

# INTELLECTUAL PROPERTIES PORTFOLIO

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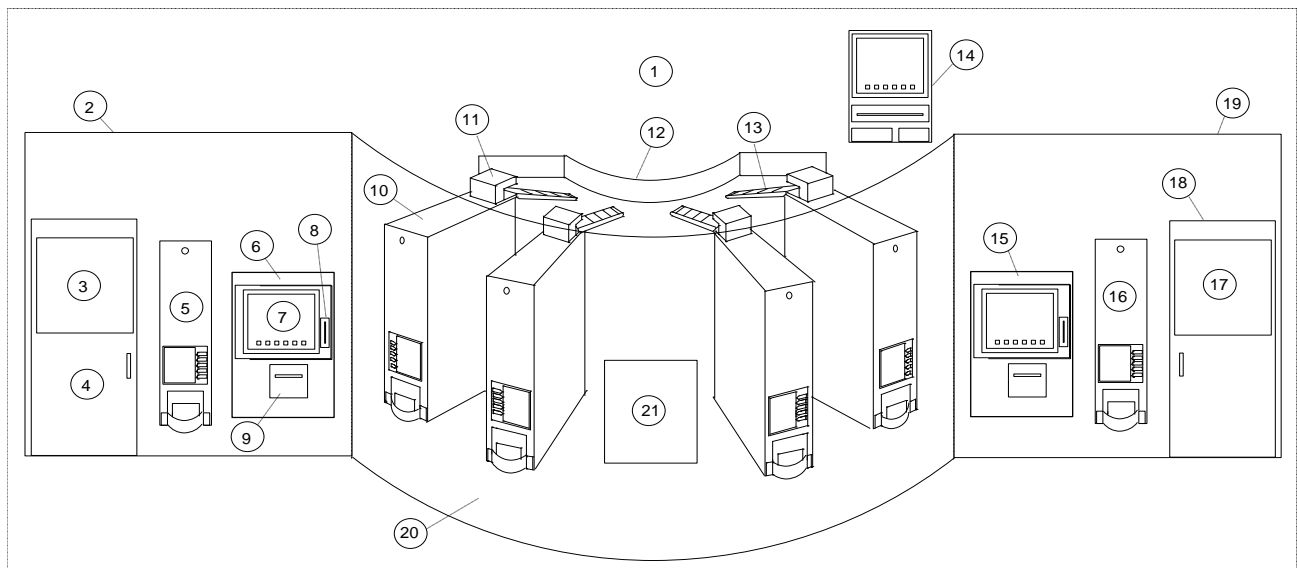
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The **ADVS-technologies** owns intellectual rights to the following patented and patent pending applications on file with the USPTO:

**Patent No. US 8,028,822****Automatic Distributed Vending System**

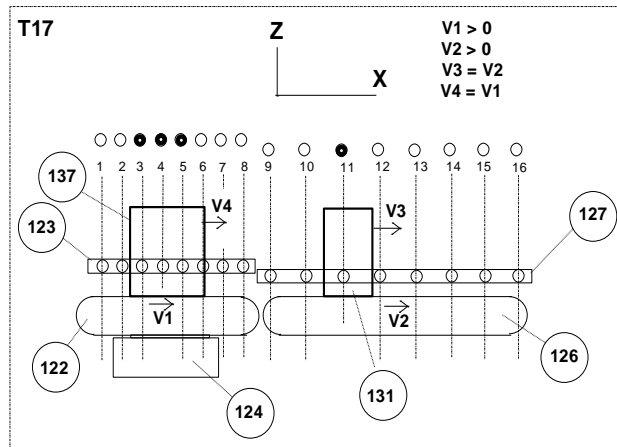
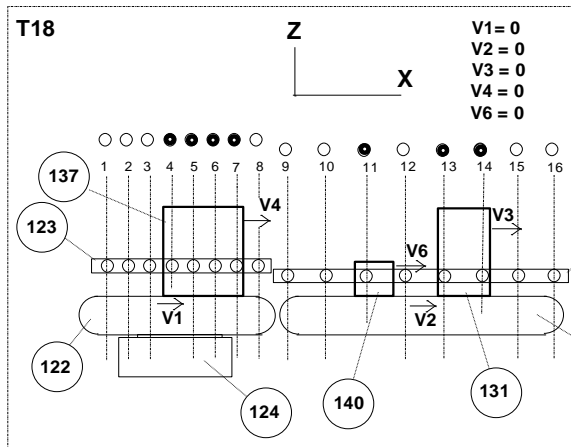
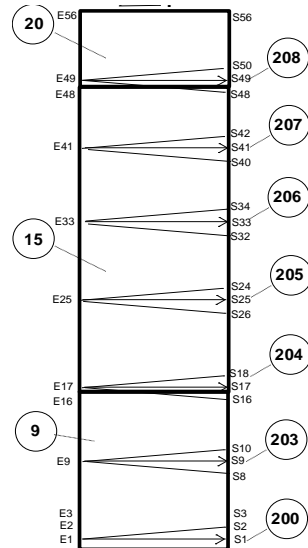
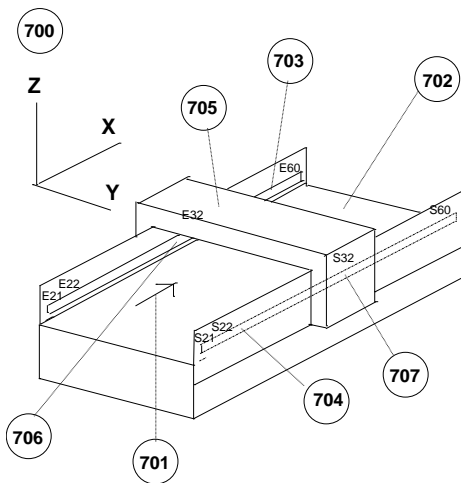
*Invention describes apparatus automating item processing including pharmacy. Apparatus includes portable vending cartridges, automatic vending modules, controllers. Cartridge contains conveyor transporting items inside carriers. Cartridges slide-into receptacles inside vending module. Controllers monitor in real-time presence of cartridges, inventory of carries and items, and execute controls of each cartridge including: indexing conveyors; loading and/or unloading items into/from carriers; maintaining items within specifications - environment, handling, safety with reports confirming compliance. Controllers execute in real-time optimization algorithm to achieve required performance: rates of item loading/unloading, power consumption. Pharmacy applications include cartridges designed for handling containers with medications. Apparatus supports centralized processing of medications: at one location cartridges are filled with medications and transported to assigned destinations for insertion into designated modules for dispensing medications to authorized customers. Number of apparatuses could be configured as closed-loop real-time process control system aimed at achieving optimum utilization of resources and delivering products within specifications.*



