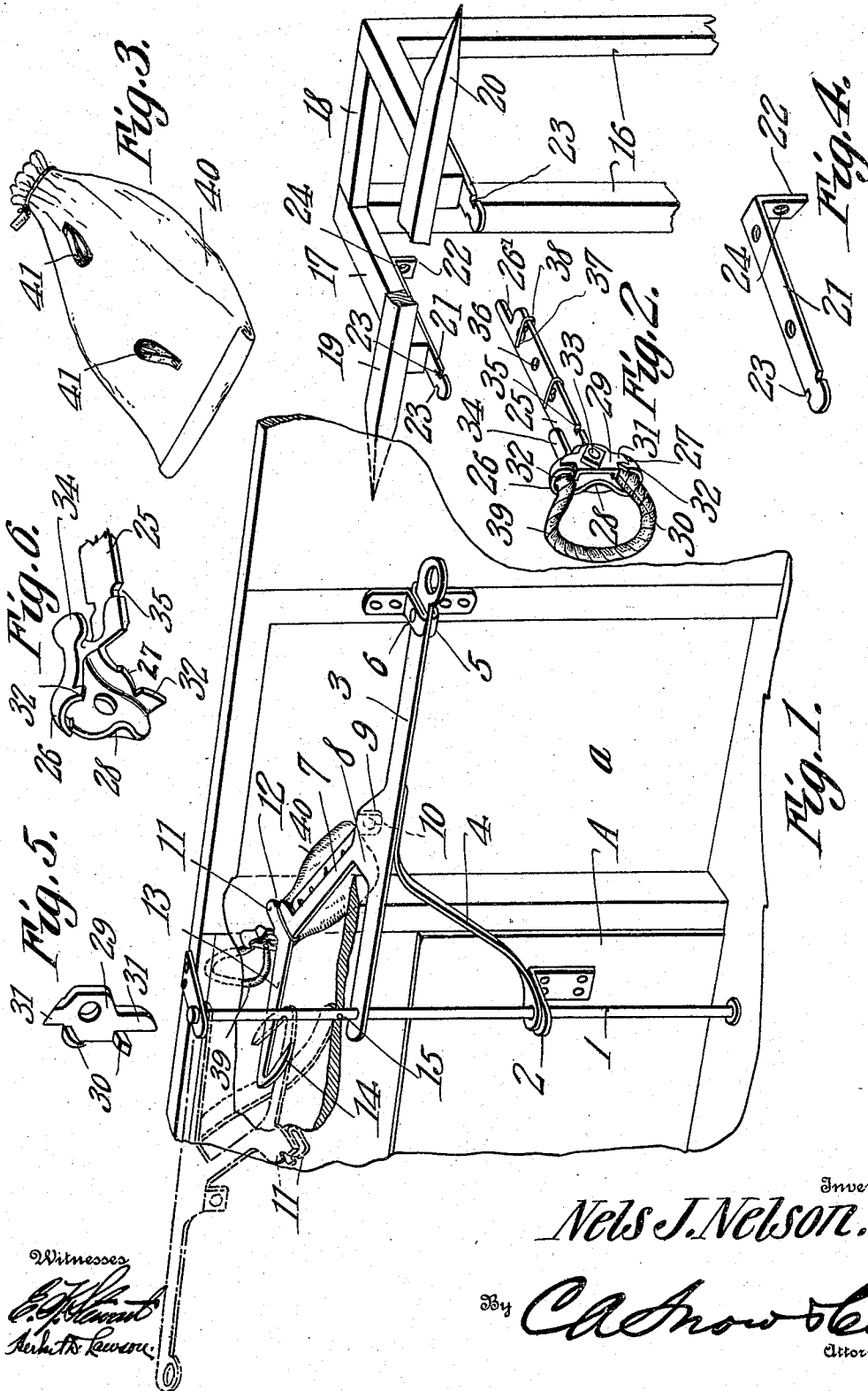


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 APPARATUS FOR EFFECTING THE INTERCHANGE OF MAIL, EXPRESS, AND TRAIN
 ORDERS, DESPATCHES, &c.
 APPLICATION FILED JULY 28, 1909.

941,461.

