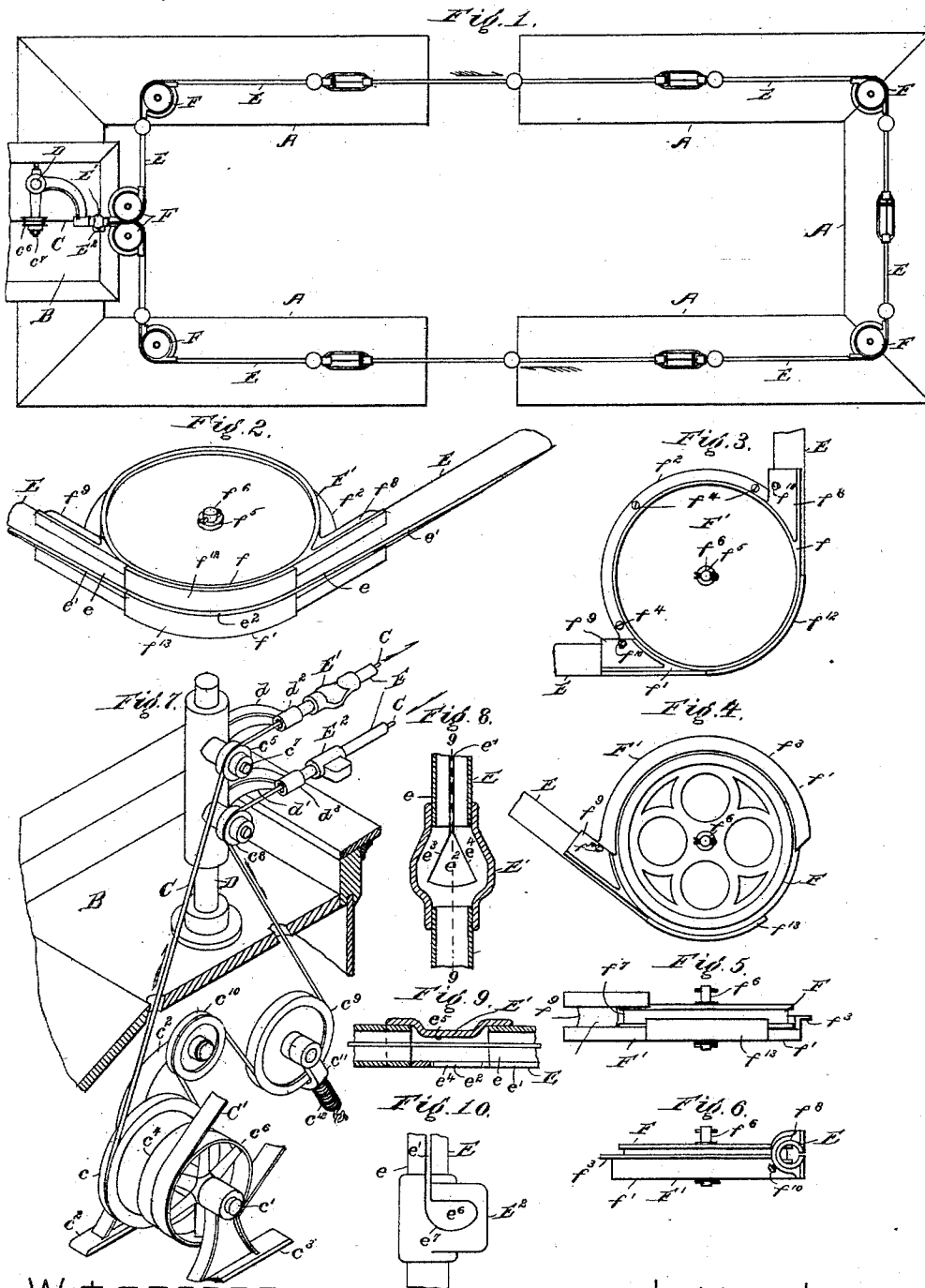


(No Model.)

2 Sheets—Sheet 1.

C. F. PARKER.
CASH AND PARCEL CARRIER APPARATUS,
No. 468,443. Patented Feb. 9, 1892.



Witnesses—
Hirshley Hyde.
Myrtie L. Beale.

Inventor—
Charles F. Parker,
By Albert M. Moore,
His Attorney.