**Patent No. US 7,844,416**

**Intelligent Modular Transport System with Object Behavioral Recognition and Traffic Management**

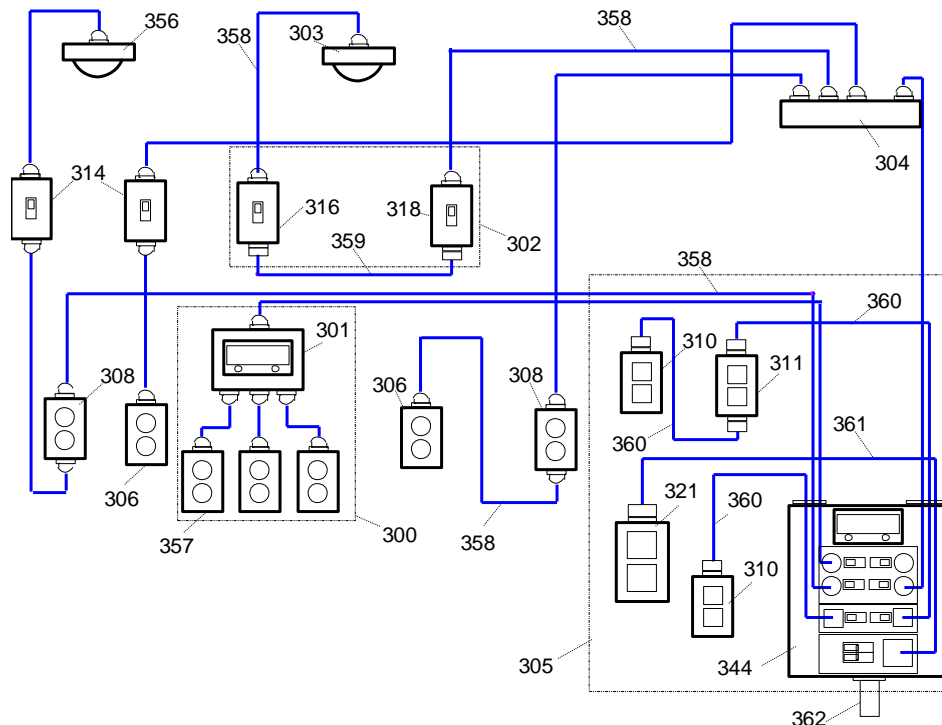
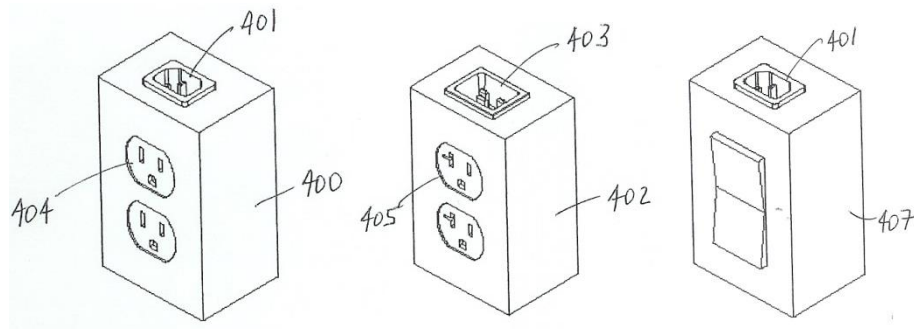
*Invention describes apparatus as closed-loop intelligent Object Transport System with Object Behavioral Pattern analysis and recognition for applications, including automatic self-check-out lanes at grocery, retail stores. Invention calculates Object Behavioral Patterns, Object Expected Behavioral Pattern ranges for each Object or Group of Objects and stores information at central data base. Invention, based on Object barcode, obtains from central data base Expected Object Behavioral Patterns and compares to calculated real-time Object Behavioral Pattern, and based on preset acceptance criteria, the System automatically without intervention by operator, executes real-time process controls to regulate traffic of Objects. Examples of acceptance criteria: protection of fragile Objects from colliding with heavy Objects and rejection of Object outside the range of Object Expected Behavioral Patterns. Invention performs real-time Object traffic management, regulating acceleration, deceleration, speed and direction of motion of Objects. Invention performs process control over Objects, including application of heat.*



