

## ABSTRACT

**[0049]** Provided is a system and method for duplicating a master key for a vehicle. The system includes determining that a first device is communicating with a t/r device, the t/r device including an antenna for communicating with the master key. A cloning application associated with said t/r device may be operating on the first device. The t/r device may retrieve security information from said master key. The cloning application may communicate the security information for said master key to said central network system. The central network system may generate duplicate security information. The central network system may communicate the duplicate security information to the cloning application. The cloning application may transmit the duplicate security information to the t/r device to program a duplicate master key with the duplicate security information.

{7968559; }

## CLAIMS

What is claimed is:

1. A method for duplicating an access device, comprising:

providing a first computing device configured to communicate with a t/r device, the t/r device including an antenna for communicating with a master key for a vehicle;

running a cloning application associated with said t/r device on the first computing device, the cloning application configured to electronically communicate with the t/r device;

retrieving, by the t/r device, security information from said master key;

communicating, by the cloning application, the security information for said master key to said network server;

generating, by the network server, a cloning security information;

communicating, by the network server, the cloning security information to the cloning application; and

transmitting, by the cloning application, the cloning security information to the t/r device to program an electronic access device of a generally programmable duplicate key with the cloning security information.

2. The method of claim 1, further comprising: in response to retrieving, by the t/r device, security information from said master key, determining, by the {7968359; }

cloning application, whether the security information is encrypted and generating the cloning security information.

3. The method of claim 1, further comprising: in response to communicating, by the cloning application, the security information for said master key to said network server, determining, by the network server, whether the security information is encrypted; and generating the cloning security information.

4. The method of claim 1, further comprising: capturing at least one image of a blade of said master key, communicating said at least one image of said blade to said network server, cutting a duplicate blade of a generally programmable duplicate key, and providing said generally programmable duplicate key to said customer.

5. The method of claim 1, further comprising: placing said generally programmable duplicate key in proximity with said vehicle, sampling communications between said generically programmable duplicate key and said vehicle to generate authentication sample data.

6. A vehicle access device duplication system comprising: a non-transitory computer-readable storage medium storing executing instructions that, when executed, cause a cloning application to perform steps comprising:

determining that a first device of a customer is communicating with a t/r device, the t/r device including an antenna ring for communicating with an access device for a vehicle;

retrieving security information from said access device;

communicating the security information for said access device to a network server;

generating a cloning security information; and

transmitting the cloning security information to the t/r device to program a duplicate access device with the cloning security information; and

a processor configured to execute the instructions.

7. A transmitter/receiver device comprising:

a housing including a computing device communication module, a battery, and a vehicle access device communication module; and

an antenna configured to communicate with an access device for a vehicle.

8. The transmitter/receiver device of claim 7 wherein said antenna includes a first coil configured to communicate on one frequency with said access device and a clonable duplicate key that operates on a first frequency.

9. The transmitter/receiver device of claim 8 wherein said antenna includes a second coil configured to communicate on a second frequency with said

{7968559; }

master key for a vehicle and a clonable duplicate key that operates on a second frequency.

{7968559; }

UTILITY PATENT APPLICATION

Inventors: William R. Mutch  
Justin A. Gill  
Thomas F. Fiore  
Randall A. Porras  
Benjamin Iwasavic

Docket No.: 16223-00351

**TITLE**

DISTRIBUTED CLONING SYSTEM, AND METHOD FOR REPLICATION OF  
VEHICLE ACCESS DEVICES

CROSS-REFERENCE TO RELATED APPLICATION

**[0001]** This application claims priority to U.S. Provisional Application No. 62/644,545 entitled “DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD,” filed on March 18, 2018, which is incorporated herein by reference in its entirety.

**FIELD OF THE INVENTION**

**[0002]** The present invention is generally related to a distributed cloning system, and method for replacement, generation, or reprogramming of vehicle access devices, such as transponder keys or remotes.

**BACKGROUND**

**[0003]** Most vehicles include an engine control module (ECM) that controls access and operation of the vehicle. A regular component of an ECM is an immobilizer system. The immobilizer system prevents the vehicle from opening,

{7968559: }

starting and operating unless and until an authorized key is placed within or near the vehicle or otherwise communicates with the vehicle.

**[0004]** These systems involve wireless communication of codes, typically using close field connection like transformer inductance or radio frequency. Vehicle access devices and immobilizer systems often involve a transponder component or other feature that operates through such electromagnetic radiation. These systems include an electronic security device fitted to an automobile that prevents the engine from running unless a valid transponder key is present. This reduces the risk of a vehicle from being "hot wired" after entry has been achieved and thus reduces motor vehicle theft. When the transponder key with the proper code is inserted in the vehicle ignition switch, for example, or comes within close proximity of the vehicle, it communicates codes with the electronic control module and the immobilizer system to unlock and activate the vehicle. These codes may be simple fixed codes or may be an encrypted authentication sequence.

**[0005]** Most vehicle manufacturers have developed their own system for this combination of immobilizer electronics and corresponding key, remote, or similar device. From time to time, a vehicle owner will lose or break these devices or need an additional one to operate the vehicle and need to purchase a new one. This can be complicated and expensive endeavor.

**[0006]** For example, vehicles may use original equipment manufacturer (OEM) programming tools to communicate or plug into the On-Board Diagnostic (OBD) port tools in order to program the new key to the immobilizer to allow access

{7968559; }

and/or to start the vehicle. Locksmiths typically utilize aftermarket programming tools that often utilize hacking techniques on certain vehicle models to bypass the OEM security protocol of that vehicle (e.g. PIN codes and/or time delays). This enables access to the vehicle's ECM to reprogram to accept a new access device. These processes require expensive equipment and significant training and expertise in order to successfully program a variety of vehicle types.

**[0007]** Aftermarket key manufacturers, however, have developed methods to clone many of the vehicles keys. Using cloning tools, you can read an existing working transponder key and create an electronic duplicate so that the new key will behave exactly like the original. As such, the vehicle immobilizer will allow the new key to start the vehicle. Such cloning systems have been used for years in retail store environments. The equipment is typically less expensive and much easier to use than the OEM/locksmith-like OBD programming tools. However, a consumer must physically go to such a retail store in order to have a key cloned.

**[0008]** This disclosure provides a distributed cloning system for duplicating access devices such as transponder keys for a vehicle. Such a system may be cost effective and allow consumers to duplicate a transponder key (for example) without having physically go to a location that has a transponder cloning tool such as a hardware store, auto parts store, or locksmith. There is a need to reduce the cost of effectively duplicating particular transponder keys and a need to offer such services using on-line selling and fulfillment.

## **SUMMARY**

{7968559: }



**[0009]** Provided is a system and method for duplicating an access device for a vehicle. The system includes a first computing device that is configured for communicating with a transmitter/receiver device ("t/r device"). The t/r device includes an antenna configured for communicating with an access device for a vehicle. A cloning application associated with said t/r device may be operating on the first computing device. The cloning application may be a software application that is configured to electronically communicate with the t/r device. The t/r device may transmit and/or receive security information from said access device. The cloning application may communicate the security information related to said access device to a network server. The network server may generate cloning security information. The network server may communicate the cloning security information to the cloning application. The cloning application may transmit related cloning security information to the t/r device. The t/r device may transmit said related cloning security information to a duplicate access device in order to program said duplicate access device for said vehicle.

**[0010]** In response to retrieving, by the t/r device, security information from said access device, the cloning application may determine whether the security information is encrypted. If not encrypted, the cloning application may then process the security information to generate cloning security information. If the security information is encrypted, the cloning application may generate the cloning security information locally when capable. In response to communicating, by the cloning application, the security information for said access device to said network server,

{7968359: }

the network server may determine whether the security information is encrypted, and may generate the cloning security information.

**[0011]** In one embodiment, at least one image of a blade of a master key may be captured and communicated to a network server. A duplicate blade of said key may be cut by a service provider to generate the generically programmed duplicate key. The generically programmed duplicate key may be provided to a customer along with the t/r device. Said customer may then use the cloning application on said first computing device to program said generically programmed duplicate key. In one embodiment, authentication sample data may be generated to create the cloning security information. A data collection device or the generically programmed duplicate key may be placed in proximity with said vehicle to sample communications between said data collection device or said generically programmed duplicate key and a vehicle communications interface to record the authentication sample data. The authentication sample data may be communicated to the network server to generate the cloning security information wherein said cloning security information may be transmitted to the cloning application. The cloning application may communicate with the t/r device to program the generically programmable duplicate key and transform it into a cloned duplicate key.

**[0012]** In one embodiment, provided is a non-transitory computer-readable storage medium storing executing instructions that, when executed, cause a cloning application to perform steps comprising: determining that a first device of a customer is communicating with a t/r device, the t/r device including an antenna for

{7968559: }

communicating with a master key for a vehicle; retrieving security information from said master key; communicating security information related to said master key to said network server; generating a cloning security information; and transmitting the cloning security information to the t/r device to program a generically programmable duplicate key with the cloning security information; and a processor configured to execute the instructions.

**[0013]** In another embodiment, provided is a t/r device comprising a housing including a computing device communication module, a battery, and a vehicle access device communication module. The vehicle access device communication module may electronically connect to an antenna configured to communicate with a master key for a vehicle. The antenna includes a first coil configured to communicate on one frequency with said master key for a vehicle and a clonable duplicate key that operates on a first frequency. The antenna may include a second coil configured to communicate on a second frequency with said master key for a vehicle and a clonable duplicate key that operates on a second frequency.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

**[0014]** The disclosed method and system may be better understood by reference to the following detailed description taken in connection with the following illustrations, wherein:

**[0015]** Figure 1 is an image of an embodiment of a t/r device in accordance with the present disclosure;

{7968559; }

**[0016]** Figure 2 is a block diagram of embodiments of said t/r device in accordance with the present disclosure;

**[0017]** Figure 3 is a block diagram of embodiments of a system for duplicating of a master key in accordance with the present disclosure;

**[0018]** Figure 4 is a schematic diagram of embodiments of a communication framework of the system for duplicating a master key in accordance with the present disclosure;

**[0019]** Figure 5 is a plan view of a computing device associated with the system for duplicating said master key in accordance with the present disclosure;

**[0020]** Figure 6 is a diagram that identifies communication between a vehicle and a generically programmed duplicate key in accordance with the present disclosure; and

**[0021]** Figure 7 is a flow chart of one embodiment of a method for the duplicating a master key in accordance with the present disclosure; and

**[0022]** Figure 8 is a schematic diagram of embodiments of a generically programmable duplicate key.

### **DETAILED DESCRIPTION**

**[0023]** Reference will now be made in detail to exemplary embodiments of the present invention, examples of which are illustrated in the accompanying drawings. It is to be understood that other embodiments may be utilized and structural and

{7968559; }

functional changes may be made without departing from the respective scope of the invention, including the incorporation into a single unitary device or partitioning into any number of local or remote networked devices. In addition, each communication link between devices may be wired or wireless. Moreover, features of the various embodiments may be combined or altered without departing from the scope of the invention. As such, the following description is presented by way of illustration only and should not limit in any way the various alternatives and modifications that may be made to the illustrated embodiments and still be within the spirit and scope of the invention.

**[0024]** The present system described in this application involves components and methods for producing a suitable access device/master key 20 to replace or supplement the original ones that came with a vehicle having an immobilizer system. Such vehicles typically include an original key that is a suitable match for the vehicle, commonly referred to as the master key. This typically is the original key that was shipped with the vehicle from the factory or the vehicle's original equipment manufacturer (OEM). These master keys 20 referred to herein include an electronic access device 22 that includes electronic security information and may be such things as a transponder key, an integrated remote head key (IHRK), a Finger Operated Button Integrated Key (FOBIK), a proximity key, a smart phone, a universal remote, and/or any combination thereof. Some master keys 20 also may include a blade 24 having a pattern of bittings and grooves thereon that are patterned to correspond to tumbler members, typically pins or wafers, within an

{7968559; }

ignition of a vehicle. For purposes of clarity herein, the master key 20 may include either or both the electronic access device 22 that includes a transponder having the secure information thereon that assists to operate a vehicle and the patterned blade 24 compatible with a particular tumbler member of that vehicle's ignition.

**[0025]** Figure 1 is an image of a transmitter/receiver device ("t/r device") 10 that may be used to duplicate the electronic access device 22 of the master key 20 for a vehicle 110. The t/r device 10 may include a housing 30 and an antenna 40. The housing 30 may include components to function as a communication link between the antenna 40 and a computing device 100. The t/r device 10 may be a part of a system and method for duplicating the master key 20 including both the electronic access device 22 and the patterned blade 24. This system and method may include a reduced complexity over other known key duplication systems. The t/r device 10 may be used in a system 200 that allows a consumer to program their own electronic access device 22' of a generically programmable duplicate key 50 without having to travel to a retail location or without the assistance of a trained sales associate or locksmith.

**[0026]** In one embodiment, the housing 30 of the t/r device 10 includes electronic components configured to provide a communication link between the computing device 100 and the electronic access device 22. The housing 30 may be permanently or releasably attached to the antenna 40. The housing 30 may be a small device made of a rigid material such as polymer, plastic, ceramic, glass, metal or the like that allows for a wired or wireless electronic communication to the

{7968559; }

computing device 100. The t/r device 10 including the housing 30 and antenna 40 may be any known configuration and may be compact and portable to allow a user to easily transport and store the t/r device 10.

**[0027]** In one embodiment, as illustrated by Figure 2, the components within the housing 30 may include a computing device communication module 132, a battery 134, and a vehicle access device communication module 138. The computing device communication module 132 may be configured to electronically communicate with the computing device 100 in a wired manner such as USB, Ethernet, or other wired communication protocol or to communicate in a wireless manner such as via Bluetooth™, Wi-Fi, cellular link, or other wireless communication protocol. The battery 134 may be able to power the electronic components within the housing 30 and may be rechargeable. The computing device communication module 132 may be electronically connected to the battery 132 to transmit power for recharging or to the other electronic components within the housing 30 to power those components. The vehicle access device communication module 138 may allow for the selective electronic attachment to the antenna 40. Also, the vehicle access device connection module 138 may include components for operating the antenna 40 to allow it to operate as both a transmitter and as a receiver for signals transmitted or received with the electronic access device 22 and a generically programmed duplicate electronic access device 22' as will be described below.

**[0028]** The antenna 40 may similarly be a small device configured to be permanently or selectively attached to the housing 30. In one embodiment, the

{7968559; }

antenna 40 is a near field antenna. This antenna 40 may be any configuration but may include a coil that includes a plurality of wire windings wound in a coil shape and defining a coil axis therein. In this embodiment, the antenna 40 may be configured to communicate with the electronic access device 22 by electromagnetic coupling. In one embodiment, the electronic access device 22 may be inserted within an aperture defined by the coil antenna such that the electronic access device 22 may be aligned with the coil axis such that the windings of the antenna 40 may generally surround the electronic access device 22. In another embodiment, the antenna 40 may include a plurality of coil type antennas wherein each coil antenna may be configured to communicate with an electronic access device 22 over a different frequency wavelength depending on the type of electronic access device 22 is to be programmed or duplicated. This disclosure is not limited in this regard as the different antennas 40 may be co linearly aligned along a common coil axis and may have different dimensions, diameters or shapes.

**[0029]** Notably, the antenna 40 may include an insulator cover 42 which may protect the coil and wire windings of the antenna 40. The insulator cover 42 may be shaped to define an aperture 44 therethrough and configured to surround the electronic access device 22. Also, it is contemplated that the antenna 40 may be any type of antenna configured to electronically communicate with the electronic access device 22. As such, the antenna 40 may be a near field or a far field type of antenna and can electronically or magnetically couple to the electronic access device 22 via

{7968559; }



inductive, capacitive, radio frequency (RFID), or other electronically coupling means.

**[0030]** The computing device 100 may be a cell phone, smartphone, lap top, tablet, computer, smartwatch, or other general computing device. The computing device 100 may be any device that includes a processor and an ability to electronically communicate with other electronic devices. The computing device 100 may include a camera, or may be able to communicate with a camera (not shown), to take images of the blade 24 of the master key 20.

**[0031]** As illustrated by Figure 3, the system 200 may include a variety of components in order to duplicate the master key 20. The system 200 may include the computing device 100, the vehicle 110, the t/r device 10, a network server 130, and the generically programmable duplicate key 50. In operation, a customer 108 may need to duplicate the master key 20 associated with the vehicle 110. Following is a description of the steps for procuring a duplicate key that is programmed with the necessary security information associated with the vehicle 110 and the master key 20.

**[0032]** As illustrated by Figures 3-6, the customer 108 may install a cloning application 102 in the computing device 100. The cloning application 102 may be a software program or may include a non-transitory computer-readable storage medium for executing instructions that, when executed, cause a cloning application to perform programmable steps. The cloning application 102 may prompt the customer to enter customer data 106 related to the customer's identity or the type of

vehicle 110 and master key 20 as well as vehicle data 116. See Figure 3. The cloning application 102 may have a communication link 104 for communicating various data to the network server 130.

**[0033]** The customer data 106 may be communicated to the network server 130 to confirm that the customer 108 is positively associated with the vehicle 110. This system 200 may also include some form of positive identification with such things as biometrics such as fingerprint, facial recognition, or could be a photo identification such as driver's license which could be swiped, copied, or photographed, and processed for data input to the network server 130. The network server 130 may communicate with third party databases to positively associate the customer 108 with the vehicle 110 to ensure a secure duplication of the master key 20. The customer data could include information such as, for example, social security number, driver's license number, name and address, vehicle registration, insurance card information, etc. The customer data 106 could be input by scanning, data entry, optical character recognition, or a facial photograph or the like.

**[0034]** The vehicle data 116 may include such things as the year, make, model of the vehicle (YMM), the vehicle registration, the vehicle identification number (VIN), the license plate number, etc. Sometimes this vehicle identity or a portion of it can be derived from the master key 20. This vehicle information 116 may also be input through various input means to the computer device 100 itself by input, scan, or otherwise downloaded by third party databases.

{7968559; }

**[0035]** In embodiments, where the master key 20 includes a blade 24, the customer 108 may capture a plurality of images 120 of the blade 24 and communicate those images 120 to the cloning application 102 on the computing device 100. The customer data 106 may include images 120 of the blade and be transferred to the network server 130. The network server 130 may analyze the customer data 106 and images 120 of the blade 24 and identify a particular type of generically programmed duplicate key 50 that may be associated with the vehicle 110. In embodiments, where the master key 20 includes a blade 24, a duplicate blade 24' may be cut by a service provider and assembled with the generally programmed duplicate key 50 along with a blank duplicate electronic access device 22'. The cutting of the duplicate blade 24' may be performed by a service provider with access to information received through the network server 130 or by a data key as identified in commonly owned US Patent No. 9,963,908 incorporated herein by reference. The generically programmable duplicate key 50 and cut duplicate blade 24' can be provided to the consumer 108 along with the t/r device 10 that can be used to program (or clone) the generically programmed duplicate key 50. In embodiments where the master key 20 does not include a blade 24, then this step may only include the transfer of customer data 106 and vehicle data 116 to allow the network server 130 or cloning application 102 to identify a proper generically programmed duplicate key 50.

**[0036]** The t/r device 10 may be provided to the customer 108 along with the generically programmed duplicate key 50 (and cut duplicate blade 24') so that the

{7968559: }

consumer 108 can program their own generically programmed electronic access device 22' of the generically programmed duplicate key 50 without having to go to a retail store and without a locksmith. Once the customer receives the t/r device 10 and the generically programmed duplicate key 50 (with or without a duplicate blade 24' depending on the master key 20 to be duplicated), the customer 108 can use the computing device 100 and cloning application 102 to program or clone the generically programmed duplicate key 50. The t/r device 10 may be placed in electronic communication with the terminal device 100 via the computing device communication module 132. This electronic communication may be wired or wireless and in one embodiment is via Bluetooth™.

**[0037]** As illustrated by the diagram of Figure 4, the consumer 108 may link the electronic access device 22 of the master key 20 with the antenna 40 of the t/r device 10. The security information 118 from the electronic access device 22 of the master key 20 associated with the vehicle 110 may be transmitted to the antenna 40 and communicated from the t/r device 10 to the cloning application 102 of the computing device 100. The computing device 100 may communicate security information 118 to the network server 130. Additionally, customer data 106 and vehicle data 116 may also be communicated to the network server 130.

**[0038]** The network server 130 may include an encryption engine 142 and a secure storage 144. The encryption engine 142 may identify if the security information 118 is encrypted. If so, the encryption engine 142 may process the security information 118 of the electronic access device 22 of the master key 20 to

{7968559: }

generate cloning security information 148. The cloning security information 148 may be stored on the secure storage 144 along with the customer data 106 and vehicle data 116. In one embodiment, the cloning application 102 may be programmed to include a encryption engine 142 such that the security information 118 may be processed directly on the computing device 100 and may be stored on a local secure storage 144 module. In this embodiment, the security information 118 may be encrypted or, the security information 118 may be a fixed code type and may not require the encryption engine 142.

**[0039]** The cloning security information 148 may be communicated from the network server 130 to the computing device 100 through the cloning application 102. The cloning application 102 may communicate with the t/r device 10 to allow the antenna 40 to transmit the cloning security information 148 to the generically programmed duplicate key 50 to create a cloned duplicate key 50'. The cloned duplicate key 50' may be able to be placed in proximity to a vehicle communications interface 112 to sufficiently meet the security parameters of the vehicle to operate the vehicle similar to the master key 20 and electronic access device 22.

**[0040]** In another embodiment, the master key 20 may include security information that may also require authentication sample data 52 from the vehicle 110 to generate the cloning security information 148. In this embodiment, once the generically programmable duplicate key 50 has been received by the customer 108, the generically programmable duplicate key 50 may be placed in proximity with the vehicle to sample communications between the generically programmable duplicate

{7968559; }

key 50 and the vehicle 110 to generate authentication sample data 52. The authentication sample data 52 may be transmitted to the network server 130 and processed to generate the cloning security information 148. The cloning security information 148 may then be transmitted to the generically programmable duplicate key 50 through the cloning application 102 on the computing device 100 to generate the cloned duplicate key 50'.