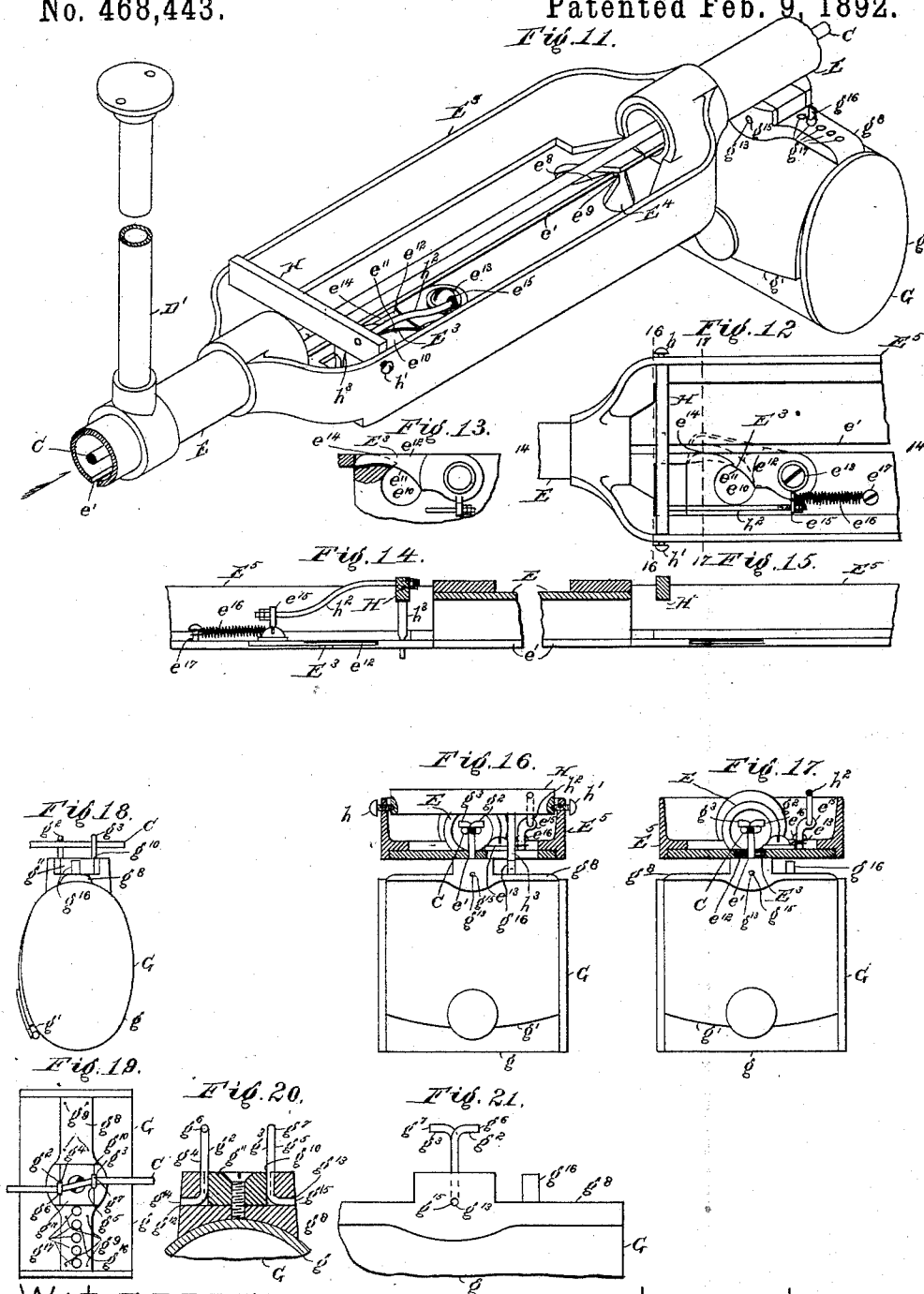
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UNITED STATES PATENT OFFICE.

CHARLES F. PARKER, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO ALBERT WHITE, OF SAME PLACE.

CASH AND PARCEL CARRIER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 468,443, dated February 9, 1892.

Application filed November 28, 1890. Serial No. 372,824. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. PARKER, a citizen of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Cash and Parcel Carriers, of which the following is a specification.