## Patent No. US 8,341,837

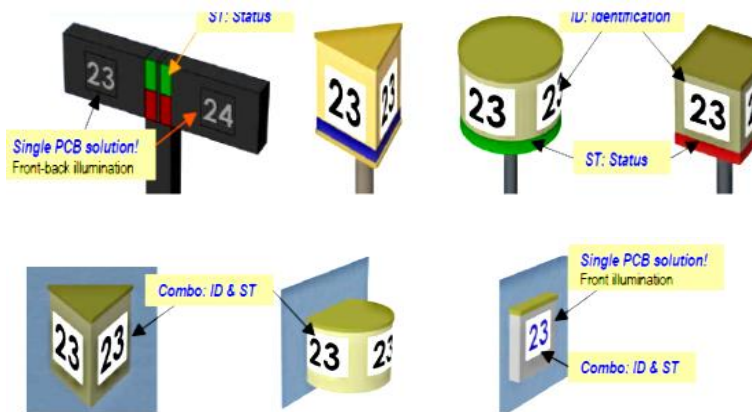
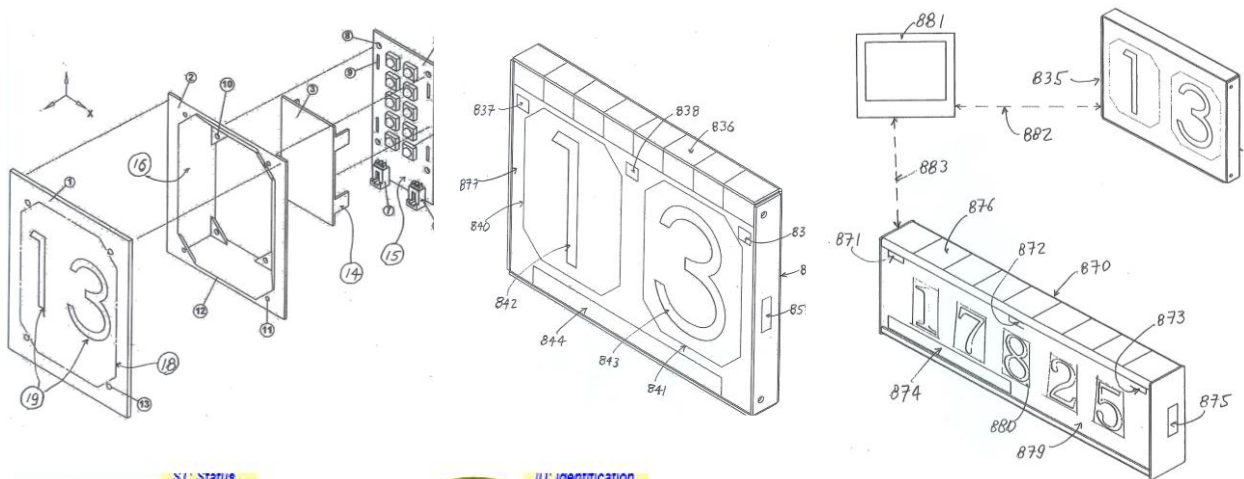
### Modular Power Distribution and Control System

The invention describes apparatus for designing and installing power distribution systems for: residential, commercial and industrial applications, as well as for power distribution within electro-mechanical devices. The invention transforms existing labor-intense installations into practically plug-and-power type modular systems. For a specific project, pre-designed, fabricated and tested kit, including factory assembled and tested: power and control enclosures, power outlets and junction boxes, interface cables, as specified by the invention, will be delivered directly to the installation site. No labor intense operations: wire crimping, outlet/switch wiring, junction box wiring, load wiring. No exposed hot wires or leads at any point outside enclosure. The invention will: significantly lower labor costs, reduce installation time, improve safety, reliability and quality. Utilization of shielded cables and shielding of other components within a system, will significantly lower electrical power emissions, benefiting the environment for all – the end users and other technologies.



**Patent No. US 8,099,261**  
**Low-cost Solid-state Identification Device**

The invention describes intelligent configurable apparatus used for identification and status indication for variety of applications: point-of-service locations; buildings/apartment complexes, residential homes; street signs; etc. Apparatus could be stand-alone or expandable plug-in modules interconnected via local area wired and wireless network into identification and status system. Apparatus could be DC powered, including solar. Apparatus has controller and sensors. Based on apparatus configuration and information obtained from sensors, controller performs variety of controls: illumination color/intensity/modulation; power consumption; communication with other controllers over LAN and/or INTERNET. Sensors could detect: presence of object; environmental parameters - temperature, light, sound; power consumption. Configuration parameters include: power consumption, brightness, ambient conditions, and schedule of operation. Power consumption allows apparatus operation based on safety and cost criteria. Apparatus also controls light function and intensity to meet set criteria. This leads to self-contained apparatus automatically driven by set criteria, including cost control.