**[0041]** In another embodiment, the master key 20 may include security information that may also require authentication sample data 52 from the vehicle 110 to generate the cloning security information 148. In this embodiment, a separate data collection device 422 may be placed in proximity with the vehicle to sample communications between data collection device 422 and the vehicle 110 to generate authentication sample data 52. The authentication sample data 52 may be transmitted to the network server 130 and processed to generate the cloning security information 148. The cloning security information 148 may then be transmitted to the generically programmable duplicate key 50 through the cloning application 102 on the computing device 100 to generate the cloned duplicate key 50'.

**[0042]** In another embodiment, the t/r device 10 may be included with the generically programmable duplicate key 850 as illustrated by Figure 8. Here, the duplicate key 850 may include a generically programmable access device 822 which may or may not also include a blade 824. The access device 822 may include the features and components of the t/r device 10 identified above to allow the

{7968559; }

generically programmable duplicate key 850 to directly communicate with the computing device 100 to be receive cloning security information 148 and be cloned as described. In one embodiment, the duplicate key 850 may include the computing device communication module 132 as well as the antenna 40. Additionally, in another embodiment, the duplicate key 850 may include the t/r device 10 components including the computing device communication module 132 but without the antenna 40.

**[0043]** In a preferred embodiment, the t/r device 10, generically programmable duplicate key 50, and cloning application 102 may be packaged as a system and offered to customers at a price point that is far lower than existing duplication solutions currently being offered. The costs may be so low that the t/r device 10 may include disposable components. Alternatively, once the generically programmable duplicate key 50 has been programmed, the t/r device 10 may be returned to the supplier in exchange for credit or discounts on future services or products.

**[0044]** Various different embodiments of and assembly and system are contemplated by this disclosure. In one embodiment, provided is a system for master key duplication wherein the clone tool assembly is either disposable or not disposable. In another embodiment, provided is a system that may be combined with a key chain tracker device such as a Bluetooth tracker and/or other key accessories such as a key ring or key chain. Other accessories may include patterned lights, LED lights, bottle openers, key tags, retractable reels, detachable

{7968559; }

key rings, split rings, straps, multi-tools, carabiners, clips, safety whistles, etc. Additionally, the system 200 may be provided for use by a store associate rather than a customer.

**[0045]** The system 200 provides for a local capability to duplicate some transponder type master keys that include security information (such as fixed codes) that can be communicated to a network server to duplicate other transponder types (such as encrypted). This allows for the sale of transponder type keys that can be duplicated/cloned at the home of a customer or otherwise without having to visit a retail key duplication establishment or locksmith. Additionally, for master keys that include access devices as well as blades with patterned bittings thereon, this system allows for both duplicate blades and access devices to be provided by cutting the blade from a photo or image taken by the customer. The cut blade and blank duplicate key may then be sent to the consumer along with the t/r device to facilitate the remaining steps of programming the access device.

**[0046]** The present disclosure could include systems and methods disclosed by U.S. Patent Nos. 7,849,721 and 7,890,878 and 8,634,655 and 8,644,619 and 9,818,041. The disclosures of U.S. Patent Nos. 7,849,721 and 7,890,878 and 8,634,655 and 8,644,619 and 9,818,041 are hereby incorporated by reference in their entireties.

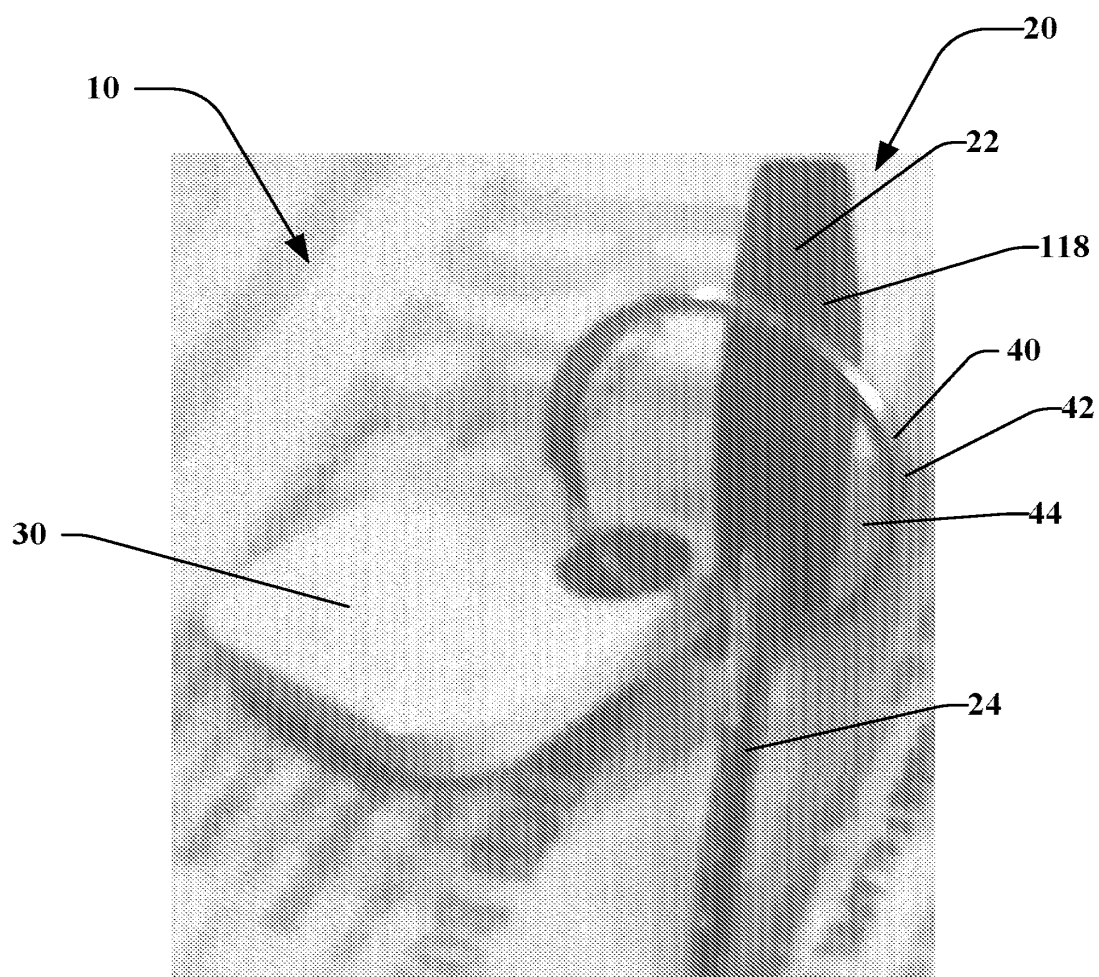
**[0047]** Fig. 7 illustrates a schematic diagram of a method 700 of the present disclosure. Provided is a vehicle access device duplication system comprising: a non-transitory computer-readable storage medium storing executing instructions that,

{7968559: }

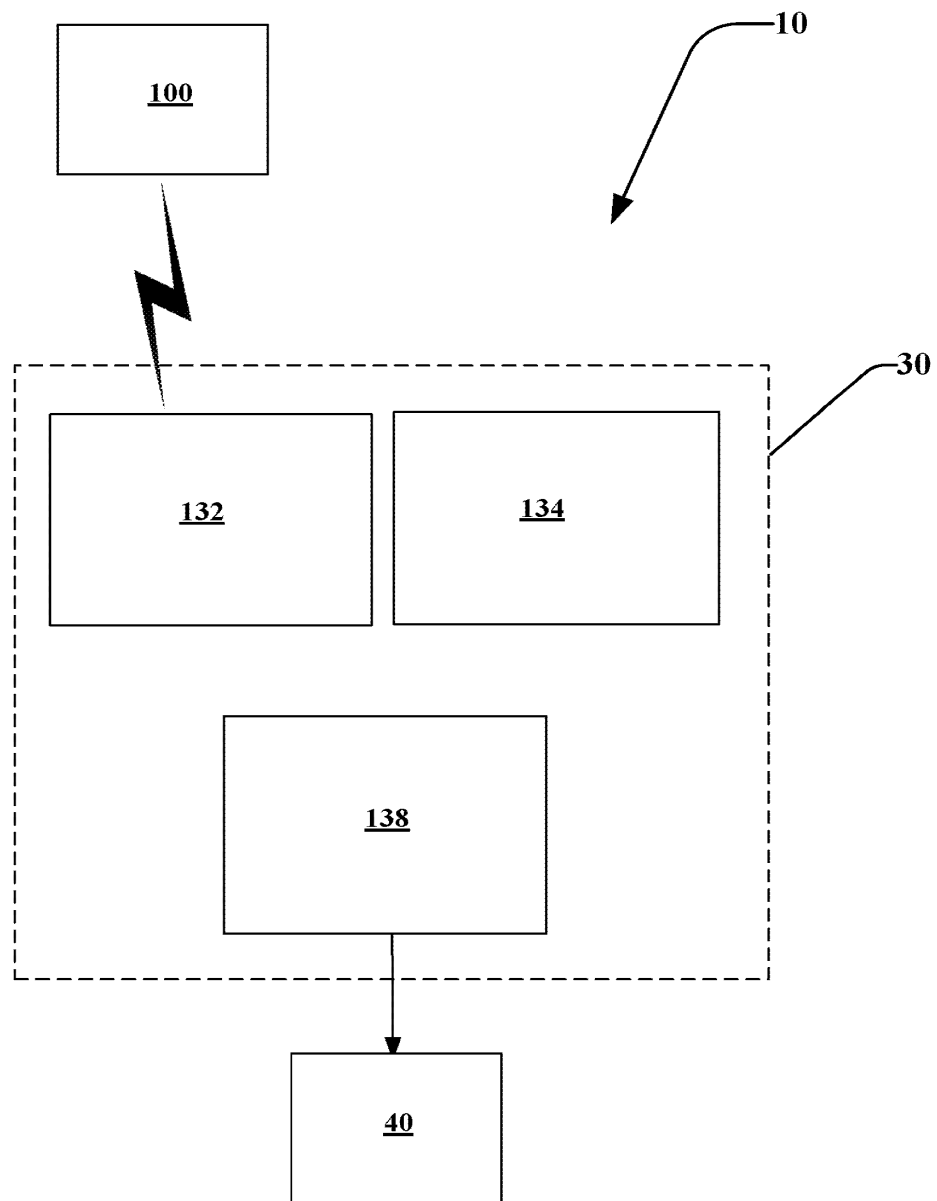


when executed, cause a cloning application to perform programmable steps. In a step 702, the cloning application may determine that a first device of a customer is communicating with a t/r device. The t/r device including an antenna for communicating with a master key for a vehicle. In step 704, the cloning application may retrieve security information from the master key. In step 706, the cloning application may communicate the security information for the master key to a network server. In step 708, the network server of the cloning application may generate cloning security information. In step 710, the cloning security information may be transmitted to the t/r device. In step 712, a generically programmable access device may be programmed with the cloning security information. As such, a cloned master key 50' may be securely replicated or created by the customer without having to visit a retail location or hire a locksmith.

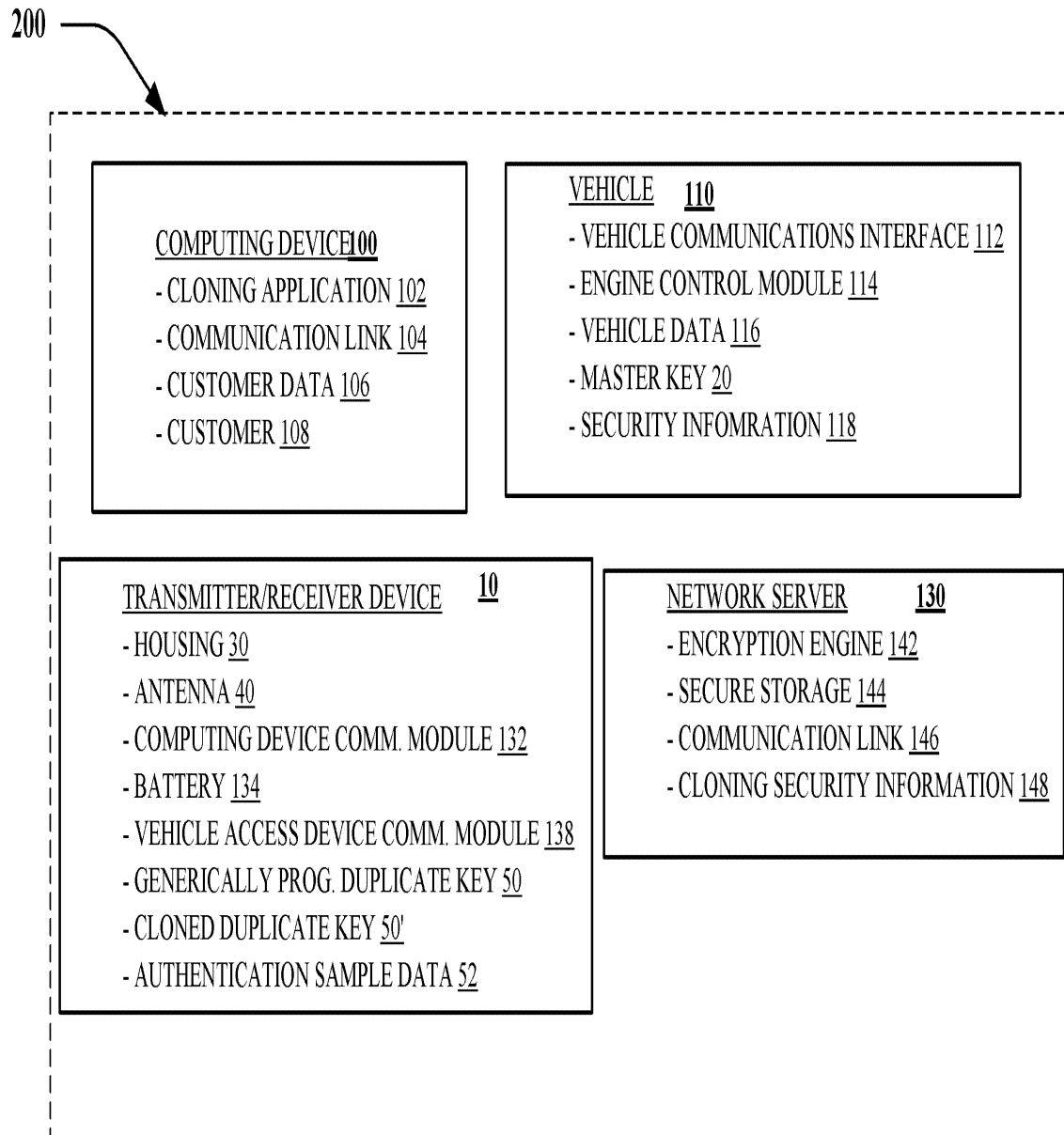
**[0048]** Although the embodiments of the present invention have been illustrated in the accompanying drawings and described in the foregoing detailed description, it is to be understood that the present invention is not to be limited to just the embodiments disclosed, but that the invention described herein is capable of numerous rearrangements, modifications and substitutions without departing from the scope of the claims hereafter. The claims as follows are intended to include all modifications and alterations insofar as they come within the scope of the claims or the equivalent thereof.