Patented Nov. 30, 1909.



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Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed July 28, 1909. Serial No. 510,101.

To all whom it may concern:

Be it known that I, NELS J. NELSON, a citizen of the United States, residing at Red Wing, in the county of Goodhue and State of Minnesota, have invented a new and useful Apparatus for Effecting the Interchange of Mail, Express, and Train Orders, Despatches, &c., of which the following is a specification.

This invention relates to apparatus for delivering and receiving train and express orders, mail despatches of different types, etc., one of the objects of the invention being to provide a simple form of apparatus which can be readily attached to an express car or the like and the car-supported portion of which is normally mounted within the car at a point where it will not ordinarily interfere with the occupants of the car, it being possible to shift said device into inoperative position close to the car ceiling.

Another object is to provide a novel form of delivering arm carried by the car-supported portion of the apparatus, this arm being designed to engage and hold a despatch carrier adapted to be supported in the path thereof.

Another object is to provide an arm having means for supporting a despatch carrier in position to be properly delivered to that portion of the apparatus located at a station.

Another object is to provide a despatch carrier which is simple in construction and the arm-engaging portion of which is preferably formed of a yielding material to reduce the force of the sudden contact of the engaging portions of the apparatus.

A still further object is to provide simple and efficient means for supporting the despatch carrier in the path of the arm carried by the car.

Another object is to provide simple means for attaching a despatch holder to the carrier.

With these and other objects in view, the invention consists of the novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In the accompanying drawings:—Figure 1 is a perspective view of the complete ap-

paratus, a portion of the car wall being broken away, one of the positions of the movable crane being shown in dotted lines. Fig. 2 is a perspective view of the despatch carrier. Fig. 3 is a detail view of a despatch holder. Fig. 4 is a view showing in detail one of the supporting plates of the stationary crane. Fig. 5 is a perspective view of the clamping plate of the carrier-head, the same being inverted. Fig. 6 is a perspective view of the head of the carrier with the clamping plate and the loop removed.

Referring to the figures by characters of reference, A designates a portion of a car structure, the same being provided with a door opening *a*. A guide and pivot rod 1 is mounted within the car and extends from the floor to the ceiling thereof, this rod being parallel with one of the door jambs and removed preferably about two feet therefrom, there being a bracket 2 upon the wall of the car and extending around the rod so as to support the swinging arm of the delivery apparatus.

The main strip or bar 3 is pivotally mounted on the rod 1 and has a brace 4 extending downwardly therefrom and also pivotally mounted on the rod, this brace being designed to normally bear downward on the bracket 2 and thus hold the strip 3 at a predetermined elevation. Spaced ears 5 extend inwardly from the door jamb farthest removed from the rod 1 and constitute a keeper, the free end of the strip 3 being designed to assume a position between these ears and to receive a locking pin, not shown, and which may be inserted through openings 6 within the ears.

Arm 7 extends from the strip 3 and preferably in the same horizontal plane therewith, this arm being disposed at an acute angle to said strip and so inclined as to lap the outer face of the door jamb adjacent which the rod 1 is located. The strip 3 is of increased width at the point from which the arm 7 extends, as indicated at 8, this enlarged portion being provided with a downwardly extending ear 9 having an opening 10 therein. Parallel, substantially horizontally extending ears 11 are formed at the outer end of the arm 7 and each of these ears has a notch 12 in its free end. A finger 13 extends from the outer end of the arm 7 and

is substantially parallel with the strip 3, there being a hook 14 at the free end of the finger.

It will be seen that the movable crane which is formed by the strip 3 and the parts connected thereto can be swung to position across the door opening *a* and with the finger 13 outside of the car and at one side of said opening, the finger when thus located being spaced from but substantially parallel with the wall of the car. This is the position assumed by the crane when in use. When it is not in use, the crane can be swung into the car and moved upward upon the rod 1 until it is brought close to the ceiling. A pin may then be inserted through an opening 15 formed within the rod 1 and below the elevated crane, this pin thus serving to support the crane out of operative position.