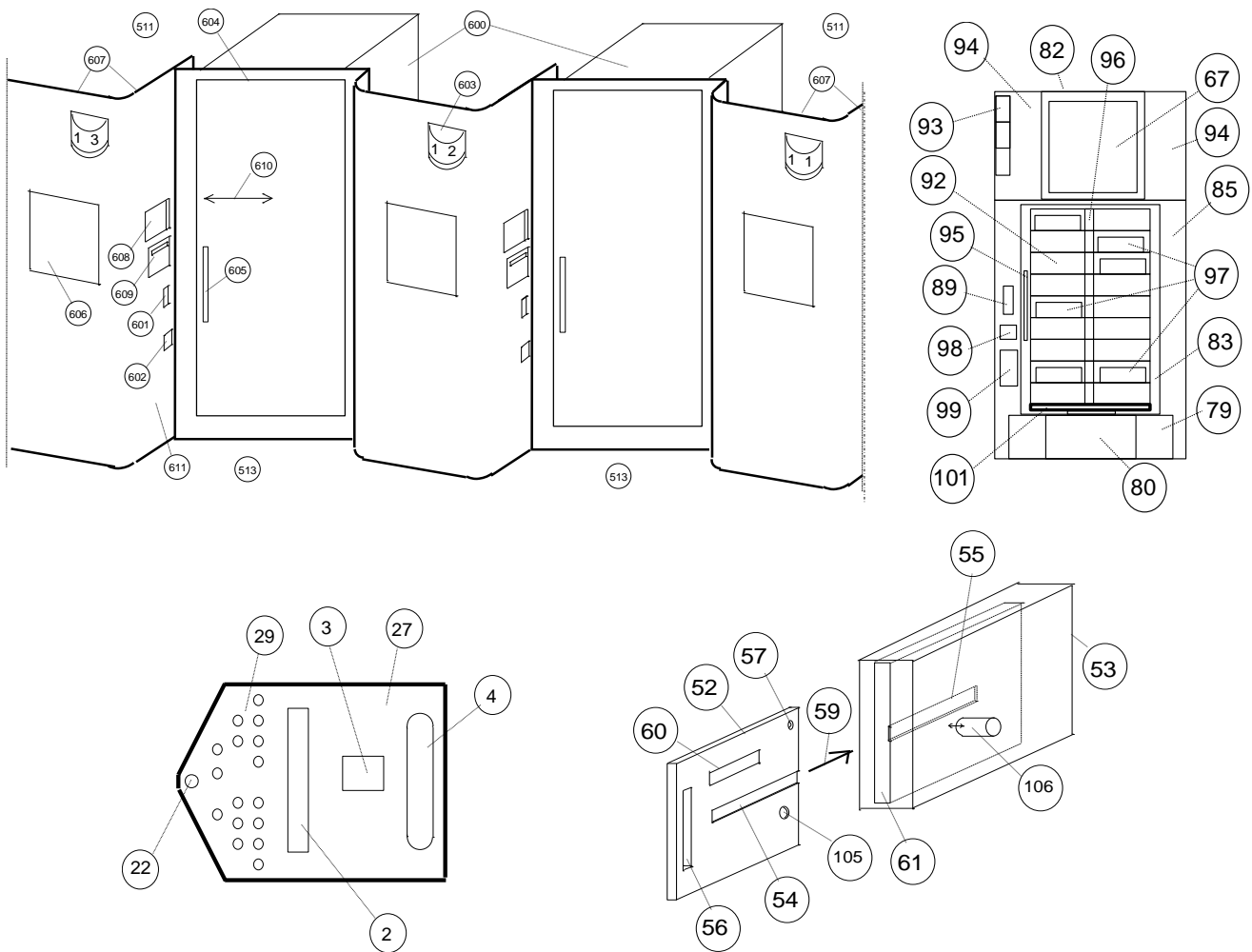


**Stand-alone Low Cost Solid State Identification Devices**

**Patent-pending application No. US 13,225,551**

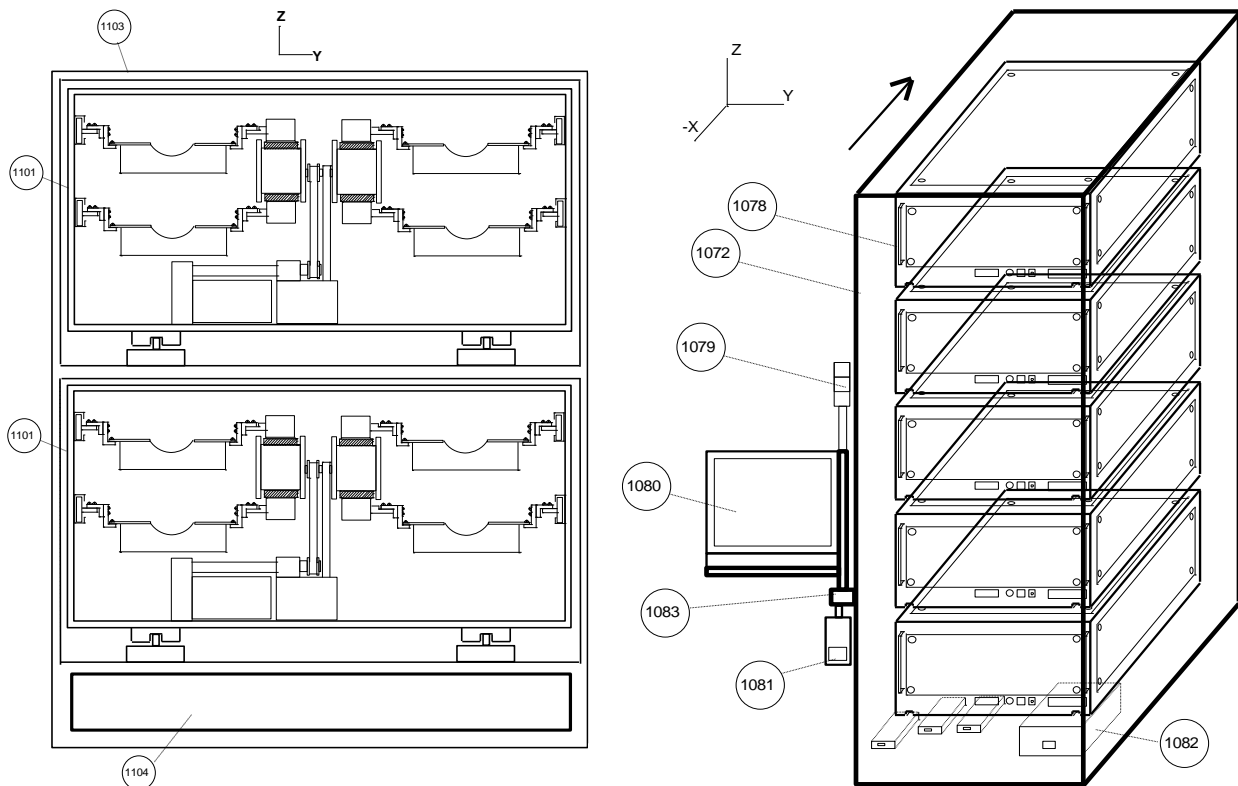
**Apparatus improving item transactions with real-time controls and navigation**