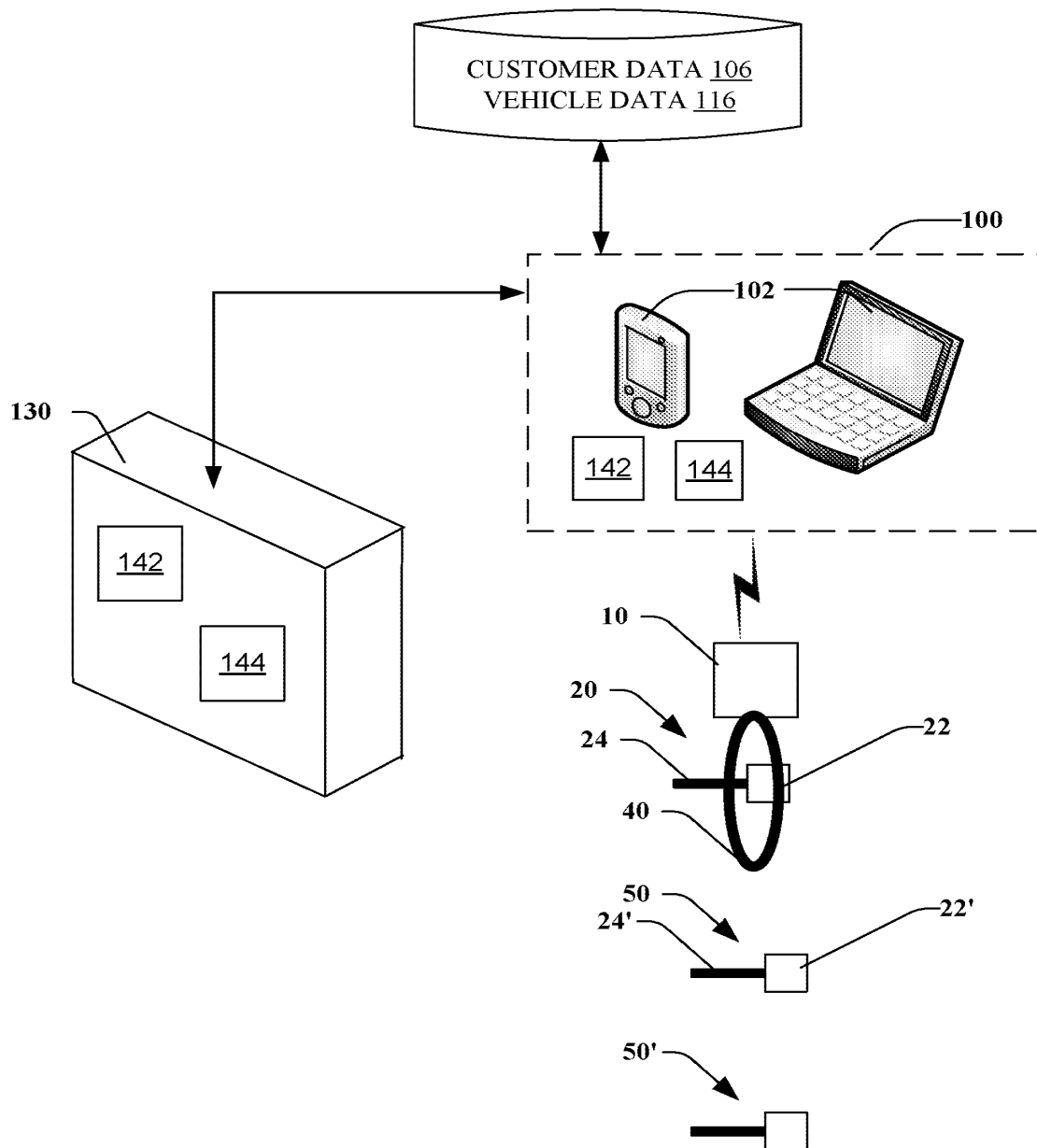
**FIG. 1**



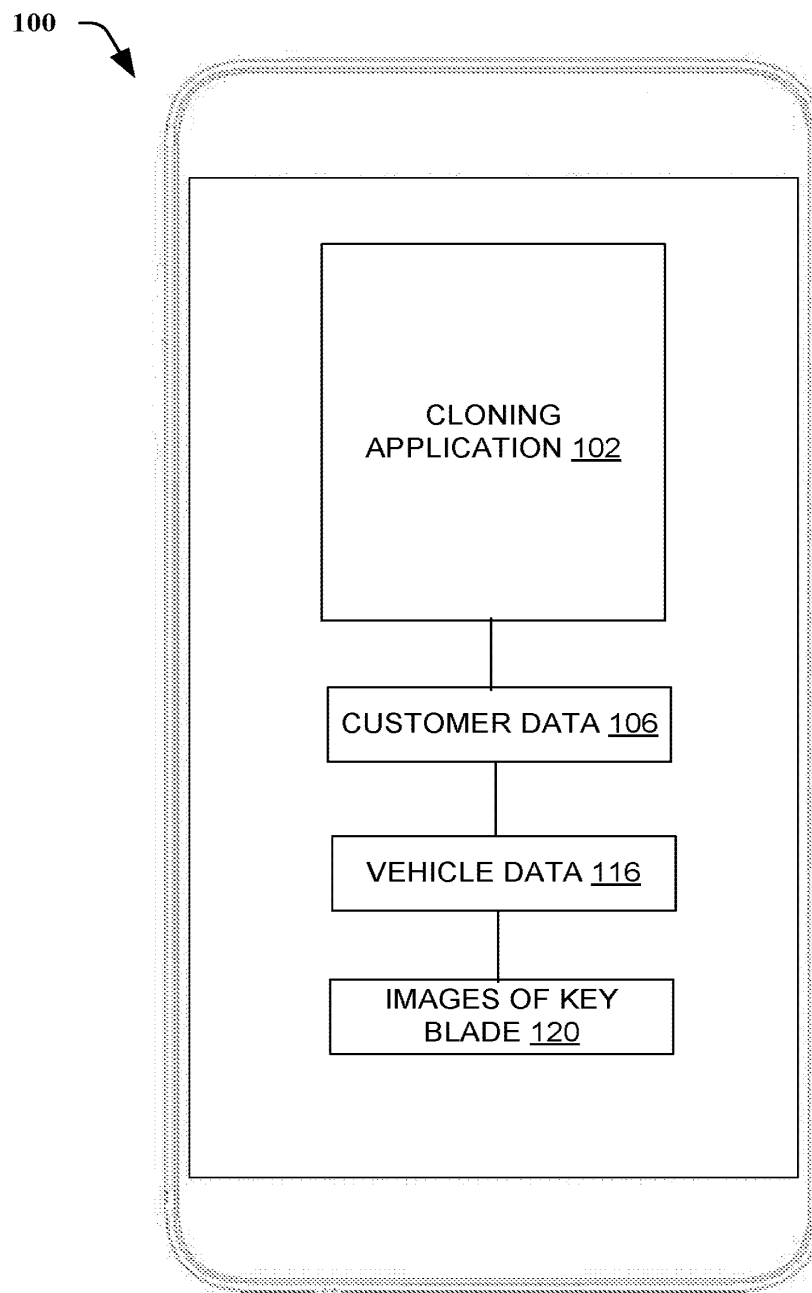
**FIG. 2**



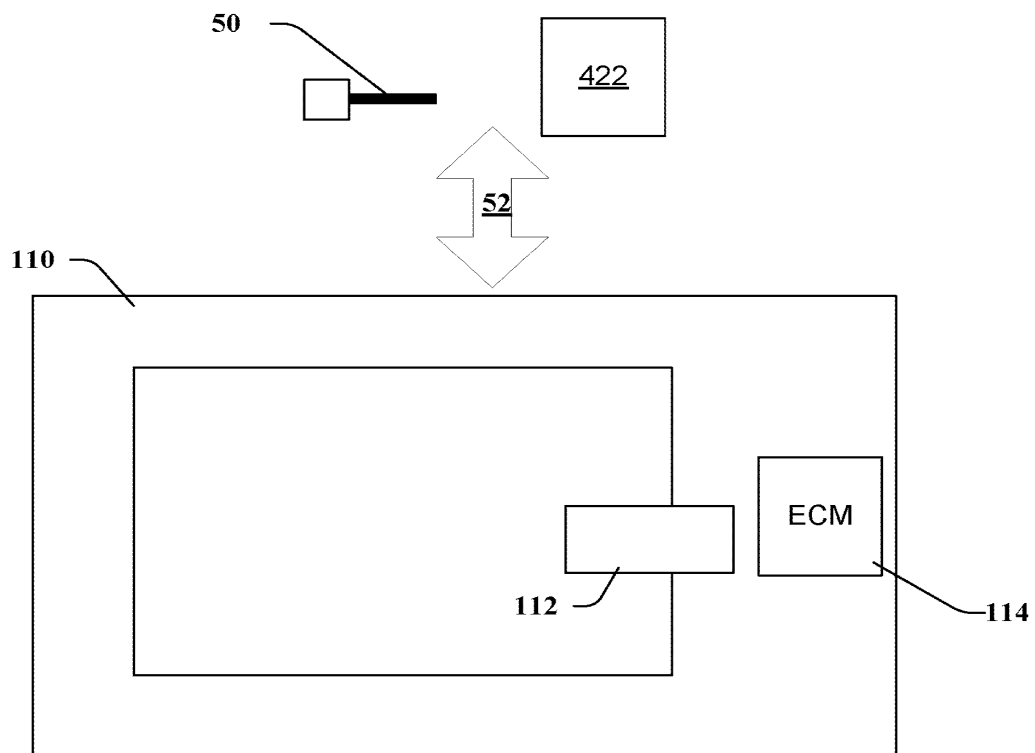
**FIG. 3**



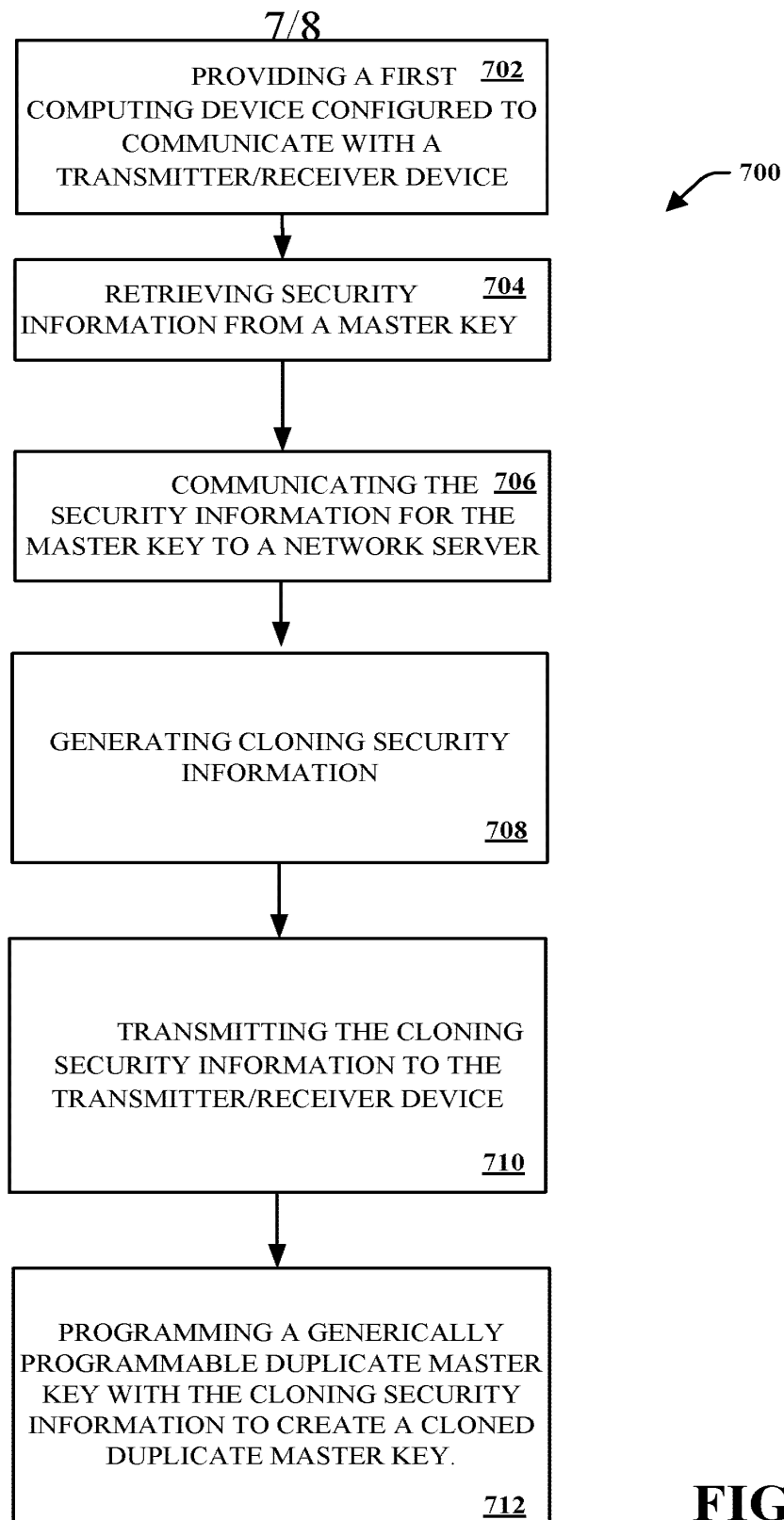
**FIG. 4**



**FIG. 5**

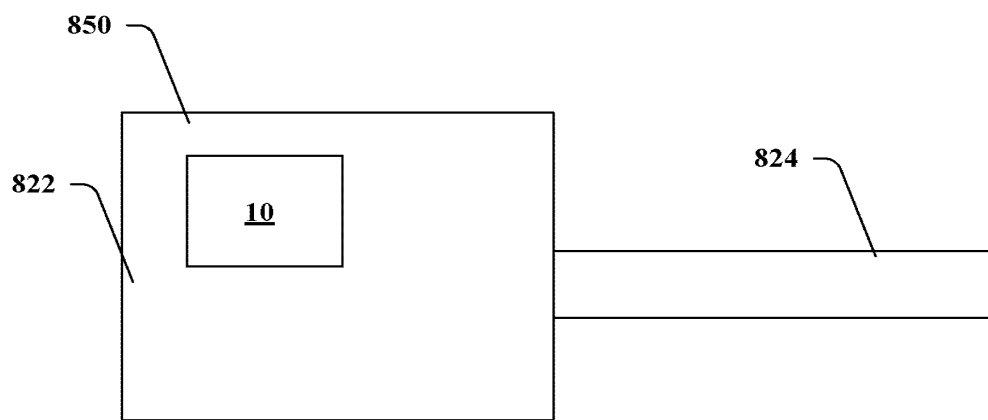


**FIG. 6**



**FIG. 7**





**FIG. 8**

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Application Data Sheet 37 CFR 1.76</b>		<b>Attorney Docket Number</b>	16223-00351
		<b>Application Number</b>	
<b>Title of Invention</b>	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

**Secrecy Order 37 CFR 5.2:**

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

**Inventor Information:**

<b>Inventor</b>	1				<a href="#">Remove</a>
<b>Legal Name</b>					
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	William	R.	Mutch		
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
<b>City</b>	North Ridgeville	<b>State/Province</b>	OH	<b>Country of Residence</b>	US
<b>Mailing Address of Inventor:</b>					
<b>Address 1</b>	35284 Nikki Ave.				
<b>Address 2</b>					
<b>City</b>	North Ridgeville	<b>State/Province</b>	OH		
<b>Postal Code</b>	44039	<b>Country</b>	US		
<b>Inventor</b>	2				<a href="#">Remove</a>
<b>Legal Name</b>					
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	Justin	A.	Gill		
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
<b>City</b>	Northfield	<b>State/Province</b>	OH	<b>Country of Residence</b>	US
<b>Mailing Address of Inventor:</b>					
<b>Address 1</b>	60 Meadow Lane				
<b>Address 2</b>					
<b>City</b>	Northfield	<b>State/Province</b>	OH		
<b>Postal Code</b>	44067	<b>Country</b>	US		
<b>Inventor</b>	3				<a href="#">Remove</a>
<b>Legal Name</b>					
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>	
	Thomas	F.	Fiore		
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number		16223-00351	
		Application Number			
Title of Invention		DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES			

City	Willowick	State/Province	OH	Country of Residence <sup>i</sup>	US
------	-----------	----------------	----	-----------------------------------	----

  
**Mailing Address of Inventor:**

Address 1	635 E. 305 St.				
Address 2					
City	Willowick	State/Province	OH		
Postal Code	44095	Country <sup>i</sup>	US		
Inventor	4				<a href="#">Remove</a>
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Randall	A.	Porras		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Avon	State/Province	OH	Country of Residence <sup>i</sup>	US

  
**Mailing Address of Inventor:**

Address 1	39464 Shoreman Dr.				
Address 2					
City	Avon	State/Province	OH		
Postal Code	44011	Country <sup>i</sup>	US		
Inventor	5				<a href="#">Remove</a>
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Benjamin		wasavic		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Northfield	State/Province	OH	Country of Residence <sup>i</sup>	US

  
**Mailing Address of Inventor:**

Address 1	60 Meadow Lane				
Address 2					
City	Northfield	State/Province	OH		
Postal Code	44067	Country <sup>i</sup>	US		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the <b>Add</b> button.					
<a href="#">Add</a>					

**Correspondence Information:**

Enter either Customer Number or complete the Correspondence Information section below.  
For further information see 37 CFR 1.33(a).

☐ An Address is being provided for the correspondence Information of this application.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351	
		Application Number		
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES			
Customer Number	83772			
Email Address	ipmailbox@mcdonaldhopkins.com		Add Email	Remove Email

**Application Information:**

Title of the Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES			
Attorney Docket Number	16223-00351	Small Entity Status Claimed	<input checked="" type="checkbox"/>	
Application Type	Nonprovisional			
Subject Matter	Utility			
Total Number of Drawing Sheets (if any)	8	Suggested Figure for Publication (if any)	1	

**Filing By Reference:**

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

**Publication Information:**

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not be** the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

**Representative Information:**

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	83772		

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		

### Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	<a href="#">Remove</a>	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Claims benefit of provisional	62/644545	2018-03-18
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the <b>Add</b> button.			<a href="#">Add</a>

### Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)<sup>i</sup> the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country <sup>i</sup>	Filing Date (YYYY-MM-DD)	<a href="#">Remove</a>
			Access Code <sup>i</sup> (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the <b>Add</b> button.			<a href="#">Add</a>

### Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		

## Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

**NOTE:** This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

### 1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

**A. Priority Document Exchange (PDX)** - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

**B. Search Results from U.S. Application to EPO** - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

### 2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

**NOTE:** Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		

## Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.			
<b>Applicant</b> 1		<input type="button" value="Remove"/>	
<p>If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.</p>			
		<input type="button" value="Clear"/>	
Assignee	Legal Representative under 35 U.S.C. 117		Joint Inventor
<input type="radio"/> Person to whom the inventor is obligated to assign.		<input type="radio"/> Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
<div style="border: 1px solid black; height: 20px; width: 100%;"></div>			
Name of the Deceased or Legally Incapacitated Inventor: <div style="border: 1px solid black; width: 400px; height: 20px;"></div>			
If the Applicant is an Organization check here. <input checked="" type="checkbox"/>			
Organization Name	HY-KO PRODUCTS COMPANY		
<b>Mailing Address Information For Applicant:</b>			
Address 1	60 Meadow Lane		
Address 2			
City	Northfield	State/Province	OH
Country	US	Postal Code	44067
Phone Number	2163485400	Fax Number	2163485474
Email Address	ipmailbox@mcdonaldhopkins.com		
Additional Applicant Data may be generated within this form by selecting the Add button.			<input type="button" value="Add"/>

## Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		

<b>Assignee</b>   1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
				<input type="button" value="Remove"/>
If the Assignee or Non-Applicant Assignee is an Organization check here.				<input type="checkbox"/>
Prefix	Given Name	Middle Name	Family Name	Suffix
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Mailing Address Information For Assignee including Non-Applicant Assignee:</b>				
Address 1		<input type="text"/>		
Address 2		<input type="text"/>		
City	<input type="text"/>	State/Province	<input type="text"/>	
Country i	<input type="text"/>	Postal Code	<input type="text"/>	
Phone Number	<input type="text"/>	Fax Number	<input type="text"/>	
Email Address	<input type="text"/>			
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

**Signature:**

**NOTE:** This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

<b>Signature</b>	/Mark J. Masterson/		Date (YYYY-MM-DD)	2019-03-18
First Name	Mark	Last Name	Masterson	Registration Number
				71886
Additional Signature may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		DISTRIBUTED CLONING SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		
First Named Inventor/Applicant Name:		William R. Mutch		
Filer:		Mark Jason Masterson/danielle mueller		
Attorney Docket Number:		16223-00351		
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	75	75
UTILITY SEARCH FEE	2111	1	330	330
UTILITY EXAMINATION FEE	2311	1	380	380
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
LATE FILING FEE FOR OATH OR DECLARATION	2051	1	80	80
<b>Petition:</b>				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				865

Electronic Acknowledgement Receipt	
<b>EFS ID:</b>	35451848
<b>Application Number:</b>	16356313
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	9197
<b>Title of Invention:</b>	DISTRIBUTED CLONING SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES
<b>First Named Inventor/Applicant Name:</b>	William R. Mutch
<b>Customer Number:</b>	33772
<b>Filer:</b>	Mark Jason Masterson/danielle mueller
<b>Filer Authorized By:</b>	Mark Jason Masterson
<b>Attorney Docket Number:</b>	16223-00351
<b>Receipt Date:</b>	18-MAR-2019
<b>Filing Date:</b>	
<b>Time Stamp:</b>	14:37:24
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$865
RAM confirmation Number	031919INTEFSW14380600
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		7968765.pdf	135579	yes	25
			43251d1e136b89d975e437a154fd5f52d9866140		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Abstract		25	25	
	Claims		21	24	
	Specification		1	20	
Warnings:					
Information:					
2	Drawings-only black and white line drawings	7967460.pdf	547573	no	8
			b531a741ba80f61ef5bdf995973bc3b8fa6bb4ac1		
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
3	Application Data Sheet	7967393.pdf	1256353	no	9
			a1629f7c4090d139399a878e0798f51cbf8125d7		
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	37042	no	2
			df8b9d589608ad9e1c93e6f5e0d39586b702982e		
Warnings:					
Information:					
Total Files Size (in bytes):			1976547		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

## **SCORE Placeholder Sheet for IFW Content**

Application Number: 16356313

Document Date: 03/18/2019

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

- Drawing

At the time of document entry (noted above):

- USPTO employees may access SCORE content via eDAN using the Supplemental Content tab, or via the SCORE web page.
- External customers may access SCORE content via PAIR using the Supplemental Content tab.





# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/356,313	03/18/2019	2491	865	16223-00351	9	3

CONFIRMATION NO. 9197

## FILING RECEIPT



33772  
MCDONALD HOPKINS LLC  
600 Superior Avenue, East  
Suite 2100  
CLEVELAND, OH 44114-2653

Date Mailed: 04/04/2019

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

### Inventor(s)

William R. Mutch, North Ridgeville, OH;  
Justin A. Gill, Northfield, OH;  
Thomas F. Fiore, Willowick, OH;  
Randall A. Porras, Avon, OH;  
Benjamin Iwasavic, Northfield, OH;

### Applicant(s)

HY-KO PRODUCTS COMPANY, Northfield, OH

Power of Attorney: None

### Domestic Priority data as claimed by applicant

This appln claims benefit of 62/644,545 03/18/2018

**Foreign Applications** for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

*Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.*

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

**If Required, Foreign Filing License Granted:** 04/03/2019

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/356,313**

**Projected Publication Date:** 09/19/2019

**Non-Publication Request:** No

**Early Publication Request:** No

**\*\* SMALL ENTITY \*\***

**Title**

DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF  
VEHICLE ACCESS DEVICES

**Preliminary Class**

713

**Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications:** No

## **PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

**LICENSE FOR FOREIGN FILING UNDER**  
**Title 35, United States Code, Section 184**  
**Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

---

***SelectUSA***

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875						Application or Docket Number 16/356,313				
<b>APPLICATION AS FILED - PART I</b>										
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	75		N/A				
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	330		N/A				
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	380		N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	9	minus 20 = *	x 50 =	0.00	OR					
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *	x 230 =	0.00						
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00						
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL		TOTAL				
				785						
<b>APPLICATION AS AMENDED - PART II</b>										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
<p style="font-size: x-small;">* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p style="font-size: x-small;">** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p style="font-size: x-small;">*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p style="font-size: x-small;">The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.</p>										



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/356,313	03/18/2019	William R. Mutch	16223-00351

**CONFIRMATION NO. 9197**

33772

MCDONALD HOPKINS LLC  
600 Superior Avenue, East  
Suite 2100  
CLEVELAND, OH 44114-2653

**INFORMAL NOTICE**



Date Mailed: 04/04/2019

**INFORMATIONAL NOTICE TO APPLICANT**

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):  
William R. Mutch  
Justin A. Gill  
Thomas F. Fiore  
Randall A. Porras  
Benjamin Iwasavic

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/fly/

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	16356313
	Filing Date	2019-03-18
	First Named Inventor	Mutch
	Art Unit	2683
	Examiner Name	ZIMMERMAN, BRIAN A
	Attorney Docket Number	16223-00351

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9963908		2018-05-08	BASS	
	2	7849721		2010-12-14	BASS	
	3	7890878		2011-02-15	BASS	
	4	8634655		2014-01-21	THOMPSON	
	5	8644619		2014-02-04	THOMPSON	
	6	9818041		2017-11-14	MUTCH	
If you wish to add additional U.S. Patent citation information please click the Add button.						Add
U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		16356313
	Filing Date		2019-03-18
	First Named Inventor	Mutch	
	Art Unit	2683	
	Examiner Name	ZIMMERMAN, BRIAN A	
	Attorney Docket Number	16223-00351	

	1				
--	---	--	--	--	--

If you wish to add additional U.S. Published Application citation information please click the Add button.

#### FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> i	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							

If you wish to add additional Foreign Patent Document citation information please click the Add button.

#### NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1		

If you wish to add additional non-patent literature document citation information please click the Add button.

#### EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	16356313
	Filing Date	2019-03-18
	First Named Inventor	Mutch
	Art Unit	2683
	Examiner Name	ZIMMERMAN, BRIAN A
	Attorney Docket Number	16223-00351

### CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

### SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/David B. Cupar/	Date (YYYY-MM-DD)	2019-08-07
Name/Print	David B. Cupar	Registration Number	47510

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**



## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
<b>EFS ID:</b>	36813831
<b>Application Number:</b>	16356313
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	9197
<b>Title of Invention:</b>	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES
<b>First Named Inventor/Applicant Name:</b>	William R. Mutch
<b>Customer Number:</b>	33772
<b>Filer:</b>	David Bogdan Cupar/Kimberly Hefner
<b>Filer Authorized By:</b>	David Bogdan Cupar
<b>Attorney Docket Number:</b>	16223-00351
<b>Receipt Date:</b>	07-AUG-2019
<b>Filing Date:</b>	18-MAR-2019
<b>Time Stamp:</b>	17:40:34
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
------------------------	----

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	8258146.pdf	1084065	no	4
			b67826db95a58c53a8b5ea619eb61327c55a8102		

### Warnings:

<b>Information:</b>	
<b>Total Files Size (in bytes):</b>	1084065
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>	

PATENT APPLICATION  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re app.:	William R. Mutch et al..	Group Art Unit:	2683
Serial No.:	16/356,313	Examiner:	Brian A. Zimmerman
Filing Date:	March 18, 2019	Docket No.:	16223-00351
		Confirmation No.:	9197

Title: DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**CORRECTED APPLICATION DATA SHEET**

Dear Sir:

Applicant submits a Supplemental Application Data Sheet which, due to an inadvertent error, corrects the name of Inventor 5 from Benjamin *Iwasavic* to Benjamin Iwasevic. The Applicant respectfully requests that the filing receipt be generated to reflect this information.

Applicant believes no additional fees or documents are due. However, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to our deposit account no. 13-0265. Please contact the undersigned if any additional issues exist.