It is to be understood that stationary cranes may be located along the track traveled by the car A, these cranes being disposed at the points where orders or despatches, etc., are to be received or delivered. Each stationary crane consists of posts 16 having parallel arms 17 extending from the upper ends thereof and toward the track. The posts may be connected at their upper ends by a brace 18 and secured on the free ends of the arms is a receiving member 19 in the form of an elongated beam having pointed ends 20 which are supported beyond the arms 17. Secured to the bottom face of each arm 17 is a holding strip 21 having a depending ear 22 at its inner end while its outer end projects beyond the arm to which it is fastened and has oppositely disposed notches 23 therein. An opening 24 is formed in the ear 22 for the purpose hereinafter set forth.

The despatch carrier included in the present improvements consists of a flat strip 25 having a tongue 26' at one end while its other end is formed with a trough-like head 26, one side of which is open as at 27 while the opposite side thereof has a central depression 28. A retaining plate 29 is designed to bear upon the open side of the head and has inwardly extending lugs 30 designed to project into the head. Wings 31 are formed at the ends of the plate 29 and are designed to be seated back of retaining lugs 32 formed on the head. A bolt 33 extends transversely through the center of the head and through the plate 27 and is designed to be tightened for the purpose of securing the plate upon the head. A lip 34 extends from the head and is spaced from and parallel with the strip 25, there being notches 35 in the strip and close to the lip, while a series of openings 36 are formed within the strip. Tongues 37 are designed to extend transversely across one or more of the openings 36 and each of these tongues

has an eye 38 at one end which pivotally engages that portion of the strip between the openings 36 and one of the longitudinal edges of the strip. A loop 39 of rope or other strong, flexible material has its ends inserted into the head 26 and under the end portions of the clamping plate 29, the lugs 30 on said plate and the depression 28 on the head being extended between the terminals of the loop so as to hold them properly spaced apart. The bolt 33 also extends between said terminals. It is to be understood that, if preferred, the loop 39 can be made of metal instead of a flexible material.

The despatch holder is preferably in the form of a bag 40 of canvas or any other desirable material, the mouth thereof being provided with any suitable means for closing it. A desired number of flexible loops 41 are secured upon the bag, as shown in Fig. 4. Should it be desired to deliver the despatch or the like from a moving car, the operator places the paper in bag 40, and, after closing the bag, inserts the loops 41 through certain of the openings 36 and hooks them onto the tongues 37. These tongues are then swung down onto the strip 25 and will, obviously, prevent the loops from being withdrawn from the openings and will therefore support the bag. The operator then inserts the tongue 26' of the strip to which the bag is attached into the opening 10 in ear 9 and place the notched portion of the strip 25 between the ears 11. The loop 39 will thus be supported beyond the free end of the arm 7. A cord can then be wrapped around the notched portion of the strip 25 and also around the arm 7 and will serve to prevent the strip from being accidentally displaced relative to the arm. It will be apparent however, that the cord receives none of the weight of the carrier strip and the holding bag. After the parts have thus been assembled the strip 3 is swung into position shown by full lines in Fig. 1 and with the loop 39 projected laterally beyond the car. When the car passes a station where the delivery is to be made, the loop 39 passes onto the nearest end 20 of the receiving member 19 and when the loop comes against the first arm 19 of the stationary crane, it will be brought to a stop and the strip 25 will therefore be drawn from between the ears 11 and out of the opening 10. The cord used for tying the parts together, will of course, be broken during this operation.

Should it be desired to deliver orders, despatches and the like to the car while in motion, the strip 25 to which the holding bag is attached is placed beneath one of the arms 17 and the tongue 26' is inserted into the opening 24 at the rear end of the strip 21 while the lip 34 is placed upon the outer end of the strip 21. Said strips 21 and 25 are

then fastened by means of a cord. When the car passes the station the finger 13 passes into the loop 39 extending from the supported strip 25 and therefore tears said strip away from its fastenings and leaves it suspended from the finger 13.

It is to be understood of course, that carrying strips 25 can be secured to both cranes and the interchange of strips effected simultaneously.

Although the apparatus has been described as primarily designed for use in effecting the interchange of train and express orders, despatches and the like, it will be obvious that the same can be used equally as well in the interchange of mail between stations and the moving trains.