*Invention describes real-time control system increasing shopping efficiency, maintaining item quality, inventory, and directing customer transactions, requiring handling and processing of items only once. Invention controls access to items inside modules via card with unique embedded identification features. Invention stores customer transactions and entered shopping lists. Invention per customer selected shopping list and items availability, will in real-time navigate customer to complete required transactions within customer selected criteria. Invention controls card identification features and modules containing items. Invention based on card identification and item identification such as barcode information will store customer executed transactions, and will require customer to pay for completed transactions before leaving the store. Invention in real-time maintains inventory of items, controls environment surrounding items, and reports items exceeding shelf life limit preventing their transaction. Invention analyzes transactions executed by the card, correlates transactions to customer at payment module, stores behavior patterns for future optimizations of transactions.*



**Patent-pending application No. US 13,335,954****Optimization of Pharmacy Operations using Automatic Distributed Vending System**

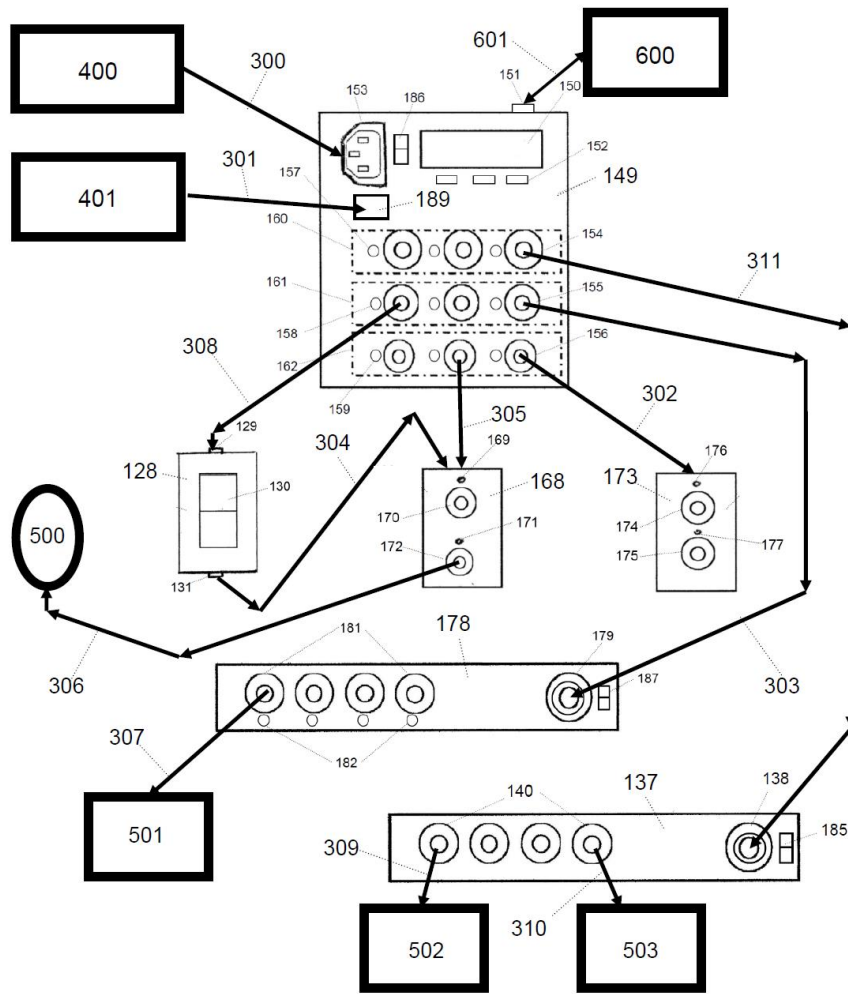
*Invention describes apparatus for automating operations of pharmacies. Apparatus includes portable vending cartridges, cartridge transport rack, automatic vending modules, controllers. Cartridge contains conveyor transporting containers with medications secured inside carriers. Cartridges slide-into receptacles inside vending module. Controllers monitor in real-time presence of cartridges, inventory of carries and containers with medications, and execute controls of each cartridge including: indexing conveyors; loading and/or unloading medications in/from carriers; maintaining medications within specifications - environment, handling, safety with reports confirming compliance. Controllers execute in real-time optimization algorithm to achieve required performance: rates of medications loading/unloading, power consumption. Apparatus could be configured to operate centralized medication processing center with distributed deliveries of medications to vending modules located at pharmacies, stand-alone kiosks, customer homes. Number of apparatuses could be configured as closed-loop real-time process control system allowing optimum utilization of pharmacy resources and delivering medications within specifications. Controller maintains all medications inside apparatus within specification requirements.*





**Patent-pending application No. US 13,731,103**  
**Plug and Power Distribution and Control Apparatus**

*Invention describes apparatus providing plug-and-power distribution of power and communications for: residential, commercial, industrial applications, and for electro-mechanical devices and computer systems. Invention transforms existing labor-intense installations into plug-and-power modular systems. For specific project, pre-designed, pre-fabricated kits, including factory assembled and tested: power and control modules, interface cables, will be delivered directly to the installation site. Labor intense operations, including: wire stripping, wire crimping are replaced with plug-and-power components. Apparatus has no exposed hot leads accessible by bare hands, including service personnel. Invention will: significantly lower labor costs, reduce installation time, improve power distribution safety, reliability, utilization efficiency, and quality. Application of shielded cables and shielding of other components within the apparatus, will significantly lower electrical power emissions, benefiting the environment for all – the end users and other technologies. Invention describes plug-and-power DC power distribution replacing existing AC power distribution, further improving safety and efficiency.*