Respectfully submitted,

Date: August 16, 2019

/Mark J. Masterson/  
Mark J. Masterson  
Reg. No. 71,886  
McDonald Hopkins LLC  
600 Superior Avenue, E.  
Suite 2100  
Cleveland, OH 44114-2653  
(216) 348-5400

{8274066: }

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

**Secrecy Order 37 CFR 5.2:**

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

**Inventor Information:**

<b>Inventor 1</b>					<a href="#">Remove</a>	
<b>Legal Name</b>						
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>		
	William	R.	Mutch			
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service						
<b>City</b>	North Ridgeville	<b>State/Province</b>	OH	<b>Country of Residence</b>	US	
<b>Mailing Address of Inventor:</b>						
<b>Address 1</b>		35284 Nikki Ave.				
<b>Address 2</b>						
<b>City</b>	North Ridgeville	<b>State/Province</b>	OH			
<b>Postal Code</b>	44039	<b>Country</b>	US			
<b>Inventor 2</b>					<a href="#">Remove</a>	
<b>Legal Name</b>						
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>		
	Justin	A.	Gill			
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service						
<b>City</b>	Northfield	<b>State/Province</b>	OH	<b>Country of Residence</b>	US	
<b>Mailing Address of Inventor:</b>						
<b>Address 1</b>		60 Meadow Lane				
<b>Address 2</b>						
<b>City</b>	Northfield	<b>State/Province</b>	OH			
<b>Postal Code</b>	44067	<b>Country</b>	US			
<b>Inventor 3</b>					<a href="#">Remove</a>	
<b>Legal Name</b>						
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>	<b>Suffix</b>		
	Thomas	F.	Fiore			
<b>Residence Information (Select One)</b> <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service						

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number		16223-00351	
		Application Number			
Title of Invention		DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES			
City	Willowick	State/Province	OH	Country of Residence <sup>i</sup>	US
<b>Mailing Address of Inventor:</b>					
Address 1		635 E. 305 St.			
Address 2					
City	Willowick	State/Province	OH		
Postal Code	44095	Country <sup>i</sup>	US		
Inventor 4					<a href="#">Remove</a>
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Randall	A.	Porras		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Avon	State/Province	OH	Country of Residence <sup>i</sup>	US
<b>Mailing Address of Inventor:</b>					
Address 1		39464 Shoreman Dr.			
Address 2					
City	Avon	State/Province	OH		
Postal Code	44011	Country <sup>i</sup>	US		
Inventor 5					<a href="#">Remove</a>
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Benjamin		<del>Iwaszovic</del> IWASEVIC		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Northfield	State/Province	OH	Country of Residence <sup>i</sup>	US
<b>Mailing Address of Inventor:</b>					
Address 1		60 Meadow Lane			
Address 2					
City	Northfield	State/Province	OH		
Postal Code	44067	Country <sup>i</sup>	US		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the <b>Add</b> button.					<a href="#">Add</a>

## Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.  
For further information see 37 CFR 1.33(a).

☐ An Address is being provided for the correspondence Information of this application.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351	
		Application Number		
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES			
Customer Number	33772			
Email Address	ipmailbox@mcdonaldhopkins.com		Add Email	Remove Email

**Application Information:**

Title of the Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES			
Attorney Docket Number	16223-00351	Small Entity Status Claimed	<input checked="" type="checkbox"/>	
Application Type	Nonprovisional			
Subject Matter	Utility			
Total Number of Drawing Sheets (if any)	8	Suggested Figure for Publication (if any)	1	

**Filing By Reference:**

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

**Publication Information:**

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

**Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

**Representative Information:**

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.


Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	33772		

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		

### Domestic Benefit/National Stage Information:


This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Claims benefit of provisional	62/644545	2018-03-18
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the <b>Add</b> button.			

### Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)<sup>i</sup> the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country <sup>i</sup>	Filing Date (YYYY-MM-DD)	 Access Code <sup>i</sup> (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the <b>Add</b> button.			

### Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

<input type="checkbox"/> This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		

## Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

**NOTE:** This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

### 1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

**A. Priority Document Exchange (PDX)** - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

**B. Search Results from U.S. Application to EPO** - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

### 2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

**NOTE:** Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		

## Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.			
<b>Applicant 1</b>			
<p>If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.</p>			
<input type="button" value="Clear"/>			
<input type="radio"/> Assignee		<input type="radio"/> Legal Representative under 35 U.S.C. 117	
<input checked="" type="radio"/> Person to whom the inventor is obligated to assign.		<input type="radio"/> Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor: <input type="text"/>			
If the Applicant is an Organization check here. <input checked="" type="checkbox"/>			
Organization Name	HY-KO PRODUCTS COMPANY		
<b>Mailing Address Information For Applicant:</b>			
Address 1	60 Meadow Lane		
Address 2			
City	Northfield	State/Province	OH
Country	US	Postal Code	44067
Phone Number	2163485400	Fax Number	2163485474
Email Address	ipmailbox@mcdonaldhopkins.com		
Additional Applicant Data may be generated within this form by selecting the Add button.			

## Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		

<b>Assignee 1</b>				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
If the Assignee or Non-Applicant Assignee is an Organization check here. <input type="checkbox"/>				
Prefix	Given Name	Middle Name	Family Name	Suffix
<b>Mailing Address Information For Assignee including Non-Applicant Assignee:</b>				
Address 1				
Address 2				
City		State/Province		
Country <sup>i</sup>		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				

**Signature:**

**NOTE:** This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Mark J. Masterson/		Date (YYYY-MM-DD)	2019-03-18
First Name	Mark	Last Name	Masterson	Registration Number
71886				
Additional Signature may be generated within this form by selecting the Add button.				

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	16223-00351
		Application Number	
Title of Invention	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

For applications filed under AIA  
(on or after September 16, 2012)

Title: DISTRIBUTED CLONING SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES  
MH Ref. No. 16223-00351

**DECLARATION AND ASSIGNMENT  
FOR U.S. UTILITY OR DESIGN PATENT APPLICATION**

Attorney Docket No.: 16223-00351

**As a below-named inventor, I hereby declare that:**

This declaration is directed to the application entitled:

**DISTRIBUTED CLONING SYSTEM, AND METHOD FOR REPLICATION OF  
VEHICLE ACCESS DEVICES**

---

(TITLE)

(check only one item below)

☐ attached hereto,

OR

☒ U.S. Utility Application No. 16/356,313 filed on March 18, 2019, U.S. Provisional Application No. 62/644,545 filed on March 18, 2018, and any subsequent applications filed in connection with the above invention (the "Patent").

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the above-identified application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WHEREAS, HY-CO PRODUCTS COMPANY, having a place of business at 60 Meadow Lane, Northfield, Ohio 44067, United States of America, hereinafter referred to as "Assignee," is desirous of acquiring the entire right, title and interest in and to the Patent;

NOW, THEREFORE, be it known that, for valuable consideration, the receipt and sufficiency of which are hereby acknowledged, all right, title, and interest, in the United States and throughout the world, in, to and under the Patent, improvements and inventions and all patents, patent applications, patent rights, and inventors' certificates thereof, therefor, and therein, including without limitation said application for patent in the United States, all divisions and continuations thereof, all patents which may be granted thereon, all reissues and extensions thereof, all right to sue for past infringement thereunder, all patents which may be granted for said improvements

{7968813: }

Page 1 of 6

For applications filed under AIA  
(on or after September 16, 2012)

Title: DISTRIBUTED CLONING SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES  
MH Ref. No. 16223-00351

and inventions by states or nations other than the United States, or by other authority, entity, or organization, all applications therefor, and all rights of priority resulting from the filing of said applications, have been and are hereby sold, assigned, transferred, and delivered unto Assignee, its successors and assigns by the undersigned; and it is covenanted and agreed by the undersigned, and for executors, administrators, and legal representatives of the undersigned, that at Assignee's request any and all applications, affidavits, assignments, and other instruments will be made, executed, and delivered as may be necessary, or desirable to secure for or vest in Assignee, its successors or assigns, any improvement, inventions, right, title, interest, application, patent, patent right or other right or property covered by this assignment, and the United States Commissioner of Patents and Trademarks is hereby requested and authorized to issue any and all United States patents granted on any of said applications to Assignee as owner of the entire right, title, and interest in, to, and under the same, and appropriately empowered officials of foreign countries are hereby authorized to issue any letters patent granted on any of said applications to Assignee as owner of the entire right, title and interest in, to, and under the same.

THIS DECLARATION AND ASSIGNMENT, has been executed below by the undersigned:

Legal Name of Inventor: **William R. Mutch**

Signature of Inventor: William R Mutch

Date: 8/13/19

**Notice to Inventor(s):** You should not execute this Declaration unless you have reviewed and understand the contents of the above-identified application, including the claims.

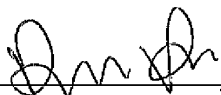
**Notice to Inventor(s):** You have a duty disclose to the USPTO all information known to you to be material to patentability as defined in 37 CFR 1.56 during prosecution of the Patent.

For applications filed under AIA  
(on or after September 16, 2012)

Title: DISTRIBUTED CLONING SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES  
MH Ref. No. 16223-00351

THIS DECLARATION AND ASSIGNMENT, has been executed below by the undersigned:

Legal Name of Inventor: **Justin A. Gill**

Signature of Inventor: \_\_\_\_\_

Date: 08/13/19\_\_\_\_\_

**Notice to Inventor(s):** You should not execute this Declaration unless you have reviewed and understand the contents of the above-identified application, including the claims.

**Notice to Inventor(s):** You have a duty disclose to the USPTO all information known to you to be material to patentability as defined in 37 CFR 1.56 during prosecution of the Patent.



For applications filed under AIA  
(on or after September 16, 2012)

Title: DISTRIBUTED CLONING SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES  
MH Ref. No. 16223-00351

Legal Name of Inventor: **Thomas F. Fiore**

Signature of Inventor: Thomas F. Fiore

Date: 8/13/2019

**Notice to Inventor(s):** You should not execute this Declaration unless you have reviewed and understand the contents of the above-identified application, including the claims.

**Notice to Inventor(s):** You have a duty disclose to the USPTO all information known to you to be material to patentability as defined in 37 CFR 1.56 during prosecution of the Patent.

For applications filed under AIA  
(on or after September 16, 2012)

Title: DISTRIBUTED CLONING SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES  
MH Ref. No. 16223-00351

Legal Name of Inventor: **Randall A. Porras**

Signature of Inventor: 

Date: 8-13-2019


**Notice to Inventor(s):** You should not execute this Declaration unless you have reviewed and understand the contents of the above-identified application, including the claims.

**Notice to Inventor(s):** You have a duty disclose to the USPTO all information known to you to be material to patentability as defined in 37 CFR 1.56 during prosecution of the Patent.

For applications filed under AIA  
(on or after September 16, 2012)

Title: "DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES"  
MH Ref. No.: 16223-00351

Legal Name of Inventor: **Benjamin IWASEVIC**

Signature of Inventor: 

Date: 8-15-19

[ ] Signatures of additional inventors on attached sheet(s)

**Notice to Inventor(s):** You should not execute this Declaration unless you have reviewed and understand the contents of the above-identified application, including the claims.

**Notice to Inventor(s):** You have a duty disclose to the USPTO all information known to you to be material to patentability as defined in 37 CFR 1.56 during prosecution of the Patent.

Electronic Acknowledgement Receipt	
<b>EFS ID:</b>	36893569
<b>Application Number:</b>	16356313
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	9197
<b>Title of Invention:</b>	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES
<b>First Named Inventor/Applicant Name:</b>	William R. Mutch
<b>Customer Number:</b>	33772
<b>Filer:</b>	Mark Jason Masterson/Rebecca Shofar
<b>Filer Authorized By:</b>	Mark Jason Masterson
<b>Attorney Docket Number:</b>	16223-00351
<b>Receipt Date:</b>	16-AUG-2019
<b>Filing Date:</b>	18-MAR-2019
<b>Time Stamp:</b>	09:18:24
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
------------------------	----

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	8275775.pdf	99745	no	1
			83df0c15436e3ac45ddb675fa43bf3bb638107f		

### Warnings:

<b>Information:</b>					
2	Application Data Sheet	8274042.pdf	200334	no	9
			8654b478771d538affb2dccc42536ece53ad5ba72		
<b>Warnings:</b>					
<b>Information:</b>					
This is not an USPTO supplied ADS fillable form					
3	Oath or Declaration filed	8275771.pdf	119798	no	6
			9085878cdfa0603357248543a4e2379be94f7bc8		
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			419877		
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5671616

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
WILLIAM R. MUTCH	08/13/2019
JUSTIN A. GILL	08/13/2019
THOMAS F. FIORE	08/13/2019
RANDAL A. PORRAS	08/13/2019
BENJAMIN IWASEVIC	08/15/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	HY-KO PRODUCTS COMPANY
<b>Street Address:</b>	60 MEADOW LANE
<b>City:</b>	NORTHFIELD
<b>State/Country:</b>	OHIO
<b>Postal Code:</b>	44067
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16356313
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(216)348-5474
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	216-348-5400
<b>Email:</b>	ipmailbox@mcdonaldhopkins.com
<b>Correspondent Name:</b>	MCDONALD HOPKINS LLC
<b>Address Line 1:</b>	600 SUPERIOR AVENUE, EAST
<b>Address Line 2:</b>	SUITE 2100
<b>Address Line 4:</b>	CLEVELAND, OHIO 44114-2653
<b>ATTORNEY DOCKET NUMBER:</b>	16223-00351
<b>NAME OF SUBMITTER:</b>	MARK J. MASTERSON
<b>SIGNATURE:</b>	/Mark J. Masterson/
<b>DATE SIGNED:</b>	08/16/2019
This document serves as an Oath/Declaration (37 CFR 1.63).	

**Total Attachments: 6**

source=8275771#page1.tif

source=8275771#page2.tif

source=8275771#page3.tif

source=8275771#page4.tif

source=8275771#page5.tif

source=8275771#page6.tif

For applications filed under AIA  
(on or after September 16, 2012)

Title: DISTRIBUTED CLONING SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES  
MH Ref. No. 16223-00351

**DECLARATION AND ASSIGNMENT  
FOR U.S. UTILITY OR DESIGN PATENT APPLICATION**

Attorney Docket No.: 16223-00351

**As a below-named inventor, I hereby declare that:**

This declaration is directed to the application entitled:

**DISTRIBUTED CLONING SYSTEM, AND METHOD FOR REPLICATION OF  
VEHICLE ACCESS DEVICES**

---

(TITLE)

(check only one item below)

☐ attached hereto,

OR

☒ U.S. Utility Application No. 16/356,313 filed on March 18, 2019, U.S. Provisional Application No. 62/644,545 filed on March 18, 2018, and any subsequent applications filed in connection with the above invention (the "Patent").

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the above-identified application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WHEREAS, HY-CO PRODUCTS COMPANY, having a place of business at 60 Meadow Lane, Northfield, Ohio 44067, United States of America, hereinafter referred to as "Assignee," is desirous of acquiring the entire right, title and interest in and to the Patent;

NOW, THEREFORE, be it known that, for valuable consideration, the receipt and sufficiency of which are hereby acknowledged, all right, title, and interest, in the United States and throughout the world, in, to and under the Patent, improvements and inventions and all patents, patent applications, patent rights, and inventors' certificates thereof, therefor, and therein, including without limitation said application for patent in the United States, all divisions and continuations thereof, all patents which may be granted thereon, all reissues and extensions thereof, all right to sue for past infringement thereunder, all patents which may be granted for said improvements

{7968813; }

Page 1 of 6



For applications filed under AIA  
(on or after September 16, 2012)

Title: DISTRIBUTED CLONING SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES  
MH Ref. No. 16223-00351

and inventions by states or nations other than the United States, or by other authority, entity, or organization, all applications therefor, and all rights of priority resulting from the filing of said applications, have been and are hereby sold, assigned, transferred, and delivered unto Assignee, its successors and assigns by the undersigned; and it is covenanted and agreed by the undersigned, and for executors, administrators, and legal representatives of the undersigned, that at Assignee's request any and all applications, affidavits, assignments, and other instruments will be made, executed, and delivered as may be necessary, or desirable to secure for or vest in Assignee, its successors or assigns, any improvement, inventions, right, title, interest, application, patent, patent right or other right or property covered by this assignment, and the United States Commissioner of Patents and Trademarks is hereby requested and authorized to issue any and all United States patents granted on any of said applications to Assignee as owner of the entire right, title, and interest in, to, and under the same, and appropriately empowered officials of foreign countries are hereby authorized to issue any letters patent granted on any of said applications to Assignee as owner of the entire right, title and interest in, to, and under the same.

THIS DECLARATION AND ASSIGNMENT, has been executed below by the undersigned:

Legal Name of Inventor: **William R. Mutch**

Signature of Inventor: William R. Mutch

Date: 8/13/19

**Notice to Inventor(s):** You should not execute this Declaration unless you have reviewed and understand the contents of the above-identified application, including the claims.

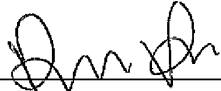
**Notice to Inventor(s):** You have a duty disclose to the USPTO all information known to you to be material to patentability as defined in 37 CFR 1.56 during prosecution of the Patent.

For applications filed under AIA  
(on or after September 16, 2012)

Title: DISTRIBUTED CLONING SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES  
MH Ref. No. 16223-00351

THIS DECLARATION AND ASSIGNMENT, has been executed below by the undersigned:

Legal Name of Inventor: **Justin A. Gill**

Signature of Inventor: \_\_\_\_\_

Date: 08/13/19\_\_\_\_\_

**Notice to Inventor(s):** You should not execute this Declaration unless you have reviewed and understand the contents of the above-identified application, including the claims.

**Notice to Inventor(s):** You have a duty disclose to the USPTO all information known to you to be material to patentability as defined in 37 CFR 1.56 during prosecution of the Patent.

For applications filed under AIA  
(on or after September 16, 2012)

Title: DISTRIBUTED CLONING SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES  
MH Ref. No. 16223-00351

Legal Name of Inventor: **Thomas F. Fiore**

Signature of Inventor:

*Thomas F. Fiore*

Date:

*8/13/2019*

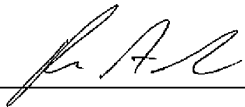
**Notice to Inventor(s):** You should not execute this Declaration unless you have reviewed and understand the contents of the above-identified application, including the claims.

**Notice to Inventor(s):** You have a duty disclose to the USPTO all information known to you to be material to patentability as defined in 37 CFR 1.56 during prosecution of the Patent.

For applications filed under AIA  
(on or after September 16, 2012)

Title: DISTRIBUTED CLONING SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES  
MH Ref. No. 16223-00351

Legal Name of Inventor: **Randall A. Porras**

Signature of Inventor: 

Date: 8-13-2019


**Notice to Inventor(s):** You should not execute this Declaration unless you have reviewed and understand the contents of the above-identified application, including the claims.

**Notice to Inventor(s):** You have a duty disclose to the USPTO all information known to you to be material to patentability as defined in 37 CFR 1.56 during prosecution of the Patent.

For applications filed under AIA  
(on or after September 16, 2012)

Title: "DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM,  
AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES"  
MH Ref. No.: 16223-00351

Legal Name of Inventor: **Benjamin IWASEVIC**

Signature of Inventor: 

Date: 8-15-19

☐ Signatures of additional inventors on attached sheet(s)

**Notice to Inventor(s):** You should not execute this Declaration unless you have reviewed and understand the contents of the above-identified application, including the claims.

**Notice to Inventor(s):** You have a duty disclose to the USPTO all information known to you to be material to patentability as defined in 37 CFR 1.56 during prosecution of the Patent.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/356,313	03/18/2019	William R. Mutch	16223-00351

**CONFIRMATION NO. 9197**

33772  
MCDONALD HOPKINS LLC  
600 Superior Avenue, East  
Suite 2100  
CLEVELAND, OH 44114-2653

**37 CFR 1.48(f)**  
**ACKNOWLEDGEMENT LETTER**



Date Mailed: 08/23/2019

**NOTICE OF ACCEPTANCE OF REQUEST UNDER 37 CFR 1.48(f)**

This is in response to the applicant's request under 37 CFR 1.48(f) submitted on 08/16/2019.

The request under 37 CFR 1.48(f) to correct the inventorship, to correct or update the name of an inventor, or to correct the order of names of joint inventors is accepted.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/ttran/



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/356,313	03/18/2019	2683	865	16223-00351	9	3

**CONFIRMATION NO. 9197**

## UPDATED FILING RECEIPT



0000000110579018

33772  
MCDONALD HOPKINS LLC  
600 Superior Avenue, East  
Suite 2100  
CLEVELAND, OH 44114-2653

Date Mailed: 08/23/2019

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

**Please verify the accuracy of the data presented on this receipt.** If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

### Inventor(s)

William R. Mutch, North Ridgeville, OH;  
Justin A. Gill, Northfield, OH;  
Thomas F. Fiore, Willowick, OH;  
Randall A. Porras, Avon, OH;  
Benjamin Iwasevic, Northfield, OH;

### Applicant(s)

HY-KO PRODUCTS COMPANY, Northfield, OH

**Power of Attorney:** None

### Domestic Priority data as claimed by applicant

This appln claims benefit of 62/644,545 03/18/2018

**Foreign Applications** for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

*Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.*

**Permission to Access Application via Priority Document Exchange:** Yes

**Permission to Access Search Results:** Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

**Projected Publication Date:** 09/19/2019

**Non-Publication Request:** No

**Early Publication Request:** No

**\*\* SMALL ENTITY \*\***

**Title**

DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES

**Preliminary Class**

340

**Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications:** No

## **PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).



**LICENSE FOR FOREIGN FILING UNDER**  
**Title 35, United States Code, Section 184**  
**Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

---

***SelectUSA***

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/356,313	03/18/2019	William R. Mutch	16223-00351

**CONFIRMATION NO. 9197**

33772

MCDONALD HOPKINS LLC  
600 Superior Avenue, East  
Suite 2100  
CLEVELAND, OH 44114-2653

## PUBLICATION NOTICE



\*OC000000111250849\*

**Title:**DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES

**Publication No.**US-2019-0287332-A1

**Publication Date:**09/19/2019

## NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publicly available Searchable Databases via the Internet at [www.uspto.gov](http://www.uspto.gov). The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at [www.uspto.gov](http://www.uspto.gov) using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <https://portal.uspto.gov/pair/PublicPair>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/356,313	03/18/2019	William R. Mutch	16223-00351	9197
33772	7590	03/31/2020		
MCDONALD HOPKINS LLC 600 Superior Avenue, East Suite 2100 CLEVELAND, OH 44114-2653			EXAMINER PENDLETON, DIONNE	
			ART UNIT 2688	PAPER NUMBER
			NOTIFICATION DATE 03/31/2020	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipmailbox@mcdonaldhopkins.com



## DETAILED ACTION

### *Notice of Pre-AIA or AIA Status*

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

### *Claim Status*

2. Claims 1-9 are currently pending.

### *Election/Restriction*

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. **Group I** – described in **claims 1-6**, and drawn to a system and method for duplicating an access device comprising a transmitter/receiver device;  
and
- II. **Group II** – described in **claims 7-9**, and drawn to a transmitter/receiver device.