My invention relates to cash and parcel carriers; and it consists in the devices and combinations hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan of counters and of my improved cash and parcel carrying apparatus arranged above the same, showing five stations adapted for the use of salesmen, also a plan of the cashier's desk; Fig. 2, an isometric view of the case, which contains one of the pulleys used to change the direction of motion of the cable and adjacent parts of the slotted tube in which the cable travels; Fig. 3, a plan of the parts shown in Fig. 2; Fig. 4, a plan of said pulley and of the lower part of the case; Fig. 5, an elevation projected from Fig. 4; Fig. 6, an elevation of the same parts as are shown in Figs. 4 and 5 in a line parallel with the axis of the tubular portion of the case; Fig. 7, a sectional isometric view, showing a part of the cashier's desk, the pulleys which drive the cable and hold the same taut, carrier-pulleys which support the cable and the end portions of the tubes in which the cable travels, with the parts which discharge the carrier from the line at the cashier's desk and which receive the carrier from the cashier; Fig. 8, a central horizontal section of a part of the slotted tube in which the cable travels at the cashier's desk, showing the slot through which the cashier engages the carrier with the cable; Fig. 9, a vertical section on the line 9 9 in Fig. 8; Fig. 10, a plan of the under side of the device which discharges the carrier from the cable at the cashier's desk; Fig. 11, an isometric view of parts of the slotted tube, a tube-supporting hanger, a switch-box or salesman's station, part of the cable, and the carrier; Fig. 12, a plan of the delivery end of the switch-box and switch; Fig. 13, a plan of a part of said switch-box and the switch-finger; Figs. 14 and 15, central vertical sections, looking from opposite directions, on the line 14 14 in Fig. 13; Figs. 16 and 17, transverse sections

of the switch-box on the line 16 16 and 17 17, respectively, in Fig. 13, and rear elevations of the carrier; Fig. 18, a side elevation of the carrier; Fig. 19, a plan of the same; Fig. 20, a vertical section, from front to rear, of the upper part of the carrier, showing in side elevation the hook which engages the cable; Fig. 21, a front or rear elevation of the upper part of the carrier, showing said hooks and a stop.

A are counters of a store. B is a cashier's desk, these parts being of the usual construction.

C is a flexible endless cord or cable, which passes over a grooved pulley *c*, secured to a shaft *c'*, supported in suitable hangers or floor-brackets *c² c³*. To the shaft *c'* is secured a fast pulley *c⁴*, rotated by a belt *C'* from any convenient source of power, as a dynamo, steam-engine, or other motor. The pulley *c⁶* is loose on the shaft *c'*, and when the apparatus is not in use the belt *C'* is shifted onto said loose pulley. From the pulley *c* the cable *C* passes over a grooved carrier-pulley *c⁵*, which turns loosely on a stud *c⁷*, projecting from a standard *D*, secured to the cashier's desk *B*. The cable *C* passes from said last-named grooved pulley over a number of grooved change-pulleys *F* and through a slotted tube *E* over another carrier-pulley *c⁸*, thence under a movable grooved tension-pulley *c⁹* and over another carrier-pulley *c¹⁰*, supported upon a floor-bracket *c²*. The tension-pulley *c⁹* is journaled in a fork *c¹¹*, which is weighted or connected by a spiral spring *c¹²* to the floor or any stationary object in such a manner as to keep a uniform tension on said cable. The direction in which the cable travels is varied at desirable points by said change-pulleys *F*, as represented in Figs. 4 to 6, each of said pulleys being arranged in a nearly circular case, formed in two equal nearly-circular parts *f f'*, provided at their adjacent edges with parallel segmental annular flanges *f² f³*, said flanges being secured to each other by bolts or screws *f⁴* and the case having a central hole *f⁵* to receive the arbor *f⁶*, on which the change-pulley *F* turns. The case *F'* is provided with two short segmental tubular projections *f⁸ f⁹*, the axes of which are tangential to the bottom of the groove *f⁷* of the pulley *F*, contained within said case, said segmental tubes *f⁸ f⁹*

receiving adjacent ends of the adjacent sections e of the slotted tube E , and being arranged at suitable angles to vary the direction of the cable as desired, and each being wholly secured on a separate half or part ff' of said case, (as by casting in one piece therewith.) The end of the slotted tube-sections e are inserted in the segmental tubes and retained therein by one or more set-screws f^{10} , which turn radially in said segmental tubes and thrust against said tube-sections, as shown in Figs. 3 and 4. The tube-sections are straight between adjacent cases F' . The tube-sections e are each slotted from end to end at e' , the slot being on the under side of said tube-sections, where said sections are approximately horizontal, except near cases F' , where said slots are, when the following tube-section is approximately horizontal, gradually bent up to the outer side of the tube-sections, and the slot in one tube-section is made continuous with the slot in the next tube-section by arc-shaped plates $f^{12} f^{13}$, secured by screws f^{11} or otherwise to the parts ff' of the case in such a manner as to leave a space e^2 or continuation of the slot e' between said plates $f^{12} f^{13}$, the space e^2 being of the same width as said slot. When the course of the cable is changed from a horizontal or approximately horizontal to a vertical or approximately vertical direction, or vice versa, the slot in adjacent tube-sections is in the same plane and is not deflected at the intermediate case F' .