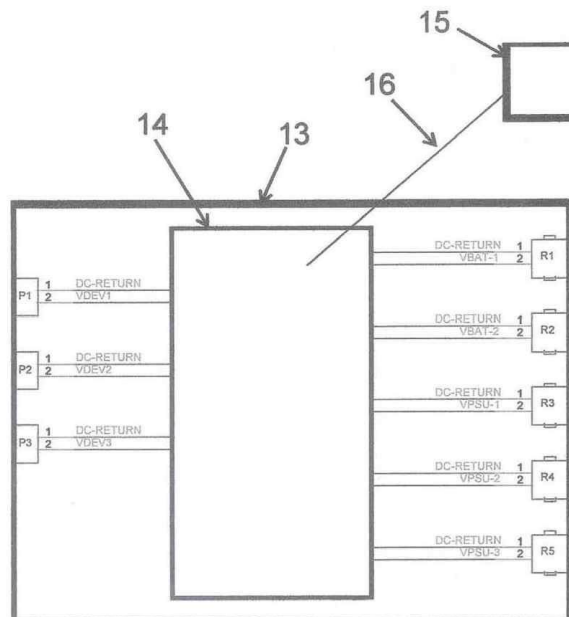




**Patent-pending application No. US 61,859,723**

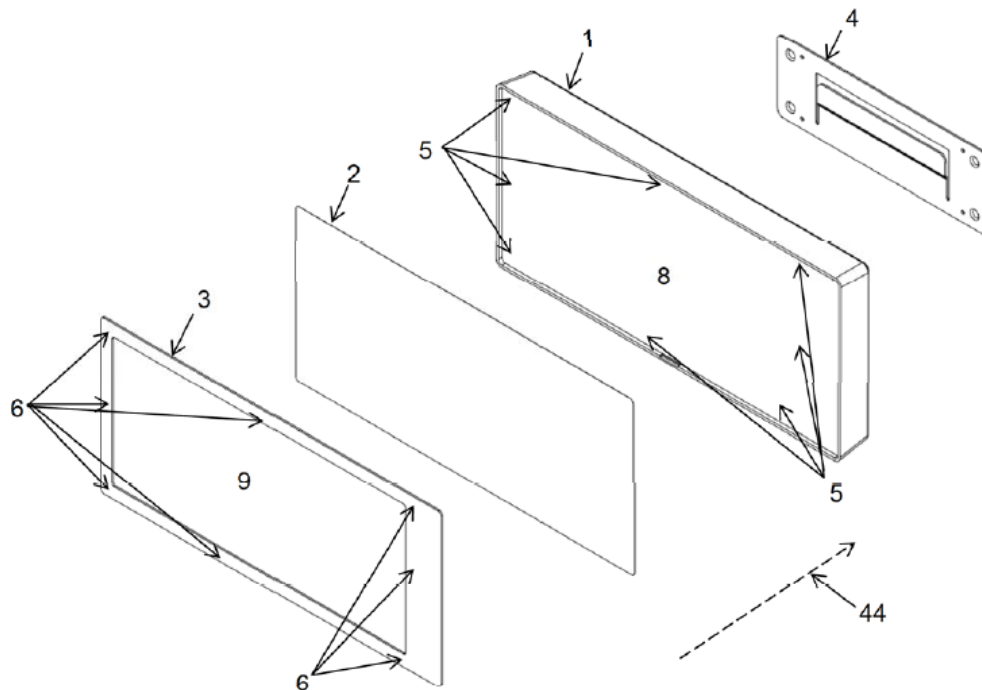
**Apparatus DC Power Splitter to a Device from Several Power Sources with Controls**

*Invention describes configurable apparatus providing DC plug-and-power distribution from DC power sources to DC power loads. Configuration of apparatus includes combination of input power interfaces configured to distinguish or interlock power supplies connected to the apparatus. Configuration of apparatus includes combination of output power interfaces configured to distinguish or interlock power loads connected to the apparatus. Apparatus configurations include controller to monitor and control each device connected to the apparatus. Monitored parameters include: voltage, current, temperature. Controller will execute pre-defined algorithm to prevent measured parameters from exceeding set operating criteria for the apparatus and devices connected to the apparatus. Apparatus can be configured as a harness with components and interfaces embedded into the harness, or enclosure with components and interfaces inside enclosure. Apparatus can be configured and controlled by a HOST over wired or wireless network, including INTERNET. Apparatus can be configured to execute real-time commands without operator assistance.*