4. Inventions of Group I and Group II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because Group I

indicates that in the combination the subcombination of Group II is broadly recited and that the specific characteristics required by the subcombination are not required by the combination claim. The subcombination of a transmitter/receiver as recited in claim 7, has separate utility such as in a smartphone for use in a car sharing system wherein the smartphone communicates with both a keyfob for a vehicle and with a server.

5. The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

6. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;

- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

7. **Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention to be examined** even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected invention.**

8. The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

9. If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

10. Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIONNE PENDLETON whose telephone number is (571)272-7497. The examiner can normally be reached on M-F 9a-5pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private



Application/Control Number: 16/356,313  
Art Unit: 2688

Page 6

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DIONNE PENDLETON/  
Primary Examiner, Art Unit 2688





## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

## BIB DATA SHEET

CONFIRMATION NO. 9197

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
16/356,313	03/18/2019	340	2688	16223-00351		
<b>APPLICANTS</b> HY-KO PRODUCTS COMPANY, Northfield, OH <b>INVENTORS</b> William R. Mutch, North Ridgeville, OH; Justin A. Gill, Northfield, OH; Thomas F. Fiore, Willowick, OH; Randall A. Porras, Avon, OH; Benjamin Iwasevic, Northfield, OH; <b>** CONTINUING DATA *****</b> This appln claims benefit of 62/644,545 03/18/2018 <b>** FOREIGN APPLICATIONS *****</b> <b>** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY **</b>						
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Met after Allowance	<b>STATE OR COUNTRY</b>	<b>SHEETS DRAWINGS</b>	<b>TOTAL CLAIMS</b>	<b>INDEPENDENT CLAIMS</b>
Verified and /DIONNE PENDLETON/ Acknowledged Examiner's Signature		Initials	OH	8	9	3
<b>ADDRESS</b> MCDONALD HOPKINS LLC 600 Superior Avenue, East Suite 2100 CLEVELAND, OH 44114-2653 UNITED STATES						
<b>TITLE</b> DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES						
<b>FILING FEE RECEIVED</b> 865	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: William R. Mutch                      Group Art Unit: 2689  
Serial No.: 16/356,313                                      Examiner: Dionne Pendleton  
Filing Date: March 18, 2019                              Docket No.: 16223-00351  
Confirmation No.: 9197

Title: DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR  
REPLICATION OF VEHICLE ACCESS DEVICES

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**RESPONSE TO RESTRICTION REQUIREMENT**

Dear Sir:

Applicant acknowledges receipt of the March 31, 2020 Restriction Requirement, setting a shortened statutory period of reply of two months. As this Response is being filed electronically on September 29, 2020, along with a three month extension, applicant believes no additional fees are due. However, if any fees are required for filing this Response, please charge such fees to our Deposit Account No. 13-0265 identifying attorney docket number 16223-00351.

Applicant respectfully requests that the Patent Office consider the following Amendments and Remarks in examining the present application.

## CLAIMS

1. (Original) A method for duplicating an access device, comprising:

providing a first computing device configured to communicate with a t/r device, the t/r device including an antenna for communicating with a master key for a vehicle;

running a cloning application associated with said t/r device on the first computing device, the cloning application configured to electronically communicate with the t/r device;

retrieving, by the t/r device, security information from said master key;

communicating, by the cloning application, the security information for said master key to said network server;

generating, by the network server, a cloning security information;

communicating, by the network server, the cloning security information to the cloning application; and

transmitting, by the cloning application, the cloning security information to the t/r device to program an electronic access device of a generally programmable duplicate key with the cloning security information.

2. (Original) The method of claim 1, further comprising: in response to retrieving, by the t/r device, security information from said master key, determining, by the cloning application, whether the security information is encrypted and generating the cloning security information.

3. (Original) The method of claim 1, further comprising: in response to communicating, by the cloning application, the security information for said master key to said network server, determining, by the network server, whether the security information is encrypted; and generating the cloning security information.

4. (Original) The method of claim 1, further comprising: capturing at least one image of a blade of said master key, communicating said at least one image of said blade to said network server, cutting a duplicate blade of a generally programmable duplicate key, and providing said generally programmable duplicate key to said customer.

5. (Original) The method of claim 1, further comprising: placing said generally programmable duplicate key in proximity with said vehicle, sampling communications between said generically programmable duplicate key and said vehicle to generate authentication sample data.

6. (Original) A vehicle access device duplication system comprising: a non-transitory computer-readable storage medium storing executing instructions that, when executed, cause a cloning application to perform steps comprising:

determining that a first device of a customer is communicating with a t/r device, the t/r device including an antenna ring for communicating with an access device for a vehicle;

retrieving security information from said access device;

communicating the security information for said access device to a network server;

generating a cloning security information; and

transmitting the cloning security information to the t/r device to program a duplicate access device with the cloning security information; and

a processor configured to execute the instructions.

7. (Withdrawn) A transmitter/receiver device comprising:

a housing including a computing device communication module, a battery, and a vehicle access device communication module; and

an antenna configured to communicate with an access device for a vehicle.

8. (Withdrawn) The transmitter/receiver device of claim 7 wherein said antenna includes a first coil configured to communicate on one frequency with said access device and a clonable duplicate key that operates on a first frequency.

9. (Withdrawn) The transmitter/receiver device of claim 8 wherein said antenna includes a second coil configured to communicate on a second frequency with said master key for a vehicle and a clonable duplicate key that operates on a second frequency.

## REMARKS

In the Restriction Requirement dated March 31, 2020, the Examiner indicates that election to one of the following inventions is required under 37 U.S.C. §121:

- Group I, claims 1-6, drawn to a system and method for duplicating an access device comprising a transmitter/receiver device; or
- Group II, claims 6-9, drawn to a transmitter/receiver device.

### Election

In response thereto, Applicant elects to prosecute Group I, Claims 1-6 without traverse. This election is being made to sufficiently meet the requirements of a timely response to the subject office action. Applicant has withdrawn Group II without prejudice, but reserves the right to rejoin unelected claims if a linking claim is found allowable.

### CONCLUSION

In light of the foregoing, applicant submits that the application is now in condition for allowance and earnestly request indication of such. If the Examiner has any questions pertaining to the above, then the undersigned attorney would welcome a phone call to provide any further clarification or a formal interview.

Respectfully submitted,

Date: September 29, 2020

/Mark J. Masterson/  
Mark J. Masterson, Reg. No. 71,886  
McDonald Hopkins LLC  
600 Superior Avenue, E.,  
Suite 2100  
Cleveland, OH 44114-2653  
(216) 348-5427



Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>		16356313		
<b>Filing Date:</b>		18-Mar-2019		
<b>Title of Invention:</b>		DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		
<b>First Named Inventor/Applicant Name:</b>		William R. Mutch		
<b>Filer:</b>		Mark Jason Masterson/Danielle Mueller		
<b>Attorney Docket Number:</b>		16223-00351		
Filed as Small Entity				
<b>Filing Fees for Utility under 35 USC 111(a)</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 4 months with \$0 paid	2254	1	1100	1100
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>1100</b>

Electronic Acknowledgement Receipt	
<b>EFS ID:</b>	40704539
<b>Application Number:</b>	16356313
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	9197
<b>Title of Invention:</b>	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES
<b>First Named Inventor/Applicant Name:</b>	William R. Mutch
<b>Customer Number:</b>	33772
<b>Filer:</b>	Mark Jason Masterson/Danielle Mueller
<b>Filer Authorized By:</b>	Mark Jason Masterson
<b>Attorney Docket Number:</b>	16223-00351
<b>Receipt Date:</b>	29-SEP-2020
<b>Filing Date:</b>	18-MAR-2019
<b>Time Stamp:</b>	15:02:15
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$1100
RAM confirmation Number	E20209SF02323946
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		9132529.pdf	107784	yes	5
			0c7b4a8519c2ac81480ac18dd691d5893e3d1d02		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Response to Election / Restriction Filed		1	1	
	Claims		2	4	
	Applicant Arguments/Remarks Made in an Amendment		5	5	
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31052	no	2
			ff503f77fcfcfdb6743e168d410087e9731d00c8		
Warnings:					
Information:					
Total Files Size (in bytes):			138836		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/356,313	03/18/2019	William R. Mutch	16223-00351	9197
33772 7590 10/16/2020 MCDONALD HOPKINS LLC 600 Superior Avenue, East Suite 2100 CLEVELAND, OH 44114-2653			EXAMINER PENDLETON, DIONNE	
			ART UNIT 2689	PAPER NUMBER
			NOTIFICATION DATE 10/16/2020	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipmailbox@mcdonaldhopkins.com



## **DETAILED ACTION**

### ***Notice of Pre-AIA or AIA Status***

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

### ***Claim Status***

2. Claims 1-9 are currently pending.

### ***Election/Restrictions***

3. Applicant's election without traverse of claims 1-6 in the reply filed on 09/29/2020 is acknowledged.

Claims 7-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 09/29/2020.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of 35 U.S.C. 112(b):  
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claim 2** is rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the



subject matter which the inventor or a joint inventor (or for applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention.

With respect to claim 2,

Paragraph [0038] of the Applicant's disclosure teaches an alternative embodiment wherein cloning security information may be generated directly on the computing device 100. The disclosure fails however, to teach an embodiment wherein cloning security information is generated by both the computing device (claim 2) and the network server (claim 1). Correction/clarification is required.

***Claim Rejections - 35 USC § 103***

6. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

7. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-6** is/are rejected under 35 U.S.C. 103 as being unpatentable over **Moore (U.S. 2016/0321632)** in view of **Treharne (U.S. Patent 6,501,369)**.

**Regarding claims 1 and 6,**

MOORE teaches a method for duplicating an access device, comprising:

providing a first computing device ([0051] teaches element 220) configured to communicate with a t/r device (key duplicate device 110) for communicating with a master key ([0058] teaches inserting a master key);

running a cloning application associated with said t/r device on the first computing device ([0108] teaches a proprietary application, accessible by the user device), the cloning application configured to electronically communicate with the t/r device ([0051] teaches that the application allows device 220 communicate with system components (including element 110) over network 240);

retrieving, by the t/r device, security information from said master key ([0060] teaches obtaining a bitting pattern of the inserted key and storing said pattern; [0059] teaches determining the proper key blank or capturing an image of the key);

communicating, by the cloning application, the security information for said master key to said network server (Fig. 8 illustrates that the customer device, via the proprietary application, communicates PIN data, at least in part corresponding to security information said application being accessible via network 540);

generating, by the network server, a cloning security information([0072] teaches that key data is stored within server 230, the act of writing key data to the server memory is interpreted as corresponding to “generating cloning security information”);

communicating, by the network server, the cloning security information to the cloning application (Fig. 8 teaches that a third party server shall communicate

**authentication confirmation (corresponding at least in-part to *cloning security information*) to the proprietary application on the customer device); and**

transmitting, by the cloning application, the cloning security information to the t/r device (**Fig. 8 teaches that the proprietary application sends PIN information to the kiosk 110 (which corresponds to the t/r device))** to create the duplicate access device.

Moore fails to expressly teach that the t/r device including an antenna ring for communicating with a master key for a vehicle; and that cloning security information is used to program an electronic access device of a generally programmable duplicate key.

TREHARNE teaches a vehicle security system having unlimited key programming capabilities and comprising a t/r device (**see elements 16 and 18 in fig. 1**) including an antenna ring (**18**) for communicating with a master key (see anyone of the *existing keys* disclosed by Treharne) for a vehicle (**column 3:19-26**); and that cloning security information is used to program an electronic access device of a generally programmable duplicate key (**column 5:44-62 teach that duplicate keys (see the “un-programmed key”) can be programmed using previously acquired key data (see “existing key”; also see “program security code 42”) via transmitting a signal to the duplicate key’s transponder 38, as shown in fig. 1).**

Before the effective filing date of the invention, it would have been obvious to modify the device of Moore per the teachings of Treharne, including a structure within the t/r means of Moore which is capable of bi-directional data communication with a hybrid key i.e, a key having both mechanical and logical components, thus expanding

the duplication capabilities of the kiosk device and also providing a means of selectively and securely programming an unlimited number of hybrid keys.

**Regarding claim 2,**

Moore teaches that in response to retrieving, by the t/r device, security information from said master key **([0060] teaches obtaining a biting pattern of the inserted key and storing said pattern; [0059] teaches determining the proper key blank or capturing an image of the key)**; *as best understood with regard to the U.S.C. 112 second paragraph rejection above*, determining, by the cloning application, whether the security information is encrypted and generating the cloning security information.

**Regarding claim 3,**

Moore teaches that in response to communicating, by the cloning application, the security information for said master key to said network server **(Fig. 8 of Moore illustrates that the customer device, via the proprietary application, communicates PIN data, at least in part corresponding to security information said application being accessible via network 540)**; determining, by the network server, whether the security information is encrypted **([0013] teaches that the one or more processor devices may also be configured to decrypt the previously stored key information, thus teachings a means for determining encryption)**; and generating the cloning security information **([0012] teaches transmitting encrypted key information and information associated with the identity of the user to a remote device associated with the user.)**

**Regarding claim 4,**

Moore teaches capturing at least one image of a blade of said master key, communicating said at least one image of said blade to said network server ([0044] of **Moore teaches one or more laser scanners, which may be configured to scan the blade of the received master key**), cutting a duplicate blade of generally programmable duplicate key, and providing said generally programmable duplicate key to said customer ([0045] **teaches a key cutting module 122 which may contain various devices and systems, known in the art, and configured to cut a key blank identified by key identification module 120.**)

**Regarding claim 5,**

Treharne teaches placing said generally programmable duplicate key in proximity with said vehicle, sampling communications between said generically programmable duplicate key and said vehicle to generate authentication sample data (in column 6:33-46, Treharne teaches **that upon programming new keys, a user turns switch 16 to the "OFF" position for a predetermined period of time (e.g., at least 10 seconds) as a cycling process so that the new security code may be programmed into the transponder 38 as code 42 wherein controller 12 reads identification code 40 (corresponding to sampling communications) to ensure that two different keys are being cycled.**)

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIONNE PENDLETON whose telephone number is (571)272-7497. The examiner can normally be reached on M-F 9a-5pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DIONNE PENDLETON/  
Primary Examiner, Art Unit 2689

<b><i>Notice of References Cited</i></b>	Application/Control No. 16/356,313		Applicant(s)/Patent Under Reexamination Mutch et al.	
	Examiner DIONNE PENDLETON		Art Unit 2689	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20160321632-A1	11-2016	Moore; Robert Clark	G06F21/6218	1/1
*	B	US-6501369-B1	12-2002	Treharne; William David	B60R25/24	307/10.5
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.


U.S. Patent and Trademark Office  
PTO-892 (Rev. 01-2001)

**Notice of References Cited**

Part of Paper No. 20201010






<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

CPC - Searched*		
Symbol	Date	Examiner
( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	10/10/2020	DP
( (G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	10/10/2020	DP
( (G07C2009/00793 OR G07C2209/62 OR G07C9/00896 OR G07C9/00944).CPC. )	10/10/2020	DP

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

--	--


<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

US Classification - Searched*			
Class	Subclass	Date	Examiner

\* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.


Search Notes		
Search Notes	Date	Examiner
( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	10/10/2020	DP
( (G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	10/10/2020	DP
( (G07C2009/00793 OR G07C2209/62 OR G07C9/00896 OR G07C9/00944).CPC. )	10/10/2020	DP
ring near5 antenna	10/10/2020	DP

--	--

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

(ring near5 antenna) with (security key credential) with key(ring near5 antenna) with (copy receiv\$4 transmit\$4 send\$4) near5 ( security key credential) with key	10/10/2020	DP
(transponder receiv\$4 ((coil ring) near5 antenna) read\$4 scan\$4) near5 (security key credential) with (fob (access adj2 device) key)	10/10/2020	DP
((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information ) with (antenna coil ring " ring-shap"\$3)) and ((antenna coil) near8 (ring "ring-shap"\$3))	10/10/2020	DP
((duplicat\$4 clon\$3) near5 (key fob token keycard card tag)) and (( read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information) )	10/10/2020	DP
((read\$4) near5 (tag security key credential)) and ((send\$4 transmit \$4 receiv\$4) near8 (tag security key credential) near8 (computer (( user mobile) adj2 (device terminal unit)))) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (server))	10/10/2020	DP
((read\$4) near5 (tag security key credential)) and (vehicle automobile car) and ((read\$4 scan\$4) near3 (master adj2 (key credential)) )	10/10/2020	DP
S9 and (copy duplicat\$4 ) near5 (security key credential) with server( clon\$4 duplicat\$4 copy\$4) near5 (master adj2 (key credential)) and ( vehicle automobile car) and ((read\$4 scan\$4) near3 (master adj2 ( key credential)) )	10/10/2020	DP
((duplicat\$4 clone cloning cloned) near5 (key fob token keycard card tag)) and ((vehicle automobile car) with (key fob token keycard card tag))	10/10/2020	DP
((duplicat\$4 clon\$3) near5 (key fob token keycard card tag)) and (( vehicle automobile car) with (key fob token keycard card tag))	10/10/2020	DP
((read\$4) near5 (tag key )) and ((send\$4 transmit\$4 receiv\$4) near8 ( tag security key credential) near8 (computer ((user mobile) adj2 ( device terminal unit)))) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (server))	10/10/2020	DP
((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag ) with (ring "ring-shap"\$3))	10/10/2020	DP
((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information ) with (antenna coil)) and (( antenna coil) near8 (ring "ring-shap"\$3))	10/10/2020	DP

--	--

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

--	--



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

## BIB DATA SHEET

CONFIRMATION NO. 9197

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
16/356,313	03/18/2019	340	2689	16223-00351		
<b>APPLICANTS</b> HY-KO PRODUCTS COMPANY, Northfield, OH <b>INVENTORS</b> William R. Mutch, North Ridgeville, OH; Justin A. Gill, Northfield, OH; Thomas F. Fiore, Willowick, OH; Randall A. Porras, Avon, OH; Benjamin Iwasevic, Northfield, OH; <b>** CONTINUING DATA *****</b> This appln claims benefit of 62/644,545 03/18/2018 <b>** FOREIGN APPLICATIONS *****</b> <b>** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY **</b>						
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Met after Allowance	<b>STATE OR COUNTRY</b>	<b>SHEETS DRAWINGS</b>	<b>TOTAL CLAIMS</b>	<b>INDEPENDENT CLAIMS</b>
Verified and /DIONNE PENDLETON/ Acknowledged Examiner's Signature		Initials	OH	8	9	3
<b>ADDRESS</b> MCDONALD HOPKINS LLC 600 Superior Avenue, East Suite 2100 CLEVELAND, OH 44114-2653 UNITED STATES						
<b>TITLE</b> DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES						
<b>FILING FEE RECEIVED</b> 865	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees		
				<input type="checkbox"/> 1.16 Fees (Filing)		
				<input type="checkbox"/> 1.17 Fees (Processing Ext. of time)		
				<input type="checkbox"/> 1.18 Fees (Issue)		
				<input type="checkbox"/> Other _____		
				<input type="checkbox"/> Credit		

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)

Approved for use through 11/30/2020. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	16356313
	Filing Date	2019-03-18
	First Named Inventor	Mutch
	Art Unit	2683
	Examiner Name	ZIMMERMAN, BRIAN A
	Attorney Docket Number	16223-00351

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/D.P/	1	9963908		2018-05-08	BASS	
/D.P/	2	7849721		2010-12-14	BASS	
/D.P/	3	7890878		2011-02-15	BASS	
/D.P/	4	8634655		2014-01-21	THOMPSON	
/D.P/	5	8644619		2014-02-04	THOMPSON	
/D.P/	6	9818041		2017-11-14	MUTCH	
If you wish to add additional U.S. Patent citation information please click the Add button.						Add
U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		16356313
	Filing Date		2019-03-18
	First Named Inventor	Mutch	
	Art Unit	2683	
	Examiner Name	ZIMMERMAN, BRIAN A	
	Attorney Docket Number	16223-00351	

	1				
--	---	--	--	--	--

If you wish to add additional U.S. Published Application citation information please click the Add button.

#### FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> i	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							

If you wish to add additional Foreign Patent Document citation information please click the Add button.

#### NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1		

If you wish to add additional non-patent literature document citation information please click the Add button.