The carrier G consists, essentially, of a pouch g , having a flap g' or other receptacle, capable of being opened and closed and of receiving and retaining money, checks, or other small articles, and provided at the top with two upwardly-projecting hooks $g^2 g^3$, the shanks $g^4 g^5$ of which are rigidly secured to said receptacle, and the upper portions or hooks proper $g^6 g^7$ of which are turned at about right angles to said shanks in opposite directions, the shanks of said hooks being at such a distance apart from each other greater than the width of the slot e' that when said hooks proper are arranged to reach beyond the cable C and across the same, the shanks being in said slot, the carrier cannot turn sufficiently to allow said hooks to be disengaged from said cable. The combined diameters of the cable C and shanks $g^4 g^5$ are also slightly greater than the width of the slot e' , so that the cable is bent in opposite directions by said shank $g^4 g^5$ of the carrier-hooks, as shown in Fig. 19, when said hooks are in the slot and in engagement with the cable, so that the carrier is driven by frictional contact of said hooks on said cable.

In Figs. 19 and 20 are shown means of securing the hooks to the carrier, the same consisting of a rigid bar g^8 , as of metal, secured to the pouch g in any usual manner, as by rivets g^9 , and having a central slot or depression g^{10} and holes $g^{12} g^{13}$, leading outward in opposite directions from said slot g^{10} and being of a size to receive and fit the lower ends

$g^{14} g^{15}$ of the shanks of the carrier-hooks, said lower ends being bent outward in opposite directions to enter said holes and being retained in said holes by a plug g^{11} , inserted in said slot g^{10} . By making the hooks of wire and making their hook ends and supporting ends of equal length said ends are rendered interchangeable. The hooks are of course interchangeable.

When the cashier or person at the central station or desk B wishes to send a carrier to an outlying station, he uses the receiver shown in Figs. 7 to 9, the same consisting of an enlarged end section E' of the tube E , provided with an opening or enlargement e^2 of the slot e' , said openings e^2 having sides $e^3 e^4$, which converge until they are a distance apart not greater than the width of said slot e' , and lead into said slot. The hooks of the carrier are thrust up into the opening e^2 , one hook on each side of the cable, and the carrier is turned until the upper ends of the hooks are over the cable and the shanks of the hooks press against the cable and let go, or, rather, the carrier being lightly held will be snatched out of the hand. The top of the receiver is depressed at e^5 to prevent the carrier being raised so high in the receiver as to carry the stop hereinafter described into the opening e^2 . The carrier in coming from an outlying station to the central station is released by the discharger E^2 , (shown in Figs. 7 and 10,) which is also in effect an end section of the tube E , having a continuation of the slot e' for a short distance, after which said slot has a curved deflection and enlargement e^6 , so that the front hook of the incoming carrier is allowed to swing away from the cable, and is crowded off from said cable by the curved side e^7 of said enlargement striking the shank of said front hook, the upper arm of said front hook reaching over the cable toward said curved side e^7 . When the front hook of the rapidly-moving carrier strikes said curved side e^7 , (which crosses the path of the cable,) the carrier is given a rapid rotation about its vertical axis, which causes the rear hook of the carrier to be disengaged from the cable and to fall below the same, the hooks dropping through the enlargement e^6 .

Dischargers E^2 and receivers E^4 , Figs. 11 to 17, on substantially the principle of the discharger and receiver at the central station are provided at each outlying station, but modified in such a manner as not to prevent the passage through them of carriers to or from other outlying stations, the discharger and receiver at each station being, for convenience, arranged in a switch-box E^3 , which connects adjacent sections of the tube E , and is provided in its bottom with a straight continuation of the slot e' in said tube. The receiver E^4 , if made like that at the central station, would allow a carrier intended to pass beyond said receiver to turn and fall from the cable, and the discharger E^2 would discharge every carrier which entered it. The receiver

E^4 is therefore provided with a tongue $e^8 e^9$ at each side of the slot e' , arranged at a distance apart equal to the width of said slot, the adjacent sides of said tongues being parallel and the tapering points of said tongues reaching nearly to the converging sides $e^3 e^4$ of said receiver, leaving just space enough between said points and converging sides to allow the shanks of the carrier-hook to pass between them. The hooks of the carrier to be sent to the central station are thrust upward into receiver E^4 , one on each side of the cable and tongues, and then turned over the cable, just as in using the receiver E above described.