**Patent-pending application No. US 61,864,879****Illuminated Building Sign with Configurable Display and Faceplate**

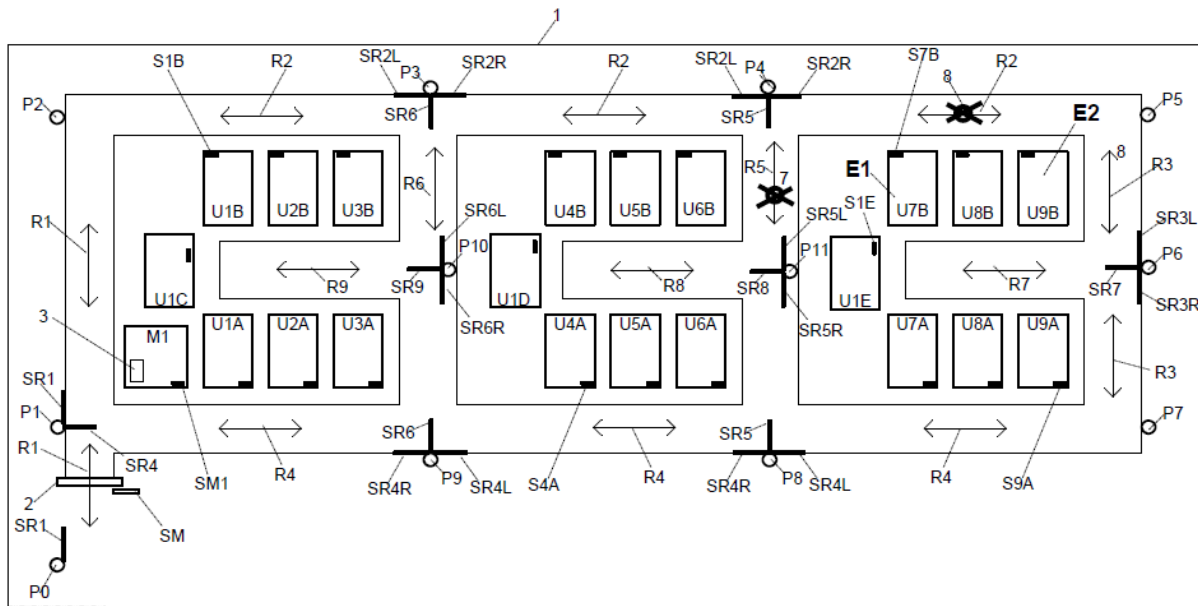
*Illuminated sign with configurable display and faceplate. Sign front area illuminated by solid state devices inside the sign. Illuminated areas are configured with pockets along perimeter of illuminated area or magnets installed inside. Sign sheet, such as transparency, matching illuminated area, configured rectangular shape, further configured with tabs to fit into pockets. Faceplate configured with magnets matching magnets of illuminated area. Sign sheet with tabs placed on top of illuminated area with pockets, and tabs are inserted into the pockets holding sheet in place. Faceplate installed on top of sign sheet without tabs and fastens its magnets to matching magnets of illuminated area, holding sign sheet in place. Sign sheet containing symbols embedded onto the sheet are visible under ambient light, and when illuminated by sign are visible at all times. Combination of symbols, art and/or characters, can be also directly attached to the illuminated area by magnets or adhesive.*



**Patent-pending application No. US 61,875,567**

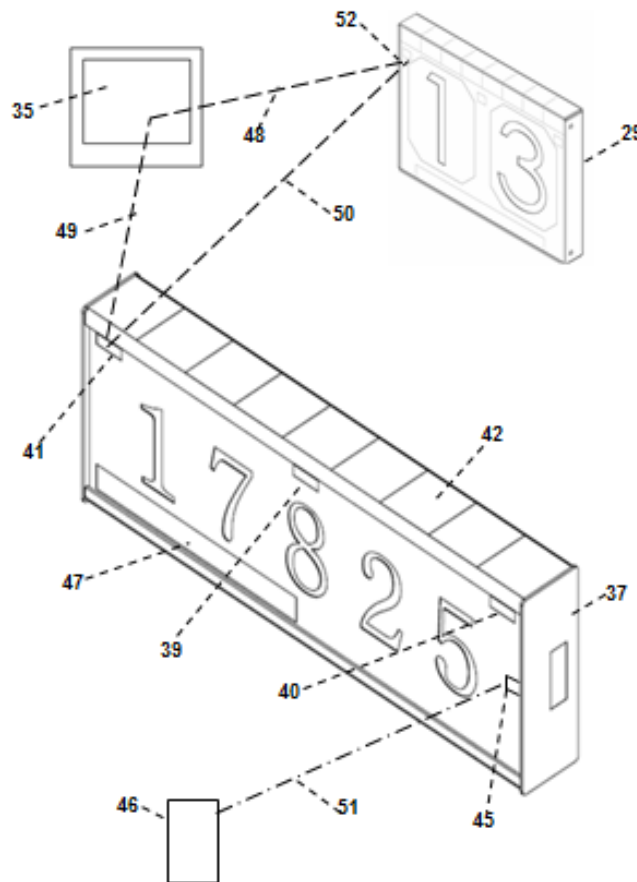
**Apparatus Real Time Control and Navigation System Using Networked Intelligent Illuminated Street Address and Directional Signs to Reduce Response Time of First Responders**

*Configurable apparatus consisting of a networked system of intelligent illuminated signs, including: street address, street name and directional signs, and providing real time navigation. Control computer of apparatus through sensors and operator data entry maintains up-to-date status information of routes within a community. Control computer interfaced to community security network, and interfaced with intelligent illuminated signs of the apparatus via wired or wireless network, such as INTERNET. Control computer will monitor sensors of the apparatus and execute control algorithm providing real-time navigation and assisting emergency teams to enter the community and reaching a target destination within the community as soon as practically possible, reducing the response time. Upon completion of onsite services, control computer providing real-time navigation and assisting emergency teams exiting the community as soon as practically possible. Apparatus configured as closed-loop control system maintaining optimum use of signs and functionality during power outage.*



**Patent-pending application No. US 61,894,130****Apparatus Intelligent LED Illuminated Sign, Methods of Configuration and Controls**