#### EXAMINER SIGNATURE

Examiner Signature	/DIONNE PENDLETON/	Date Considered	10/10/2020
--------------------	--------------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	16356313
Filing Date	2019-03-18
First Named Inventor	Mutch
Art Unit	2683
Examiner Name	ZIMMERMAN, BRIAN A
Attorney Docket Number	16223-00351

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

**SIGNATURE**

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/David B. Cupar/	Date (YYYY-MM-DD)	2019-08-07
Name/Print	David B. Cupar	Registration Number	47510

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**



## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

## EAST Search History

### EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1	16/356313	US-PGPUB; USPAT	OR	OFF	2020/10/09 22:57
S2	8,094	( (G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	US-PGPUB; USPAT	OR	OFF	2020/10/09 22:58
S4	103	S2 and S3	US-PGPUB; USPAT	OR	OFF	2020/10/09 22:59
S3	1,442	(clon\$4 duplicat\$4 copy\$4) near5 (security key credential) same (server network) and (vehicle automobile car)	US-PGPUB; USPAT	OR	OFF	2020/10/09 22:59
S5	1	S4 and ring near5 antenna	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:00
S7	67	(ring near5 antenna) with (security key credential) with key	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:08
S6	1	S2 and (ring near5 antenna) with (security key credential) with key	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:08
S8	6	(ring near5 antenna) with (copy receiv\$4 transmit\$4 send\$4) near5 (security key credential) with key	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:09
S9	251,544	(transponder receiv\$4 ((coil ring) near5 antenna) read\$4 scan\$4) near5 (security key credential) with (fob (access adj2 device) key)	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:16
S11	46	S2 and S10	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:17
S10	2,112	S9 and (copy duplicat\$4 ) near5 (security key credential) with server	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:17
S12	1	(US-20120038453-\$).did.	US-PGPUB	OR	OFF	2020/10/09 23:21
S13	5,435	( (G07C2009/00793 OR G07C2209/62 OR G07C9/00896 OR G07C9/00944).CPC. )	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:22

S14	61	((clon\$4 duplicat\$4 copy\$4) near5 (master adj2 (key credential)) and (vehicle automobile car) and ((read\$4 scan\$4) near3 (master adj2 (key credential)) )	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:41
S15	153	((read\$4) near5 (tag security key credential)) and (vehicle automobile car) and ((read\$4 scan\$4) near3 (master adj2 (key credential)) )	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:48
S16	5,965	((read\$4) near5 (tag security key credential)) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (computer ((user mobile) adj2 (device terminal unit)))) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (server))	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:52
S18	247	S16 and S17	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:53
S17	9,840	S2 S13	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:53
S19	135	S18 and (vehicle automobile car)	US-PGPUB; USPAT	OR	OFF	2020/10/09 23:54
S20	5,294	((read\$4) near5 (tag key )) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (computer ((user mobile) adj2 (device terminal unit)))) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (server))	US-PGPUB; USPAT	OR	ON	2020/10/09 23:56
S21	90	S19 and S20	US-PGPUB; USPAT	OR	ON	2020/10/09 23:59
S22	2,198	((duplicat\$4 clon\$3) near5 (key fob token keycard card tag)) and ((vehicle automobile car) with (key fob token keycard card tag))	US-PGPUB; USPAT	OR	OFF	2020/10/10 01:10
S23	2,894	((duplicat\$4 clone cloning cloned) near5 (key fob token keycard card tag)) and ((vehicle automobile car) with (key fob token keycard card tag))	US-PGPUB; USPAT	OR	ON	2020/10/10 01:11
S24	69	S23 and ((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag ) with (ring "ring-shap"\$3))	US-PGPUB; USPAT	OR	ON	2020/10/10 01:13
S25	69	S23 and ((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information ) with (ring "ring-shap"\$3))	US-PGPUB; USPAT	OR	ON	2020/10/10 01:14

S27	22	S23 and ((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information ) with (antenna coil ring "ring-shap"\$3)) and ((antenna coil) near8 (ring "ring-shap"\$3))	US-PGPUB; USPAT	OR	ON	2020/10/10 01:15
S26	22	S23 and ((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information ) with (antenna coil)) and ((antenna coil) near8 (ring "ring-shap"\$3))	US-PGPUB; USPAT	OR	ON	2020/10/10 01:15
S28	625	S23 and ((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information ) with (antenna coil ring "ring-shap"\$3))	US-PGPUB; USPAT	OR	ON	2020/10/10 01:37
S30	111	S23 and S29	US-PGPUB; USPAT	OR	ON	2020/10/10 01:44
S29	328	S20 and ((duplicat\$4 clon\$3) near5 (key fob token keycard card tag)) and ((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information) )	US-PGPUB; USPAT	OR	ON	2020/10/10 01:44
L2	0	1 and server same mobile adj2 device	US-PGPUB; USPAT	OR	ON	2020/10/10 14:49
L1	1	(US-20160321632-\$).did.	US-PGPUB	OR	OFF	2020/10/10 14:49
L3	1	1 and server same "220"	US-PGPUB; USPAT	OR	ON	2020/10/10 14:50
L8	33	((clon\$4 duplicat\$4 read\$4 copy\$4) near8 (key fob token keycard card tag )) same ((ring "ring-shap"\$3) with (antenna coil)) and ((vehicle automobile car) with (key fob token keycard card tag) )	US-PGPUB; USPAT	OR	OFF	2020/10/10 15:31
L9	23	((clon\$4 duplicat\$4 read\$4 copy\$4) near5 (key fob token keycard card tag )) same ((ring "ring-shap"\$3) with (antenna coil)) and ((vehicle automobile car) with (key fob token keycard card tag) )	US-PGPUB; USPAT	OR	OFF	2020/10/10 15:52
L10	0	((clon\$4 duplicat\$4 ) near5 (key fob token keycard card tag )) same ((ring "ring-shap"\$3) with (antenna coil)) and ((vehicle automobile car) with (key fob token keycard card tag) ) and (read\$4 near5 (key fob token keycard card tag) )	US-PGPUB; USPAT	OR	OFF	2020/10/10 15:59

L11	22	((clon\$4 duplicat\$4 ) near5 (key fob token keycard card tag )) and ((ring "ring-shap"\$3) with (antenna coil)) and ((vehicle automobile car) with (key fob token keycard card tag ) and (read\$4 near5 (key fob token keycard card tag ))	US-PGPUB; USPAT	OR	OFF	2020/10/10 16:00
L13	17	((clon\$4 duplicat\$4 ) near5 (key fob token keycard card tag )) and (ring "ring-shap"\$3) and (dealership)	US-PGPUB; USPAT	OR	OFF	2020/10/10 16:34
L12	0	((clon\$4 duplicat\$4 ) near5 (key fob token keycard card tag )) and ((ring "ring-shap"\$3) with (antenna coil)) and (dealership)	US-PGPUB; USPAT	OR	OFF	2020/10/10 16:34
L14	64	((clon\$4 duplicat\$4 copy\$3 cop\$3) near5 (key fob token keycard card tag )) and (ring "ring-shap"\$3) and (dealership)	US-PGPUB; USPAT	OR	OFF	2020/10/10 16:36
L15	0	((clon\$4 duplicat\$4 copy\$3 cop\$3) near5 (key fob token keycard card tag )) and ((ring "ring-shap"\$3) with (antenna coil)) and (dealership)	US-PGPUB; USPAT	OR	OFF	2020/10/10 16:37
L16	2,307	((clon\$4 duplicat\$4 copy\$3 cop\$3) near5 (key fob token keycard card tag )) and ((vehicle automobile car dealer dealership) with (key fob token keycard card tag ) and (reader near5 (key fob token keycard card tag ))	US-PGPUB; USPAT	OR	OFF	2020/10/10 17:40
L19	257,745	( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR	US-PGPUB; USPAT	OR	OFF	2020/10/10 17:41

		B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )				
L17	12	(US-20190287332-\$ or US-20160103780-\$ or US-20120038453-\$ or US-20140152421-\$ or US-20150049181-\$ or US-20150379796-\$ or US-20180262891-\$ or US-20180245559-\$ or US-20130214898-\$ or US-20160321632-\$ or US-20090043450-\$ or US-20160004892-\$).did.	US-PGPUB	OR	OFF	2020/10/10 17:41
L21	759	16 and 19	US-PGPUB; USPAT	OR	OFF	2020/10/10 17:42
L23	0	L22 and (ngt nfc nf)	US-PGPUB; USPAT	OR	OFF	2020/10/10 17:57
L22	1	16/356313	US-PGPUB; USPAT	OR	OFF	2020/10/10 17:57
L24	184	((clon\$4 duplicat\$4 copy\$3 cop\$3) near5 (key fob token keycard card tag )) and ((vehicle automobile car dealer dealership) with (key fob token keycard card tag ) and ((nf nft "near field" "near-field") near5 (key fob token keycard card tag ))	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:05
L25	10	24 and ((ring "ring-shap"\$3) with (antenna coil))	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:06
L26	69	((clon\$4 duplicat\$4 copy\$3 cop\$3) near5 (key fob token keycard card tag )) same (vehicle automobile car dealer dealership) and ((nf nft "near field" "near-field") near5 (key fob token keycard card tag ))	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:09
L27	0	26 and ((ring "ring-shap"\$3) with (antenna coil))	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:10

L28	162	((clon\$4 duplicat\$4 copy\$3 cop\$3) near5 (key fob token keycard card tag )) and ((nf nft "near field" "near-field") near5 (key fob token keycard card tag ) same antenna)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:18
L30	14	21 and 28	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:19
L29	0	((clon\$4 duplicat\$4 copy\$3 cop\$3) near5 (key fob token keycard card tag )) and ((nf nft "near field" "near-field") near5 (key fob token keycard card tag ) same antenna same ring)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:19
L31	14	((clon\$4 duplicat\$4 copy\$3 cop\$3) near5 (key fob token keycard card tag )) and ((nf nft "near field" "near-field") near5 (key fob ("e" smart) adj2 key) tag ) and ring with antenna)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:27
L32	0	((clon\$4 duplicat\$4 copy\$3 cop\$3) same (dealer dealership automobile car vehicle)) and ((nf nft "near field" "near-field") near5 (key fob ("e" smart) adj2 key) tag ) and ring with antenna)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:28
L34	0	((duplicat\$4 clon\$3 copy copy\$4) near5 (key )) and ((read\$4 scan\$4 detect\$4 receiv\$4 sens\$3 ) near8 (key fob token keycard card tag credential\$3 security information) ) and ((nf nft "near field" "near-field") same ring same antenna)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:33
L33	0	((duplicat\$4 clon\$3 copy copy\$4) near5 (key )) and ((read\$4 scan\$4 detect\$4 receiv\$4 sens\$3 ) near8 (key fob token keycard card tag credential\$3 security information) ) and ((nf nft "near field" "near-field") same ring with antenna)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:33
L35	0	((duplicat\$4 clon\$3 copy copy\$4) near5 key ) and (key fob token keycard card tag credential\$3 security) same ((nf nft "near field" "near-field") same ring same antenna) and (dealer dealership automobile car vehicle)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:35
L37	0	36 and ((nf nft "near field" "near-field") same ring same antenna) and (dealer dealership automobile car vehicle)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:36
L36	5,674	((duplicat\$4 clon\$3 copy copy\$4) near5 key ) and (dealer dealership automobile car vehicle)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:36

L39	59	((duplicat\$4 clon\$3 copy copy\$4) near5 key ) and (key fob token keycard card tag credential\$3 security) same ((nf nft "near field" "near-field") same antenna) and (dealer dealership automobile car vehicle)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:37
L38	103	36 and ((nf nft "near field" "near-field") same antenna)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:37
L40	8	hybrid adj3 key same (electron\$3 and mechanic\$3)	US-PGPUB; USPAT	OR	OFF	2020/10/10 18:46
L42	0	(g07c2009/00992).cpc. and ((duplicat\$4 clon\$3 copy copy\$4) near5 key ).clm. and (dealer dealership automobile car vehicle)	US-PGPUB; USPAT	OR	OFF	2020/10/10 19:04
L41	6	(g07c2009/00992).cpc. and ((duplicat\$4 clon\$3 copy copy\$4) near5 key ) and (dealer dealership automobile car vehicle)	US-PGPUB; USPAT	OR	OFF	2020/10/10 19:04
L43	0	(g07c2009/00992).cpc. and ((duplicat\$4 clon\$3 copy copy\$4) near5 key ).clm. and (nf nft "near field" "near-field") same antenna same (key fob token keycard card tag credential\$3 security information)	US-PGPUB; USPAT	OR	OFF	2020/10/10 19:06
L44	2	(US-20160321632-\$).did. or (US-6501369-\$).did.	US-PGPUB; USPAT	OR	OFF	2020/10/10 20:46
L45	2	44 and encrypt\$4	US-PGPUB; USPAT	OR	OFF	2020/10/10 20:47
L47	1	L22 and cloning adj security adj information	US-PGPUB; USPAT	OR	OFF	2020/10/10 20:51
L46	0	1 and cloning adj security adj information	US-PGPUB	OR	OFF	2020/10/10 20:51
L48	1	L22 and cloning adj security adj information same (computing customer) adj2 device	US-PGPUB; USPAT	OR	OFF	2020/10/10 20:52

10/10/2020 10:28:08 PM

C:\Users\dharvey1\Documents\EAST\Workspaces\16356313.wsp



PATENT APPLICATION  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application:	William R. Mutch	Group Art Unit:	2689
Serial No.:	16/356,313	Examiner:	Dionne Pendleton
Filing Date:	March 18, 2019	Docket No.:	16223-00351
		Confirmation No.:	9197

Title: DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**RESPONSE TO NON-FINAL OFFICE ACTION DATED OCTOBER 16, 2020**

Dear Commissioner:

Applicant acknowledges the Non-Final Office Action dated October 16, 2020, and submits this Response along with a request for an appropriate extension of time with the corresponding fees. Please consider the following Amendments and Remarks in examining the present application. Applicant believes no additional fees appear due. However, if any fees are required for filing this Response, please charge such fees to our Deposit Account No. 13-0265, noting attorney docket number 16223-00351.

**Amendments** to the Claims begin on page 2 of this Response.

**Remarks** begin on page 5 of this Response

## CLAIMS

1. (Currently Amended) A method for duplicating an access device, comprising:

providing a first computing device configured to communicate with a t/r device, the t/r device including an antenna for wirelessly communicating with a master key for a vehicle;

running a cloning application associated with said t/r device on the first computing device, the cloning application configured to electronically communicate with the t/r device;

retrieving, by the antenna of the t/r device, security information ~~from~~ digitally stored by said master key;

communicating, by the cloning application, the security information for said master key to said network server;

generating, by the network server, a cloning security information;

communicating, by the network server, the cloning security information to the cloning application; and

transmitting, by the cloning application, the cloning security information to the t/r device to program an electronic access device of a generally programmable duplicate key with the cloning security information.

2. (Original) The method of claim 1, further comprising: in response to retrieving, by the t/r device, security information from said master key, determining, by the cloning application, whether the security information is encrypted and generating the cloning security information.

3. (Original) The method of claim 1, further comprising: in response to communicating, by the cloning application, the security information for said master key to said network server, determining, by the network server, whether the security information is encrypted; and generating the cloning security information.

4. (Original) The method of claim 1, further comprising: capturing at least one image of a blade of said master key, communicating said at least one image of said blade to said network server, cutting a duplicate blade of a generally programmable duplicate key, and providing said generally programmable duplicate key to said customer.

5. (Original) The method of claim 1, further comprising: placing said generally programmable duplicate key in proximity with said vehicle, sampling communications between said generically programmable duplicate key and said vehicle to generate authentication sample data.

6. (Currently Amended) A vehicle access device duplication system comprising: a non-transitory computer-readable storage medium storing executing instructions that, when executed, cause a cloning application to perform steps comprising:

determining that a first device of a customer is communicating with a t/r device, the t/r device including an antenna ring for wirelessly communicating with an access device for a vehicle;

retrieving security information ~~from~~ digitally stored by said access device;

communicating the security information for said access device to a network server;

generating a cloning security information; and

transmitting the cloning security information to the t/r device to program a duplicate access device with the cloning security information; and

a processor configured to execute the instructions.

7-9. (Canceled)

10. (New) A method for duplicating an access device, comprising:

providing a cloning application for a smartphone configured to communicate with a t/r device separate from the smartphone, the t/r device including an antenna for wirelessly communicating with a first key for a vehicle;

retrieving, via the antenna of the t/r device, security information digitally stored by the first key;

in response to retrieving the security information from the first key, decrypting the security information by an encryption engine of the cloning application;

generating, by the cloning application, a cloning security information based on the decrypted security information;

transmitting, by the cloning application, the cloning security information to the t/r device to program an electronic access device of a second key with the cloning security information.

11. (New) The method of claim 10, further comprising, before decrypting the security information, communicating customer data and vehicle data to a network server to positively associate a customer associated with the customer data with a vehicle associated with the vehicle data.

## REMARKS

Prior to this Response, claims 1-9 were pending in the present application. With this Response, claims 1 and 6 have been amended. Claims 7-9 have been canceled without prejudice to their future prosecution. New claims 10 and 11 have been added. No new matter has been added. Accordingly, claims 1-6, 10, and 11 are presently pending. Applicant respectfully requests reconsideration and allowance of the pending claims in view of the amendments and arguments presented herein.

### Rejections Under 35 U.S.C. § 112

Claims 2 was rejected under 35 U.S.C. § 112(b) as allegedly failing to distinctly claim the subject matter which the inventor regards as the invention. Specifically, the Office Action alleges that the disclosure fails to teach an embodiment wherein cloning security information is generated by both the computing device and the network server. Applicant respectfully disagrees. The disclosure states:

The *network server may include an encryption engine* and a secure storage. The encryption engine may identify if the security information is encrypted. If so, the encryption engine may process the security information of the electronic access device of the master key to generate cloning security information. The cloning security information may be stored on the secure storage along with the customer data and vehicle data. In one embodiment, the *cloning application may be programmed to include a encryption engine* such that the security information may be processed directly on the computing device and may be stored on a local secure storage module. In this embodiment, the security information 118 may be encrypted or, the security information may be a fixed code type and may not require the encryption engine.

*Applicant's Specification*, para. [0038] (emphasis added). The specification states that the network server may include an encryption engine. It also states that, in one embodiment, the cloning application may include an encryption engine. Nowhere in the specification states that the location of an encryption engine is mutually exclusive. That is, the specification does not state, nor does it imply, that the embodiment where the cloning application includes an encryption engine is necessarily an alternative embodiment to one where the network server includes an encryption engine. Thus, the specification supports (i) only the network server having an encryption engine, (ii) both the network server and the cloning application having an encryption engine, and (iii) only the cloning application having an encryption engine. *See id.*, FIG. 4. Accordingly, the specification supports claim 2. Applicant respectfully requests that the rejection under 35 U.S.C. § 112(b) be withdrawn.

### **Rejections Under 35 U.S.C. § 103**

Independent claims 1 and 6 was rejected under 35 U.S.C. § 103 as allegedly unpatentable over Moore et al (U.S. Patent App. Pub. No. 2016/0321632) in view of Treharne (U.S. Patent No. 6,501,369).

#### **Claim 1**

Applicant has amended claim 1 and respectfully submits that it is now in condition for allowance. Claim 1 sets forth, in part, retrieving, by the antenna of the t/r device, security information digitally stored by said master key, communicating, by the cloning application, the security information for said master key to said network server, generating, by the network server, a cloning security information, and communicating, by the network server, the cloning security information to the cloning application. None of Moore nor Treharne, taken singly or in combination, teach or suggest such features.

As an initial matter, claim terms must be "given their broadest reasonable interpretation consistent with the specification." MPEP 2111. However, the broadest reasonable interpretation is not the broadest possible interpretation, nor is it an inconsistent interpretation of the term. *Id.* From this perspective, Applicant submits that the interpretation of the term "security information" in the Office Action is not reasonable as overly broad. Applicant's Specification describes the security information as the encrypted or unencrypted code on a vehicle key that interacts with, for example, the immobilizer to allow ignition of the vehicle. *Applicant's Specification* at paras. [0024], [0038], and [0045]. However, to show that Moore and Treharne teach or suggest certain elements related to the security information, the Office Action treats the term inconsistently by applying the same term for different features of the cited art. For example, to show "retrieving, by the t/r device, security information from said mater key," the Office Action states that the key bitting pattern is the "security information." *Non-Final Office Action dated October 16, 2020*, page 4. Subsequently, to show "communication, by the clone application, the security information for said master key," the Office Action points to PIN data meant to verify that a user, a user device, and a key duplication machine are all in the same physical location as the "security information." *Id.*; *see also Moore et al.*, paragraph [0114]. It is not reasonable, in light of the Applicant's specification, to interpret the "security information" to be both "the key bitting" and the "PIN data," especially when both of these interpretations are not consistent with the claims and Applicant's Specification.

Turing to Moore, Moore does not teach or suggest retrieving, by the antenna of the t/r device, security information digitally stored by said master key, communicating, by the cloning application, the security information for said master key to said network server, generating, by the network server, a cloning security information, and communicating. The Office Action acknowledges that Moore does not teach or suggest a t/r device using an antenna to communicate with a master key. *Office Action*, page 5. Similarly, Moore does not teach or suggest retrieving, the by the antenna of the t/r device, security information digitally stored by said master key. While Moore may transmit PIN data to a network, Moore, the security information digital stored by the master key is not analogous to the PIN data of Moore. Thus, Moore does not teach or suggest communicating, by the cloning application, the security information for said master key to said network server.

Further, because the security data is not retrieved by the system of Moore and is never sent to the network of Moore, Moore cannot teach or suggest generating, by the network server, a cloning security information, and communicating, by the network server, the cloning security information to the cloning application, as set forth in claim 1. Accordingly, Moore does not teach or suggest retrieving, by the antenna of the t/r device, security information digitally stored by said master key, communicating, by the cloning application, the security information for said master key to said network server, generating, by the network server, a cloning security information, and communicating, by the network server, the cloning security information to the cloning application, as set forth in claim 1.

Treharne does not cure the deficiencies of Moore. Treharne describes a system that does not care about what values digitally stored in the key before being programmed. *Treharne*, 4:59-6:12; *see* FIG. 2. The system of Treharne presents two programming scenarios: (1) an already programmed key is used, in which case, the code on the key is erased before the key is reprogrammed, and (2) a blank key without a code is used and the key is simply programmed. *Id.* Treharne never describes first reading the code, nor does Treharne describe transmitting the code to anything. *Id.* Accordingly, Treharne does not teach or suggest retrieving, by the antenna of the t/r device, security information digitally stored by said master key, communicating, by the cloning application, the security information for said master key to said network server, generating, by the network server, a cloning security information, and communicating, by the network server, the cloning security information to the cloning application, as set forth in claim 1.

Because neither of Moore nor Treharne teach or suggest retrieving, by the antenna of the t/r device, security information digitally stored by said master key, communicating, by the

cloning application, the security information for said master key to said network server, generating, by the network server, a cloning security information, and communicating, by the network server, the cloning security information to the cloning application, the combination of Moore and Treharne cannot teach or suggest such features. Accordingly, claim 1 and all claims depending therefrom are in condition for allowance.

#### Claim 6

Applicant respectfully submits that claim 6 is also in condition for allowance. Claim 6 sets forth, in part, determining that a first device of a customer is communicating with a t/r device, the t/r device including an antenna ring for wirelessly communicating with an access device for a vehicle, retrieving security information digitally stored by said access device, communicating the security information for said access device to a network server, generating a cloning security information, and transmitting the cloning security information to the t/r device to program a duplicate access device with the cloning security information. For at least the reasons discussed above, None of Moore nor Treharne, taken singly or in combination, teach or suggest such features.