Various changes can of course, be made in the construction and arrangement of parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

1. In apparatus of the class described, the combination with a structure having a door opening and a pivot rod within said structure and adjacent the opening, of a crane pivotally and slidably mounted on the rod, said crane including a main strip, a brace extending therefrom, said brace and strip engaging the rod, an arm extending from the strip and a hooked finger upon the arm, said arm and finger being movable through the door opening and into position at one side thereof.

2. Apparatus of the class described including a structure having a door opening, a pivot rod within the structure and adjacent the opening, and a crane slidably and pivotally mounted upon the rod, said crane including a main strip, a brace extending therefrom, said strip and brace engaging the rod, an arm extending from the strip, an engaging finger extending therefrom, means upon the structure for supporting the crane at a predetermined elevation, and a keeper for engagement by the main strip of the crane.

3. The combination with a crane, an arm thereon and a holding projection upon the arm, of a carrier having one end movable into engagement with said projection, means for supporting the other end of the carrier from the arm, and a breakable tie for attaching the holder to the carrier.

4. The combination with a crane including an arm and a depending engaging device upon the arm, of a carrier including a strip having one end movable into engagement with said device, cooperating means upon the arm and strip for supporting the other end of said strip relative to the arm, and a loop detachably connected to one end of the strip.

5. The combination with a crane including an arm and a depending engaging device

upon the arm, of a carrier including a strip having one end movable into engagement with said device, cooperating means upon the arm and strip for supporting the other end of said strip relative to the arm, and a flexible loop having terminals detachably connected to said end of the strip.

6. The combination with a crane including an arm and a depending engaging device upon the arm, of a carrier including a strip having one end movable into engagement with said device, cooperating means upon the arm and strip for supporting the other end of said strip relative to the arm, a head at one end of the strip and a loop having terminals within the head, said loop extending beyond the head, and means for clamping the terminals in the head.

7. The combination with a crane including an arm and a depending engaging device upon the arm, of a carrier including a strip having one end movable into engagement with said device, cooperating means upon the arm and strip for supporting the other end of said strip relative to the arm, a head at one end of the strip and having an open side, there being a depression formed by the opposite side of the head, a loop having its terminals seated within the head and at opposite sides of the depression and means upon the open face of the head for binding the terminals within the head.

8. The combination with a crane including an arm and a depending engaging device upon the arm, of a carrier including a strip having one end movable into engagement with said device, cooperating means upon the arm and strip for supporting the other end of said strip relative to the arm, a hollow head at one end of the strip and having an open side, a clamping plate, a loop having its terminals within the head, projections upon the plate and extending beyond the terminals of the loop and means for binding the plate upon said terminals.

9. The combination with a crane, an arm thereon and an engaging device upon the arm, of a carrier including a strip, a tongue at one end of the strip and insertible into said device, said strip having an opening therein, a loop extending from the strip, a tongue pivotally connected to the strip and extending across the opening, and a despatch holder having means for detachably engaging the tongue.

10. In apparatus of the class described, a carrier including a strip having an engaging portion at one end, there being an opening within the strip, a head at the other end of the strip, a loop having its terminals seated within the head, means for detachably binding the terminals within the head, and a pivoted tongue normally extending across the opening.

11. In apparatus of the class described, a

carrier including a strip having a support-engaging portion at one end, a head at the other end of the strip, a loop extending beyond the head, there being an opening within the strip, a pivoted tongue normally extending across the opening and a despatch holder including a receptacle and a loop upon the receptacle and insertible through the opening and into engagement with the tongue.

12. In apparatus of the class described, a carrier including a strip having a support engaging portion at one end, there being an opening in the strip, a tongue pivotally connected to the strip and normally extending across the opening, a loop at one end of the strip, and a despatch holder including a

receptacle and a loop extending from the receptacle and insertible through the opening and into engagement with the tongue.

13. In apparatus of the class described, a crane including a slidably and pivotally supported member, an arm extending from said member, an engaging portion projecting from the arm, spaced supporting ears upon the arm, and a carrier insertible into the supporting member and ears.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

NELS J. NELSON.

Witnesses:

J. H. BOUSTEAD,
AUG. H. MAETZOLD.