The spaces between the points of the tongues $e^8 e^9$ are too narrow and the time occupied by a carrier in passing them is too short to allow the carrier to turn sufficiently to become disengaged from the cable C , and even if the hooks should become partially disengaged from said cable they would be thrown back into engagement with said cable by their shanks striking the converging sides $e^3 e^4$ of the receiver E^4 . The discharger E^3 of each switch-box E^2 is, or may be, when in operation, an opening e^{10} in the bottom of said switch-box, in shape substantially like the discharging opening e^6 of the discharger E^2 above described; but the side e^{11} of said opening e^{10} , which corresponds to the curved side e^7 of the discharger E^2 , is the outer side of a tongue e^{12} , pivoted at e^{13} , and having a straight side e^{14} , which normally forms one side of the slot e' ; but said tongue is capable of being moved across said slot, so that the curved side e^{11} forms a curved continuation of a side of said slot, in which case the shanks of the carrier-hooks will strike the curved side of said tongue and the carrier will be driven into the discharge-opening e^{10} and rotated, as above described, and unhooked from the cable C . The tongue e^{12} is provided with an upwardly-extending arm e^{15} , to which is connected one end of a spiral spring e^{16} , the other end of said spring being secured at e^{17} to the inside of the bottom of the switch-box, the contraction of said spring normally holding said tongue or switch in a position to open the slot e' and close the discharge-opening e^{10} . A horizontal transverse rock-shaft H is journaled at $h h'$ in the sides of the switch-box E^5 , is connected above the axis of its journals by a link h^2 to the arm e^{15} of said tongue or switch e^{12} , and is provided with a down-hanging arm h^3 , adapted to be struck by a stop or switch pin g^{16} , which projects upward from the bar g^8 of the carrier intended to be stopped. The distance between the lower end of the arm h^3 and the guide-slot e' in any switch-box is different from such distance in any other switch-box, and is equal to the distance between the switch-pin and the middle of the bar g^8 on the carrier intended to be stopped by such switch-box, and said arm h^3 and switch-pins are made so narrow that there may be placed upon the cable at the same time as many carriers as there are switch-boxes, and each carrier will

be stopped by its own switch-box and no other. By providing the bar g^8 with a series of holes g^{17} , equal in number to the switch-boxes and arranged at suitable intervals, as shown in Fig. 11, each of said holes being adapted to receive and hold a switch-pin g^{16} , the carrier may be adapted to be stopped at any switch-box by inserting the switch-pin in the proper hole. The tube-sections e are supported by hangers D' , depending from the ceiling or by other usual means, and the end sections $E' E^2$ are supported in a similar manner or by brackets $d d'$, projecting from the standard D and having tubular ends $d^2 d^3$, which surround the cable C and enter said end sections. The tube-sections e are coupled to the end sections $E' E^2$ and to the switch-boxes by any usual means. The sides of the slot e' constitute parallel guides, the principal object of the body of the tube being to connect these guides, so that, if desired, portions of the tube may be removed at intervals to make the same lighter, provided the sides of the slot or the guides remain continuous and properly supported.

I claim as my invention—

1. The combination of a traveling cord or cable, a carrier provided with hooks adapted to extend across said cord in opposite directions, and parallel guides arranged below said cord at a distance from each other less than the combined diameters of said cord and of the shanks of said hooks to hold said hooks in engagement with said cord and to cause said carrier to travel with said cord, as and for the purpose specified.

2. The combination of a traveling cord or cable, a tube surrounding the same and provided with a longitudinal slot, a carrier provided with hooks adapted to extend into said slot and over said cord from opposite sides thereof, said slot being narrower than the combined diameters of said cord and of the shanks of said hooks to prevent said hooks from being disengaged from said cord and to cause said carrier to travel with said cord, as and for the purpose specified.

3. The combination of a traveling cord or cable, tubes, each surrounding said cord and provided with a longitudinal slot, a pulley on which said cord travels to change the direction of motion of said cord, a case inclosing said pulley and connecting adjacent tubes and provided with a slot continuous with the slots in said tubes, and a carrier provided with hooks adapted to extend into said slot and over said cord from opposite sides thereof, said slot being narrower than the combined diameters of said cord and of the shanks of said hooks to prevent said hooks from being disengaged from said cord and to cause said carrier to travel with said cord, as and for the purpose specified.