#### New Claims 10 and 11

Applicant has included new claims 10 and 11 that recites a method for duplicating an access device and includes similar subject matter of claims 1 and 6 that is sufficiently supported by the specification as originally filed and no new matter is being added. Applicant submits that its subject matter is also in condition for allowance for the reasons set for above.

### CONCLUSION

Based on the foregoing remarks, the pending claims are believed to be in condition for allowance, and such allowance is courteously solicited. If any further amendment is necessary to advance prosecution and place this case in allowable condition, the Examiner is requested to contact the undersigned by e-mail or telephone at the contact information listed below.



In general, the Office Action makes various statements regarding the pending claims and the cited references that are now moot in light of the above. Thus, those statements are not addressed at the present time. However, Applicant expressly reserves the right to challenge such statements in the future should the need arise (e.g., if any such statement should become relevant by appearing in a rejection of any current or future claim).

Please charge any cost incurred in the filing of this Amendment, along with any other costs, to Deposit Account No. 13-0265.

Respectfully submitted,

Dated: April 16, 2021

By: /James R. Baldwin/

James R. Baldwin Reg. No. 69,060  
312.642.4556  
jbaldwin@mcdonaldhopkins.com

McDonald Hopkins, LLC  
300 North LaSalle Street, Suite 1400  
Chicago, Illinois 60654

*Attorney for Applicant*

Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>		16356313		
<b>Filing Date:</b>		18-Mar-2019		
<b>Title of Invention:</b>		DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		
<b>First Named Inventor/Applicant Name:</b>		William R. Mutch		
<b>Filer:</b>		James Robert Baldwin/Rebecca Shofar		
<b>Attorney Docket Number:</b>		16223-00351		
Filed as Small Entity				
<b>Filing Fees for Utility under 35 USC 111(a)</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 3 months with \$0 paid	2253	1	740	740
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>740</b>

Electronic Acknowledgement Receipt	
<b>EFS ID:</b>	42471056
<b>Application Number:</b>	16356313
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	9197
<b>Title of Invention:</b>	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES
<b>First Named Inventor/Applicant Name:</b>	William R. Mutch
<b>Customer Number:</b>	33772
<b>Filer:</b>	James Robert Baldwin/Rebecca Shofar
<b>Filer Authorized By:</b>	James Robert Baldwin
<b>Attorney Docket Number:</b>	16223-00351
<b>Receipt Date:</b>	16-APR-2021
<b>Filing Date:</b>	18-MAR-2019
<b>Time Stamp:</b>	10:04:54
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$740
RAM confirmation Number	E20214FA05093047
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		9545201.pdf	219630	yes	9
			98153e776673945c59c6104a4804a758d0cfc2f7		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	4	
	Applicant Arguments/Remarks Made in an Amendment		5	9	
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31319	no	2
			f70157a2c011618b29288969da979dda37c682ae		
Warnings:					
Information:					
Total Files Size (in bytes):			250949		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875				Application or Docket Number 16/356,313		Filing Date 03/18/2019		<input type="checkbox"/> To be Mailed		
ENTITY: <input type="checkbox"/> LARGE <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> MICRO										
<b>APPLICATION AS FILED - PART I</b>										
		(Column 1)	(Column 2)							
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)		FEE (\$)			
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A		N/A					
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))		N/A	N/A		N/A					
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A		N/A					
TOTAL CLAIMS (37 CFR 1.16(j))		minus 20 =	*		x \$50 =					
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*		x \$230 =					
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).								
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
* If the difference in column 1 is less than zero, enter "0" in column 2.					TOTAL					
<b>APPLICATION AS AMENDED - PART II</b>										
		(Column 1)	(Column 2)		(Column 3)					
AMENDMENT	04/16/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)			
	Total (37 CFR 1.16(j))	* 8	Minus	** 20	= 0	x \$50 =	0			
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	x \$240 =	0			
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))									
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE	0			
AMENDMENT		(Column 1)	(Column 2)		(Column 3)					
		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)			
	Total (37 CFR 1.16(j))	*	Minus	**	=	x \$0 =				
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$0 =				
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))									
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
						TOTAL ADD'L FEE				
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						SLIE				
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/AMANDA CHRISTINE LEMUS/				
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".										
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/356,313	03/18/2019	William R. Mutch	16223-00351	9197
33772 7590 07/20/2021 MCDONALD HOPKINS LLC 600 Superior Avenue, East Suite 2100 CLEVELAND, OH 44114-2653			EXAMINER PENDLETON, DIONNE	
			ART UNIT 2689	PAPER NUMBER
			NOTIFICATION DATE 07/20/2021	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipmailbox@mcdonaldhopkins.com



<b>Office Action Summary</b>	<b>Application No.</b> 16/356,313	<b>Applicant(s)</b> Mutch et al.	
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689	<b>AIA (FITF) Status</b> Yes

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 04/16/2021.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_.

2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims\***

5) ☒ Claim(s) 1-6 and 10-11 is/are pending in the application.  
     5a) Of the above claim(s) 10-11 is/are withdrawn from consideration.

6) ☒ Claim(s) 1-6 is/are allowed.

7) ☐ Claim(s) \_\_\_\_ is/are rejected.

8) ☐ Claim(s) \_\_\_\_ is/are objected to.

9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement

\* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

**Application Papers**

10) ☐ The specification is objected to by the Examiner.

11) ☒ The drawing(s) filed on 03/18/2019 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

**Certified copies:**

a) ☐ All      b) ☐ Some\*\*      c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)  
     Paper No(s)/Mail Date \_\_\_\_.

3) ☐ Interview Summary (PTO-413)  
     Paper No(s)/Mail Date \_\_\_\_.

4) ☒ Other: See Continuation Sheet

Continuation of Attachment(s) 4) Other: An Examiner's amendment as indicated in the Quayle Action

## QUAYLE ACTION

### ***Notice of Pre-AIA or AIA Status***

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

### ***Claim Status***

2. Claims 1-6, 10 and 11 are pending. Claims 7-9 have been cancelled. Claims 10 and 11 are new.

3. This application is in condition for allowance except for the following formal matters:

Newly submitted claims 10-11 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Claims 10 and 11 are directed toward a separate and distinct species wherein the cloning application generates security information locally and does not require the communication of *security information* to a network server.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 10 and 11 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

**The Applicant must cancel claims 10 and 11.**

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO (2) MONTHS** from the mailing date of this letter. Extensions of time may be granted under 37 CFR 1.136 but in no case can any extension carry the date for reply to this Office action beyond the maximum period of SIX MONTHS set by statute (35 U.S.C. 133).

#### **EXAMINER'S AMENDMENT**

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

5. The application has been amended as follows:

**With respect to claim 1,**

In line 2, "with a t/r device" has been replaced with - - with a transmitter/receiver device (t/r device) - -;

**With respect to claim 6,**

In line 4, "with a t/r device" has been replaced with - - with a transmitter/receiver device (t/r device) - -;

***Reasons for Allowance***

6. The following is an examiner's statement of reasons for allowance:

*With respect to independent claims 1 and 6,*

The prior art of record fails to teach or to reasonably suggest:

A vehicle access device duplication system comprising:

a non-transitory computer-readable storage medium storing executing instructions that, when executed, cause a cloning application to perform steps comprising:

determining that a first device of a customer is communicating with a t/r device, the t/r device including an antenna ring for wirelessly communicating with an access device for a vehicle;

retrieving security information digitally stored by said access device;

communicating the security information for said access device to a network server; generating a cloning security information; and

transmitting the cloning security information to the t/r device to program a duplicate access device with the cloning security information; and

a processor configured to execute the instructions.

***Related Art***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. **GLICK (US Patent 5,749,253)** teaches a master keying device.

- b. **JOHNSON (US Publication 2020/0013241)** teaches in [0073] transmitting a password from a key to a duplicating device, and then from the duplicating device to a blank key.
- c. **HAGEN (US Patent 9,558,236)** teaches a master key identifier which captures physical aspects of a key, but fails to teach that the captured data is *digitally stored by* the key as required by the claim.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIONNE PENDLETON whose telephone number is (571)272-7497. The examiner can normally be reached on M-F 9a-5pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair->

[my.uspto.gov/pair/PrivatePair](http://my.uspto.gov/pair/PrivatePair). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DIONNE PENDLETON/  
Primary Examiner, Art Unit 2689

<b>Notice of References Cited</b>	Application/Control No. 16/356,313		Applicant(s)/Patent Under Reexamination Mutch et al.	
	Examiner DIONNE PENDLETON		Art Unit 2689	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-5749253-A	05-1998	Glick; Mark	G07C9/00571	70/278.2
*	B	US-9558236-B1	01-2017	Hagen; George Lynn	G06K9/6288	1/1
*	C	US-20200013241-A1	01-2020	Johnson; Daniel Charles	B60R25/248	1/1
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	


\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

U.S. Patent and Trademark Office  
PTO-892 (Rev. 01-2001)

**Notice of References Cited**


Part of Paper No. 20210715



<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

CPC - Searched*		
Symbol	Date	Examiner
( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	10/10/2020	DP
( (G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	10/10/2020	DP
( (G07C2009/00793 OR G07C2209/62 OR G07C9/00896 OR G07C9/00944).CPC. )	10/10/2020	DP
(G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	07/15/2021	DP

--	--


<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	07/15/2021	DP
(B60R25/24 OR G06F21/31 OR G06F21/35 OR G06F21/6218 OR G06Q20/18 OR G07C2009/00793 OR G07C2009/00992 OR G07C9/00857 OR G07F17/26 OR H04L63/0492 OR H04L63/06 OR H04L9/0894 OR H04L9/321).CPC. )	07/15/2021	DP
BRS ( (G07C9/00857 OR G07C2009/00992 OR G06Q20/18 OR H04L63/06 OR H04L9/321 h04i9/08).CPC. )	07/15/2021	DP

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner


--	--

<b>Search Notes</b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

\* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.


Search Notes		
Search Notes	Date	Examiner
( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	10/10/2020	DP
( (G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	10/10/2020	DP
( (G07C2009/00793 OR G07C2209/62 OR G07C9/00896 OR G07C9/00944).CPC. )	10/10/2020	DP
ring near5 antenna	10/10/2020	DP
(ring near5 antenna) with (security key credential) with key(ring near5 antenna) with (copy receiv\$4 transmit\$4 send\$4) near5 ( security key credential) with key	10/10/2020	DP
(transponder receiv\$4 ((coil ring) near5 antenna) read\$4 scan\$4) near5 (security key credential) with (fob (access adj2 device) key)	10/10/2020	DP

--	--

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689


((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information ) with (antenna coil ring " ring-shap"\$3)) and ((antenna coil) near8 (ring "ring-shap"\$3))	10/10/2020	DP
((duplicat\$4 clon\$3) near5 (key fob token keycard card tag)) and (( read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information) )	10/10/2020	DP
((read\$4) near5 (tag security key credential)) and ((send\$4 transmit \$4 receiv\$4) near8 (tag security key credential) near8 (computer (( user mobile) adj2 (device terminal unit)))) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (server))	10/10/2020	DP
((read\$4) near5 (tag security key credential)) and (vehicle automobile car) and ((read\$4 scan\$4) near3 (master adj2 (key credential)) )	10/10/2020	DP
S9 and (copy duplicat\$4 ) near5 (security key credential) with server( clon\$4 duplicat\$4 copy\$4) near5 (master adj2 (key credential)) and ( vehicle automobile car) and ((read\$4 scan\$4) near3 (master adj2 ( key credential)) )	10/10/2020	DP
((duplicat\$4 clone cloning cloned) near5 (key fob token keycard card tag)) and ((vehicle automobile car) with (key fob token keycard card tag))	10/10/2020	DP
((duplicat\$4 clon\$3) near5 (key fob token keycard card tag)) and (( vehicle automobile car) with (key fob token keycard card tag))	10/10/2020	DP
((read\$4) near5 (tag key )) and ((send\$4 transmit\$4 receiv\$4) near8 ( tag security key credential) near8 (computer ((user mobile) adj2 ( device terminal unit)))) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (server))	10/10/2020	DP
((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag ) with (ring "ring-shap"\$3))	10/10/2020	DP
((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information ) with (antenna coil)) and (( antenna coil) near8 (ring "ring-shap"\$3))	10/10/2020	DP
(G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/ 00857).CPC. )	07/15/2021	DP

--	--

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	07/15/2021	DP
(B60R25/24 OR G06F21/31 OR G06F21/35 OR G06F21/6218 OR G06Q20/18 OR G07C2009/00793 OR G07C2009/00992 OR G07C9/00857 OR G07F17/26 OR H04L63/0492 OR H04L63/06 OR H04L9/0894 OR H04L9/321).CPC. )	07/15/2021	DP
BRS ( (G07C9/00857 OR G07C2009/00992 OR G06Q20/18 OR H04L63/06 OR H04L9/321 h04i9/08).CPC. )	07/15/2021	DP
(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (data security) same duplicat\$4	07/15/2021	DP
(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) and ( duplicat\$4 and vehicle)	07/15/2021	DP
(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 ( \$4word credential data security token ) and (copy duplicat\$4) near5 ( key ekey \$4word credential data security token)	07/15/2021	DP
(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) and (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	07/15/2021	DP

--	--

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4)	07/15/2021	DP
(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	07/15/2021	DP
(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4)	07/15/2021	DP

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

--	--



## EAST Search History

### EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S75	2	(US-20160321632-\$).did. or (US-6501369-\$).did.	US-PGPUB; USPAT	OR	ON	2021/07/14 14:20
S77	64,826	( (B60R25/24 OR G06F21/31 OR G06F21/35 OR G06F21/6218 OR G06Q20/18 OR G07C2009/00793 OR G07C2009/00992 OR G07C9/00857 OR G07F17/26 OR H04L63/0492 OR H04L63/06 OR H04L9/0894 OR H04L9/321).CPC. )	US-PGPUB; USPAT	OR	ON	2021/07/14 18:05
S76	2	(US-20160321632-\$).did. or (US-6501369-\$).did.	US-PGPUB; USPAT	OR	ON	2021/07/14 18:05
S78	4	(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (data security) same duplicat\$4	US-PGPUB; USPAT	OR	ON	2021/07/14 18:07
S79	5	S77 and (master adj2 key) adj8 (send\$4 transmit\$4) adj5 (data security) and (key near5 duplicat\$4)	US-PGPUB; USPAT	OR	ON	2021/07/14 18:13
S80	1	(US-6975202-\$).did.	USPAT	OR	ON	2021/07/14 18:37
S81	3	S76 S80	US-PGPUB; USPAT	OR	ON	2021/07/14 18:38
S82	17,532	( (G07C9/00857 OR G07C2009/00992 OR G06Q20/18 OR H04L63/06 OR H04L9/321 h04I9/08).CPC. )	US-PGPUB; USPAT	OR	ON	2021/07/14 18:43
S83	28	(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (data security) and (key near5 duplicat\$4)	US-PGPUB; USPAT	OR	ON	2021/07/14 18:44
S85	23	S83 not S79	US-PGPUB; USPAT	OR	ON	2021/07/14 18:45
S84	67	(master adj2 key) near5 (receiv\$4 read\$4 send\$4 transmit\$4) near5 (data security) and (key near5 duplicat\$4)	US-PGPUB; USPAT	OR	ON	2021/07/14 18:45
S86	17	(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) and ( duplicat\$4 and vehicle)	US-PGPUB; USPAT	OR	ON	2021/07/15 10:15



S87	30	(ekey (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) and ( duplicat\$4 and vehicle)	US-PGPUB; USPAT	OR	ON	2021/07/15 10:40
S89	81	(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) and (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	US-PGPUB; USPAT	OR	ON	2021/07/15 10:42
S88	132	(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) and (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	US-PGPUB; USPAT	OR	ON	2021/07/15 10:42
S90	204	S88 S89	US-PGPUB; USPAT	OR	ON	2021/07/15 10:44
S94	17,542	( (G07C9/00857 OR G07C2009/00992 OR G06Q20/18 OR H04L63/06 OR H04L9/321 h04I9/08).CPC. )	US-PGPUB; USPAT	OR	ON	2021/07/15 11:17
S93	64,887	( (B60R25/24 OR G06F21/31 OR G06F21/35 OR G06F21/6218 OR G06Q20/18 OR G07C2009/00793 OR G07C2009/00992 OR G07C9/00857 OR G07F17/26 OR H04L63/0492 OR H04L63/06 OR H04L9/0894 OR H04L9/321).CPC. )	US-PGPUB; USPAT	OR	ON	2021/07/15 11:17
S92	278,166	( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR	US-PGPUB; USPAT	OR	OFF	2021/07/15 11:17

		B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )				
S91	8,917	( (G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	US-PGPUB; USPAT	OR	OFF	2021/07/15 11:17
S99	97	S97 S98	US-PGPUB; USPAT	OR	ON	2021/07/15 11:18
S98	49	S90 and S96	US-PGPUB; USPAT	OR	ON	2021/07/15 11:18
S97	92	S90 and S95	US-PGPUB; USPAT	OR	ON	2021/07/15 11:18
S96	66,276	S93 S94	US-PGPUB; USPAT	OR	ON	2021/07/15 11:18
S95	278,166	S91 S92	US-PGPUB; USPAT	OR	ON	2021/07/15 11:18
S103	42	(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4)	US-PGPUB; USPAT	OR	ON	2021/07/15 11:27
S102	23	(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4)	US-PGPUB; USPAT	OR	ON	2021/07/15 11:27
S101	21	(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	US-PGPUB; USPAT	OR	ON	2021/07/15 11:27

S100	40	(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	US-PGPUB; USPAT	OR	ON	2021/07/15 11:27
S105	18	(S102 S103) and S104	US-PGPUB; USPAT	OR	ON	2021/07/15 11:28
S104	280,951	S95 S96	US-PGPUB; USPAT	OR	ON	2021/07/15 11:28
S106	1	16/356313	US-PGPUB; USPAT	OR	OFF	2021/07/15 12:09
S107	1	S106 and cloning adj2 application same network	US-PGPUB; USPAT	OR	OFF	2021/07/15 12:12
S110	1	S107 S108 S109	US-PGPUB; USPAT	OR	OFF	2021/07/15 12:13
S109	1	S106 and cloning adj2 application with generat\$4	US-PGPUB; USPAT	OR	OFF	2021/07/15 12:13
S108	1	S106 and cloning adj2 application same generat\$4	US-PGPUB; USPAT	OR	OFF	2021/07/15 12:13
L2	0	L1 and "(" .clm.	US-PGPUB; USPAT	OR	OFF	2021/07/15 13:17
L1	278,166	( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR	US-PGPUB; USPAT	OR	OFF	2021/07/15 13:17

		B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )				
L6	0	L5 and "(.clm.	US- PGPUB; USPAT	OR	OFF	2021/07/15 13:18
L5	17,542	( (G07C9/00857 OR G07C2009/00992 OR G06Q20/18 OR H04L63/06 OR H04L9/321 h04I9/08).CPC. )	US- PGPUB; USPAT	OR	ON	2021/07/15 13:18
L4	0	L3 and "(.clm.	US- PGPUB; USPAT	OR	OFF	2021/07/15 13:18
L3	64,887	( (B60R25/24 OR G06F21/31 OR G06F21/35 OR G06F21/6218 OR G06Q20/18 OR G07C2009/00793 OR G07C2009/00992 OR G07C9/00857 OR G07F17/26 OR H04L63/0492 OR H04L63/06 OR H04L9/0894 OR H04L9/321).CPC. )	US- PGPUB; USPAT	OR	ON	2021/07/15 13:18
L7	0	L5 and ("(.clm.	US- PGPUB; USPAT	OR	OFF	2021/07/15 13:19

7/15/2021 1:40:56 PM

C:\Users\dhavrey1\Documents\EAST\Workspaces\16356313.wsp

PATENT APPLICATION  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application:	William R. Mutch	Group Art Unit:	2689
Serial No.:	16/356,313	Examiner:	Dionne Pendleton
Filing Date:	March 18, 2019	Docket No.:	16223-00351
		Confirmation No.:	9197

Title: DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**RESPONSE TO QUAYLE ACTION**

Dear Commissioner:

Applicant acknowledges the ex-parte Quayle Action dated July 20, 2021, and submits this Response. Please consider the following Amendments and Remarks in examining the present application. Applicant believes no additional fees appear due. However, if any fees are required for filing this Response, please charge such fees to our Deposit Account No. 13-0265, noting attorney docket number 16223-00351.

## CLAIMS

1. (Currently Amended) A method for duplicating an access device, comprising:
  - providing a first computing device configured to communicate with a transmitter/receiver device (t/r device), the t/r device including an antenna for wirelessly communicating with a master key for a vehicle;
  - running a cloning application associated with said t/r device on the first computing device, the cloning application configured to electronically communicate with the t/r device;
  - retrieving, by the antenna of the t/r device, security information digitally stored by said master key;
  - communicating, by the cloning application, the security information for said master key to said network server;
  - generating, by the network server, a cloning security information;
  - communicating, by the network server, the cloning security information to the cloning application; and
  - transmitting, by the cloning application, the cloning security information to the t/r device to program an electronic access device of a generally programmable duplicate key with the cloning security information.
2. (Original) The method of claim 1, further comprising: in response to retrieving, by the t/r device, security information from said master key, determining, by the cloning application, whether the security information is encrypted and generating the cloning security information.
3. (Original) The method of claim 1, further comprising: in response to communicating, by the cloning application, the security information for said master key to said network server, determining, by the network server, whether the security information is encrypted; and generating the cloning security information.
4. (Original) The method of claim 1, further comprising: capturing at least one image of a blade of said master key, communicating said at least one image of said blade to said network server, cutting a duplicate blade of a generally programmable duplicate key, and providing said generally programmable duplicate key to said customer.

5. (Original) The method of claim 1, further comprising: placing said generally programmable duplicate key in proximity with said vehicle, sampling communications between said generically programmable duplicate key and said vehicle to generate authentication sample data.

6. (Currently Amended) A vehicle access device duplication system comprising: a non-transitory computer-readable storage medium storing executing instructions that, when executed, cause a cloning application to perform steps comprising:

determining that a first device of a customer is communicating with a transmitter/receiver device (t/r device), the t/r device including an antenna ring for wirelessly communicating with an access device for a vehicle;

retrieving security information digitally stored by said access device;

communicating the security information for said access device to a network server;

generating a cloning security information; and

transmitting the cloning security information to the t/r device to program a duplicate access device with the cloning security information; and

a processor configured to execute the instructions.