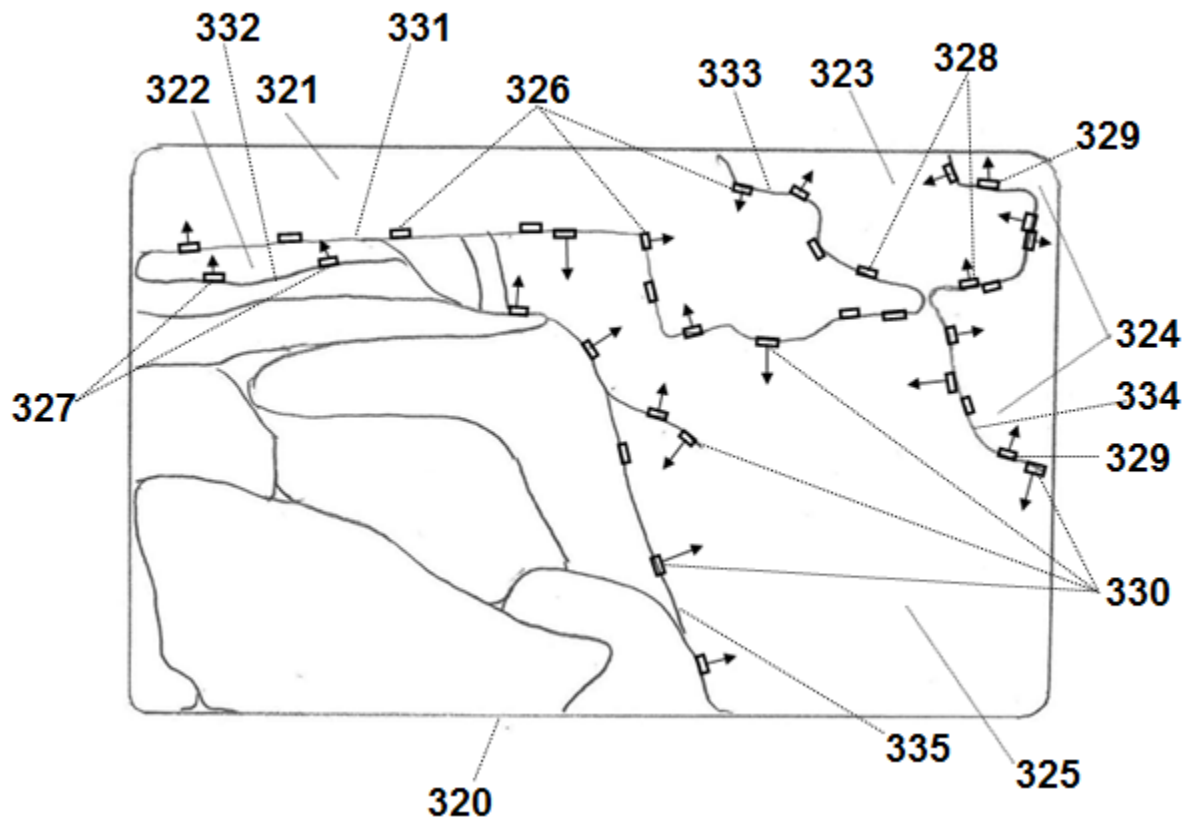
*Apparatus intelligent LED illuminated sign comprising: controller, sensors, illumination devices, interfaces. Sensors comprising: ambient light, proximity, voice, temperature, voltage, current. Configuration methods include: operator interfaces, remote controller wireless interface. Operator interfaces include: interrupting ambient light and triggering light sensor status; triggering status of proximity sensor; voice commands; wireless remote. Remote controller interfaces include: LAN, INTERNET. Controller uses predefined sensor triggering sequences by operator, such as: duration, frequency, combination of both, allowing operator setting new configuration. Remote controller uses predefined protocol setting new configuration. New configuration includes: sensors operating limits; time based controls; and control algorithm. Configuration and controls are stored in non-volatile memory. Operating limits include: power applied to illumination devices; energy consumption by apparatus. Control algorithm includes real-time self-diagnostics and controls to achieve criteria set by configuration. Apparatus configurable in compliance to local and national regulations for applications as intelligent illuminated: street address sign, street name sign; building sign.*





**Patent-pending application No. US 61,926,939****Apparatus Intelligent Parallel View Illumination Pix-Cell, Methods of Configuration and Controls**

*Apparatus intelligent parallel view illumination pix-cell comprising configurable: illumination devices, controller, sensors, interfaces, mounting. Illumination devices include LED's. Controller including: local, remote, executing real-time control algorithm of illumination devices. Sensors including: ambient light, temperature. Illumination devices including: single color, multicolor, generating light directed parallel to viewing surface. Interfaces including: wireless, INTERNET. Mounting including: flexible PCB, supported by flexible channels creating configurable flexible illumination patterns. Channel configurations including: L-shape, U-shape construction and materials, controlling illumination parameters: retention, reflection, diffusion, direction, focusing. Apparatus compatible with DC plug and power distribution. Method of controls including number of pix-cells forming system, with control algorithm of the system and individual pix-cells, supporting applications, including: real-time reproduction of video streams on super large scale; illumination of static images, including super large billboards. System configuration including: front, in-line and backlighting illumination, creating 3-D effects. Control of each pix-cell auto-tuned based on initial characterization of pix-cell illumination properties.*





The **ADVS-technologies** owns intellectual rights to the following trademarks:

**ADVS-pharmacy™**

**ADVS-pharmacy.central™**

**ADVS-pharmacy.kiosk™**

**ADVS-pharmacy.Au™**

**ADVS-pharmacy.mobile™**

**ADVS-pharmacy.connect™**

**ADVS-portable.vending.cartridge™**

**ADVS-automatic.vending.module™**

**ADVS-super.kiosk™**

**ADVS-plug.n.power™**

**ADVS-LED.signage™**

**100% Factory-sealed Quality™**

**ADVS-MagicSign™**

**ADVS-MagicBillboard™**

**ADVS-MagicSign.Net™**

**ADVS-MagicBillboard.Net™**

**Plug-n-Power™**

**iMagicBillboard™**

**MagicSign™**

**MagicPowerSplitter™**

**MagicSignNet™**

**MagicLight™**

**ParallelView™**

**iPix-Cell™**