4. The combination of a traveling cord or cable, tubes, each surrounding said cord and provided with a longitudinal slot in the under side thereof, a grooved pulley carrying

said cord and changing the direction of the motion thereof, a case inclosing said pulley and connecting adjacent tubes and provided with a slot continuous with the slots in said tubes, said pulley rotating in the plane in which both said adjacent tubes lie, and the slot in said case being in the plane of the axis of said tubes, and the slots in said tubes being curved near their ends to enter the slot in said case, and a carrier provided with hooks adapted to extend into said slot and over said cord from opposite sides thereof, said slot being narrower than the combined diameters of said cord and of the shanks of said hooks to prevent said hooks from being disengaged from said cord and to cause said carrier to travel with said cord, as and for the purpose specified.

5. The combination of a traveling cord or cable, a tube surrounding said cord and provided with a longitudinal slot, a carrier provided with hooks adapted to extend through said slot and over said cord in opposite directions, said slot having parallel sides and being narrower than the combined diameters of said cord and the shanks of said hooks to keep said hooks in engagement with said cord, said tube being also provided with an opening at each station to enable said hooks to be thrust into said tube on opposite sides of said cord and turned to engage said cord, as and for the purpose specified.

6. The combination of a traveling cord or cable, a tube surrounding said cord and provided with a longitudinal slot, and a carrier provided with hooks adapted to extend through said slot and over said cord in opposite directions, said slot having parallel sides and being narrower than the combined diameters of said cord and the shanks of said hooks to keep said hooks in engagement with said cord, said tube being provided also with an opening at each station, having sides which converge in the direction in which said cord travels to the sides of said slot and are continuous therewith to enable said hooks to be thrust into said tube on opposite sides of said cord and turned to engage said cord, as and for the purpose specified.

7. The combination of a traveling cord or cable, parallel guides arranged below the same, and slots at each station in said guides converging in the direction said cord travels into the space between said guides, and a carrier provided with hooks adapted to extend up into said slots and over said cord in opposite directions, the space between said guides being narrower than the combined diameters of said cord and the shanks of said hooks to keep said hooks in engagement with said cord and to enable said hooks to be placed on opposite sides of said cord and to be engaged with said cord, as and for the purpose specified.

8. The combination of a traveling cord or cable, parallel guides arranged below the same, and slots at each station in said guides converging in the direction said cord travels into the space between said guides, and the sides of each slot converging toward each other, and a carrier provided with hooks adapted to extend up into said slots and over said cord in opposite directions, the space between said guides being narrower than the combined diameters of said cord and the shanks of said hooks to keep said hooks in engagement with said cord and to enable said hooks to be placed on opposite sides of said cord and to be engaged with said cord, as and for the purpose specified.

9. The combination of the traveling cord or cable, parallel guides arranged below the same, a lateral opening at the salesman's station in one of said guides, a carrier provided with hooks arranged at a greater distance apart than the diameter of said cord and adapted when placed on opposite sides of said cord to be engaged therewith by turning said carrier in one direction and to be disengaged therefrom by turning said carrier in the other direction, and a pivoted tongue arranged to close said opening and to make the side of said guide continuous and adapted to be turned across the space between said guides to make said space continuous with said opening and by striking said hooks to turn said carrier to disengage said hooks from said cord, as and for the purpose specified.

10. The combination of the traveling cord or cable, parallel guides arranged below the same, a lateral opening at the salesman's station in one of said guides, a carrier provided with hooks arranged at a greater distance apart than the diameter of said cord and adapted when placed on opposite sides of said cord to be engaged therewith by turning said carrier in one direction and to be disengaged therefrom by turning said carrier in the other direction, a pivoted tongue arranged to close said opening and to make the side of said guide continuous and adapted to be turned across the space between said guides and to make said space continuous with said opening and by striking said hooks to rotate said carrier to disengage said hooks from said cord, and a lever connected to said tongue to turn said tongue and adapted to be struck by a stop with which said carrier is provided, as and for the purpose specified.

In witness whereof I have signed this specification, in the presence of two attesting witnesses, this 31st day of October, A. D. 1890.

CHARLES F. PARKER.

Witnesses:

RCD. PHILLIPS,
GEO. S. HOOKER.