7-11. (Canceled)

### **REMARKS**

Prior to this Response, claims 1-6 and 10-11 were pending in the present application. The Ex Parte Quayle action identified that claims 1-6 are in condition for allowance pending an examiner's amendment to claims 1 and 6 and the cancelation of claims 10 and 11. With this Response, claims 1 and 6 have been amended according to the noted examiner's amendment to recite "a transmitter/receiver device (t/r device)" and claims 10 and 11 are now canceled. Accordingly, claims 1-6 are now in condition for allowance.

### **CONCLUSION**

Based on the foregoing remarks, the pending claims are believed to be in condition for allowance, and such allowance is courteously solicited. If any further amendment is necessary to advance prosecution and place this case in allowable condition, the Examiner is requested to contact the undersigned by e-mail or telephone at the contact information listed below.

Respectfully submitted,

Date: September 16, 2021

/Mark J. Masterson/  
Mark J. Masterson (Reg. No. 71,886)  
McDonald Hopkins LLC  
600 Superior Avenue, E.  
Suite 2100  
Cleveland, OH 44114-2653  
(216) 348-5818



Electronic Acknowledgement Receipt	
<b>EFS ID:</b>	43785117
<b>Application Number:</b>	16356313
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	9197
<b>Title of Invention:</b>	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES
<b>First Named Inventor/Applicant Name:</b>	William R. Mutch
<b>Customer Number:</b>	33772
<b>Filer:</b>	Mark Jason Masterson/Danielle Mueller
<b>Filer Authorized By:</b>	Mark Jason Masterson
<b>Attorney Docket Number:</b>	16223-00351
<b>Receipt Date:</b>	16-SEP-2021
<b>Filing Date:</b>	18-MAR-2019
<b>Time Stamp:</b>	14:43:02
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
------------------------	----

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		9848291.pdf	123739	yes	4
			2cc2a65e73190ee6f7ad6bd7c3249c9b9036b874		

Multipart Description/PDF files in .zip description			
Document Description	Start	End	
Response after Ex Parte Quayle Action	1	1	
Claims	2	3	
Applicant Arguments/Remarks Made in an Amendment	4	4	

**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>	123739
-------------------------------------	--------

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**  
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**  
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**  
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875				Application or Docket Number 16/356,313		Filing Date 03/18/2019		<input type="checkbox"/> To be Mailed	
ENTITY: <input type="checkbox"/> LARGE <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> MICRO									
<b>APPLICATION AS FILED - PART I</b>									
	(Column 1)	(Column 2)							
FOR	NUMBER FILED	NUMBER EXTRA			RATE (\$)			FEE (\$)	
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A			N/A				
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A			N/A				
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 =	*			x \$50 =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*			x \$230 =				
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).								
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
<b>APPLICATION AS AMENDED - PART II</b>									
	(Column 1)		(Column 2)	(Column 3)					
<b>AMENDMENT</b>	09/16/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 6	Minus	** 20	= 0		x \$50 =		0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x \$240 =		0
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		0	
<b>AMENDMENT</b>		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x \$0 =		
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x \$0 =		
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						LIE			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/DELEACHES M YOUNG/			
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".									
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

33772 7590 09/27/2021  
MCDONALD HOPKINS LLC  
600 Superior Avenue, East  
Suite 2100  
CLEVELAND, OH 44114-2653

EXAMINER

PENDLETON, DIONNE

ART UNIT

PAPER NUMBER

2689

DATE MAILED: 09/27/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/356,313	03/18/2019	William R. Mutch	16223-00351	9197

TITLE OF INVENTION: DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	12/27/2021

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at [www.uspto.gov/PatentMaintenanceFees](http://www.uspto.gov/PatentMaintenanceFees).**

## PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

33772 7590 09/27/2021  
MCDONALD HOPKINS LLC  
600 Superior Avenue, East  
Suite 2100  
CLEVELAND, OH 44114-2653

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

### Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/356,313	03/18/2019	William R. Mutch	16223-00351	9197

TITLE OF INVENTION: DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	12/27/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
PENDLETON, DIONNE	2689	340-005610

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. \_\_\_\_\_

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

**NOTE:** Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

**NOTE:** If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

**NOTE:** Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/356,313	03/18/2019	William R. Mutch	16223-00351	9197
33772 7590 09/27/2021 MCDONALD HOPKINS LLC 600 Superior Avenue, East Suite 2100 CLEVELAND, OH 44114-2653			EXAMINER PENDLETON, DIONNE	
			ART UNIT	PAPER NUMBER
			2689	
DATE MAILED: 09/27/2021				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.** Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

### Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

<b>Notice of Allowability</b>	<b>Application No.</b> 16/356,313	<b>Applicant(s)</b> Mutch et al.	
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689	<b>AIA (FITF) Status</b> Yes

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Response to Quayle Action filed on 09-16-2021.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_\_.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_\_; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-6 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

**Certified copies:**

a) ☐ All      b) ☐ Some\*      c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**


6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. <input type="checkbox"/> Notice of References Cited (PTO-892)	5. <input type="checkbox"/> Examiner's Amendment/Comment
2. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance
3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. <input type="checkbox"/> Other _____.
4. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____.	

/DIONNE PENDLETON/ Primary Examiner, Art Unit 2689	
-------------------------------------------------------	--




<b>Issue Classification</b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

CPC						
Symbol					Type	Version
G07C	/	9	/	00857	F	2013-01-01
G07C	/	9	/	00309	I	2013-01-01
G07C	/	2009	/	00793	A	2013-01-01
G07C	/	2009	/	00587	A	2013-01-01
G07C	/	2009	/	00412	A	2013-01-01

CPC Combination Sets					
Symbol				Type	Version
/	/	/	/		

NONE (Assistant Examiner) (Date)		<b>Total Claims Allowed:</b> 6	
/DIONNE PENDLETON/ Primary Examiner, Art Unit 2689 (Primary Examiner) (Date)		21 September 2021 O.G. Print Claim(s) 6	O.G. Print Figure 4

<b>Issue Classification</b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

<b>INTERNATIONAL CLASSIFICATION</b>			
<b>CLAIMED</b>			
H04L		9	08

<b>NON-CLAIMED</b>			


<b>US ORIGINAL CLASSIFICATION</b>	
<b>CLASS</b>	<b>SUBCLASS</b>

<b>CROSS REFERENCES(S)</b>						
<b>CLASS</b>	<b>SUBCLASS (ONE SUBCLASS PER BLOCK)</b>					

NONE		<b>Total Claims Allowed:</b>	
(Assistant Examiner)	(Date)	6	
/DIONNE PENDLETON/ Primary Examiner, Art Unit 2689	21 September 2021	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	6	4


U.S. Patent and Trademark Office

Part of Paper No.: 20210921

<b>Issue Classification</b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689


<input type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input type="checkbox"/> T.D. <input type="checkbox"/> R.1.47															
<b>CLAIMS</b>															
<b>Final</b>	<b>Original</b>	<b>Final</b>	<b>Original</b>	<b>Final</b>	<b>Original</b>	<b>Final</b>	<b>Original</b>	<b>Final</b>	<b>Original</b>	<b>Final</b>	<b>Original</b>	<b>Final</b>	<b>Original</b>	<b>Final</b>	<b>Original</b>
1	1	-	10												
2	2	-	11												
3	3														
4	4														
5	5														
6	6														
-	7														
-	8														
-	9														

NONE  (Assistant Examiner) _____ (Date) _____		<b>Total Claims Allowed:</b> 6	
/DIONNE PENDLETON/ Primary Examiner, Art Unit 2689 (Primary Examiner) _____ (Date) 21 September 2021		O.G. Print Claim(s) 6	O.G. Print Figure 4

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689


CPC - Searched*		
Symbol	Date	Examiner
( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	10/10/2020	DP
( (G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	10/10/2020	DP
( (G07C2009/00793 OR G07C2209/62 OR G07C9/00896 OR G07C9/00944).CPC. )	10/10/2020	DP
(G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	07/15/2021	DP

--	--

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	07/15/2021	DP
(B60R25/24 OR G06F21/31 OR G06F21/35 OR G06F21/6218 OR G06Q20/18 OR G07C2009/00793 OR G07C2009/00992 OR G07C9/00857 OR G07F17/26 OR H04L63/0492 OR H04L63/06 OR H04L9/0894 OR H04L9/321).CPC. )	07/15/2021	DP
BRS ( (G07C9/00857 OR G07C2009/00992 OR G06Q20/18 OR H04L63/06 OR H04L9/321 h04I9/08).CPC. )	07/15/2021	DP
( (G07C9/00857 OR G07C2009/00992 OR G06Q20/18 OR H04L63/06 OR H04L9/321 h04I9/08).CPC. )	09/21/2021	DP
( (B60R25/24 OR G06F21/31 OR G06F21/35 OR G06F21/6218 OR G06Q20/18 OR G07C2009/00793 OR G07C2009/00992 OR G07C9/00857 OR G07F17/26 OR H04L63/0492 OR H04L63/06 OR H04L9/0894 OR H04L9/321).CPC. )	09/21/2021	DP

--	--

<b>Search Notes</b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

( G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	09/21/2021	DP
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------	----


CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

\* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.


Search Notes		
Search Notes	Date	Examiner

--	--

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	10/10/2020	DP
( (G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	10/10/2020	DP
( (G07C2009/00793 OR G07C2209/62 OR G07C9/00896 OR G07C9/00944).CPC. )	10/10/2020	DP
ring near5 antenna	10/10/2020	DP
(ring near5 antenna) with (security key credential) with key(ring near5 antenna) with (copy receiv\$4 transmit\$4 send\$4) near5 ( security key credential) with key	10/10/2020	DP
(transponder receiv\$4 ((coil ring) near5 antenna) read\$4 scan\$4) near5 (security key credential) with (fob (access adj2 device) key)	10/10/2020	DP
((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information ) with (antenna coil ring " ring-shap"\$3)) and ((antenna coil) near8 (ring "ring-shap"\$3))	10/10/2020	DP
((duplicat\$4 clon\$3) near5 (key fob token keycard card tag)) and (( read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information) )	10/10/2020	DP


--	--

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

((read\$4) near5 (tag security key credential)) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (computer ((user mobile) adj2 (device terminal unit)))) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (server))	10/10/2020	DP
((read\$4) near5 (tag security key credential)) and (vehicle automobile car) and ((read\$4 scan\$4) near3 (master adj2 (key credential)) )	10/10/2020	DP
S9 and (copy duplicat\$4 ) near5 (security key credential) with server( clon\$4 duplicat\$4 copy\$4) near5 (master adj2 (key credential)) and ( vehicle automobile car) and ((read\$4 scan\$4) near3 (master adj2 (key credential)) )	10/10/2020	DP
((duplicat\$4 clone cloning cloned) near5 (key fob token keycard card tag)) and ((vehicle automobile car) with (key fob token keycard card tag))	10/10/2020	DP
((duplicat\$4 clon\$3) near5 (key fob token keycard card tag)) and (( vehicle automobile car) with (key fob token keycard card tag))	10/10/2020	DP
((read\$4) near5 (tag key )) and ((send\$4 transmit\$4 receiv\$4) near8 ( tag security key credential) near8 (computer ((user mobile) adj2 ( device terminal unit)))) and ((send\$4 transmit\$4 receiv\$4) near8 (tag security key credential) near8 (server))	10/10/2020	DP
((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag ) with (ring "ring-shap"\$3))	10/10/2020	DP
((read\$4 scan\$4 detect\$4 receiv\$4 ) near8 (key fob token keycard card tag credential\$3 security information ) with (antenna coil)) and (( antenna coil) near8 (ring "ring-shap"\$3))	10/10/2020	DP
(G07C2009/00412 OR G07C2009/00587 OR G07C2009/00793 OR G07C2009/00865 OR G07C9/00309 OR G07C9/00571 OR G07C9/00857).CPC. )	07/15/2021	DP


--	--



<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689


( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	07/15/2021	DP
(B60R25/24 OR G06F21/31 OR G06F21/35 OR G06F21/6218 OR G06Q20/18 OR G07C2009/00793 OR G07C2009/00992 OR G07C9/00857 OR G07F17/26 OR H04L63/0492 OR H04L63/06 OR H04L9/0894 OR H04L9/321).CPC. )	07/15/2021	DP
BRS ( (G07C9/00857 OR G07C2009/00992 OR G06Q20/18 OR H04L63/06 OR H04L9/321 h04i9/08).CPC. )	07/15/2021	DP
(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (data security) same duplicat\$4	07/15/2021	DP
(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) and ( duplicat\$4 and vehicle)	07/15/2021	DP
(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 ( \$4word credential data security token ) and (copy duplicat\$4) near5 ( key ekey \$4word credential data security token)	07/15/2021	DP
(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) and (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	07/15/2021	DP

--	--

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 ( \$4word credential data security token ) same (copy duplicat\$4)	07/15/2021	DP
(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 ( \$4word credential data security token ) same (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	07/15/2021	DP
(master adj2 key) adj8 (send\$4 transmit\$4) adj5 ( \$4word credential data security token ) same (copy duplicat\$4)	07/15/2021	DP
( (G07C9/00857 OR G07C2009/00992 OR G06Q20/18 OR H04L63/06 OR H04L9/321 h0419/08).CPC. )	09/21/2021	DP
( (B60R25/24 OR G06F21/31 OR G06F21/35 OR G06F21/6218 OR G06Q20/18 OR G07C2009/00793 OR G07C2009/00992 OR G07C9/00857 OR G07F17/26 OR H04L63/0492 OR H04L63/06 OR H04L9/0894 OR H04L9/321).CPC. )	09/21/2021	DP
( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )	09/21/2021	DP
(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 ( \$4word credential data security token ) same (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	09/21/2021	DP

--	--

<b><i>Search Notes</i></b> 	<b>Application/Control No.</b> 16/356,313	<b>Applicant(s)/Patent Under Reexamination</b> Mutch et al.
	<b>Examiner</b> DIONNE PENDLETON	<b>Art Unit</b> 2689

(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	09/21/2021	DP
(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4)	09/21/2021	DP
cloning adj2 application with generat\$4	09/21/2021	DP
(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4)	09/21/2021	DP

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	PG Pub text limited search	09/21/2021	DP

--	--

## EAST Search History

### EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	(US-5749253-\$ or US-9558236-\$).did.	USPAT	OR	ON	2021/09/21 14:56
L2	1	(US-20200013241-\$).did.	US-PGPUB	OR	ON	2021/09/21 14:56
L3	3	1 2	US-PGPUB; USPAT	OR	ON	2021/09/21 14:57
L4	3,297,108	"111" "113" "115"	US-PGPUB; USPAT	OR	ON	2021/09/21 15:09
L5	284,250	( (G07C9/00309 OR G07C9/00571 OR G07C2009/00793 OR G07C9/00174 OR G07C2009/00412 OR G07C9/00857 OR G07C9/00944 OR G07C2009/00341 OR G07C2009/00373 OR G07C2009/0042 OR G07C2009/00515 OR G07C2009/00547 OR G07C2009/00587 OR G07C2009/00865 OR G07C2009/0092 OR G07C2209/62 OR G07C9/00896 OR H04W12/06 OR H04W4/023 OR H04W4/80 OR H04W12/00503 OR H04W12/0605 OR H04W12/0608 OR H04W12/08 OR H04W4/00 OR H04W80/04 OR G06Q20/18 OR G06Q20/14 OR H04L63/0492 OR H04L63/06 OR H04L63/083 OR H04L63/0861 OR H04L63/101 OR H04L63/107 OR H04L9/0894 OR H04L9/321 OR B23C2235/12 OR B23C2235/28 OR B23C2235/41 OR B23C3/35 OR B23P15/005 OR B60L15/2072 OR B60L2220/54 OR B60L2250/20 OR B60L2270/32 OR B60L2270/38 OR B60L3/00 OR B60L3/04 OR B60L53/14 OR B60L53/24 OR B60L53/305 OR B60L53/65 OR B60L53/665 OR B60L58/12 OR E05B17/0004 OR E05B19/00 OR E05B19/0058 OR E05B19/04 OR E05B19/14 OR E05B19/24 OR F02N11/0807 OR G06F13/4081 OR G06F13/4208 OR G06F21/31 OR G06F21/32 OR G06F21/34 OR G06F21/35 OR G06F21/6218 OR G06K2209/19 OR G06K7/1413 OR G06K9/00 OR	US-PGPUB; USPAT	OR	OFF	2021/09/21 15:09

		G06K9/2036 OR G07F15/005 OR G07F17/0014 OR G07F17/26 OR G08B25/14 OR G08C19/00 OR G09C1/00 OR Y02T10/64 OR Y02T10/70 OR Y02T10/7072 OR Y02T10/72 OR Y02T90/12 OR Y02T90/14 OR Y02T90/16 OR Y02T90/167 OR Y02T90/169 OR Y04S30/14 OR Y10T409/300952 OR Y10T70/7842).CPC. )				
L6	66,249	( (B60R25/24 OR G06F21/31 OR G06F21/35 OR G06F21/6218 OR G06Q20/18 OR G07C2009/00793 OR G07C2009/00992 OR G07C9/00857 OR G07F17/26 OR H04L63/0492 OR H04L63/06 OR H04L9/0894 OR H04L9/321).CPC. )	US-PGPUB; USPAT	OR	ON	2021/09/21 15:09
L7	17,901	( (G07C9/00857 OR G07C2009/00992 OR G06Q20/18 OR H04L63/06 OR H04L9/321 h04i9/08).CPC. )	US-PGPUB; USPAT	OR	ON	2021/09/21 15:09
L8	287,083	L5 L6 L7	US-PGPUB; USPAT	OR	ON	2021/09/21 15:09
L9	2	8 and cloning adj2 application with generat\$4	US-PGPUB; USPAT	OR	OFF	2021/09/21 15:11
L10	43	(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4)	US-PGPUB; USPAT	OR	ON	2021/09/21 15:12
L11	23	(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4)	US-PGPUB; USPAT	OR	ON	2021/09/21 15:12
L12	21	(master adj2 key) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	US-PGPUB; USPAT	OR	ON	2021/09/21 15:12
L13	41	(ekey "e-key" (electronic adj2 key)) adj8 (send\$4 transmit\$4) adj5 (\$4word credential data security token ) same (copy duplicat\$4) near5 (key ekey \$4word credential data security token)	US-PGPUB; USPAT	OR	ON	2021/09/21 15:12
L14	19	8 and (10 11 12)	US-PGPUB; USPAT	OR	ON	2021/09/21 15:13

9/21/2021 3:26:23 PM

C:\Users\dharvey1\Documents\EAST\Workspaces\16356313.wsp



**PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

33772 7590 09/27/2021  
MCDONALD HOPKINS LLC  
600 Superior Avenue, East  
Suite 2100  
CLEVELAND, OH 44114-2653

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
EFS (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/356,313	03/18/2019	William R. Mutch	16223-00351	9197

TITLE OF INVENTION: DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	12/27/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
PENDLETON, DIONNE	2689	340-005610

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 McDonald Hopkins LLC

2

3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

HY-KO PRODUCTS COMPANY LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

PORTAGE, MI

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☒ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 130265

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

**NOTE:** Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

**NOTE:** If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

**NOTE:** Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Mark J. Masterson/

Date December 7, 2021

Typed or printed name Mark J. Masterson

Registration No. 71886

Electronic Patent Application Fee Transmittal				
<b>Application Number:</b>		16356313		
<b>Filing Date:</b>		18-Mar-2019		
<b>Title of Invention:</b>		DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES		
<b>First Named Inventor/Applicant Name:</b>		William R. Mutch		
<b>Filer:</b>		Mark Jason Masterson/Danielle Mueller		
<b>Attorney Docket Number:</b>		16223-00351		
Filed as Small Entity				
<b>Filing Fees for Utility under 35 USC 111(a)</b>				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
UTILITY APPL ISSUE FEE	2501	1	600	600



Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				600

Electronic Acknowledgement Receipt	
<b>EFS ID:</b>	44454153
<b>Application Number:</b>	16356313
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	9197
<b>Title of Invention:</b>	DISTRIBUTED CLONING TOOL ASSEMBLY, SYSTEM, AND METHOD FOR REPLICATION OF VEHICLE ACCESS DEVICES
<b>First Named Inventor/Applicant Name:</b>	William R. Mutch
<b>Customer Number:</b>	33772
<b>Filer:</b>	Mark Jason Masterson/Danielle Mueller
<b>Filer Authorized By:</b>	Mark Jason Masterson
<b>Attorney Docket Number:</b>	16223-00351
<b>Receipt Date:</b>	07-DEC-2021
<b>Filing Date:</b>	18-MAR-2019
<b>Time Stamp:</b>	14:52:34
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 600
RAM confirmation Number	E2021B7E52494636
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

<b>File Listing:</b>					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	10001293.pdf	119252	no	1
			c9230d0b96cdca7d8ff8bae03e8d953cace343ddd		
<b>Warnings:</b>					
<b>Information:</b>					
2	Fee Worksheet (SB06)	fee-info.pdf	38163	no	2
			95b5ac689bdc16dcc970540e80a14d579f713c96		
<b>Warnings:</b>					
<b>Information:</b>					
<b>Total Files Size (in bytes):</b>			157415		
<p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b>  If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b>  If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b>  If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/356,313	01/18/2022	11227455	16223-00351	9197

33772 7590 12/28/2021  
MCDONALD HOPKINS LLC  
600 Superior Avenue, East  
Suite 2100  
CLEVELAND, OH 44114-2653

## ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

### **Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)** (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

**INVENTOR(s)** (Please see PAIR WEB site <http://pair.uspto.gov> for additional inventors):

William R. Mutch, North Ridgeville, OH;  
Justin A. Gill, Northfield, OH;  
Thomas F. Fiore, Willowick, OH;  
Randall A. Porras, Avon, OH;  
Benjamin Iwasevic, Northfield, OH;

**APPLICANT(s)** (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

HY-KO PRODUCTS COMPANY, Northfield, OH

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit [SelectUSA.gov](http://SelectUSA.gov).