

C. A. IFFERT.  
MAIL DELIVERING AND RECEIVING APPARATUS.  
APPLICATION FILED FEB. 9, 1912.

1,022,028.

Patented Apr. 2, 1912.

2 SHEETS—SHEET 1.

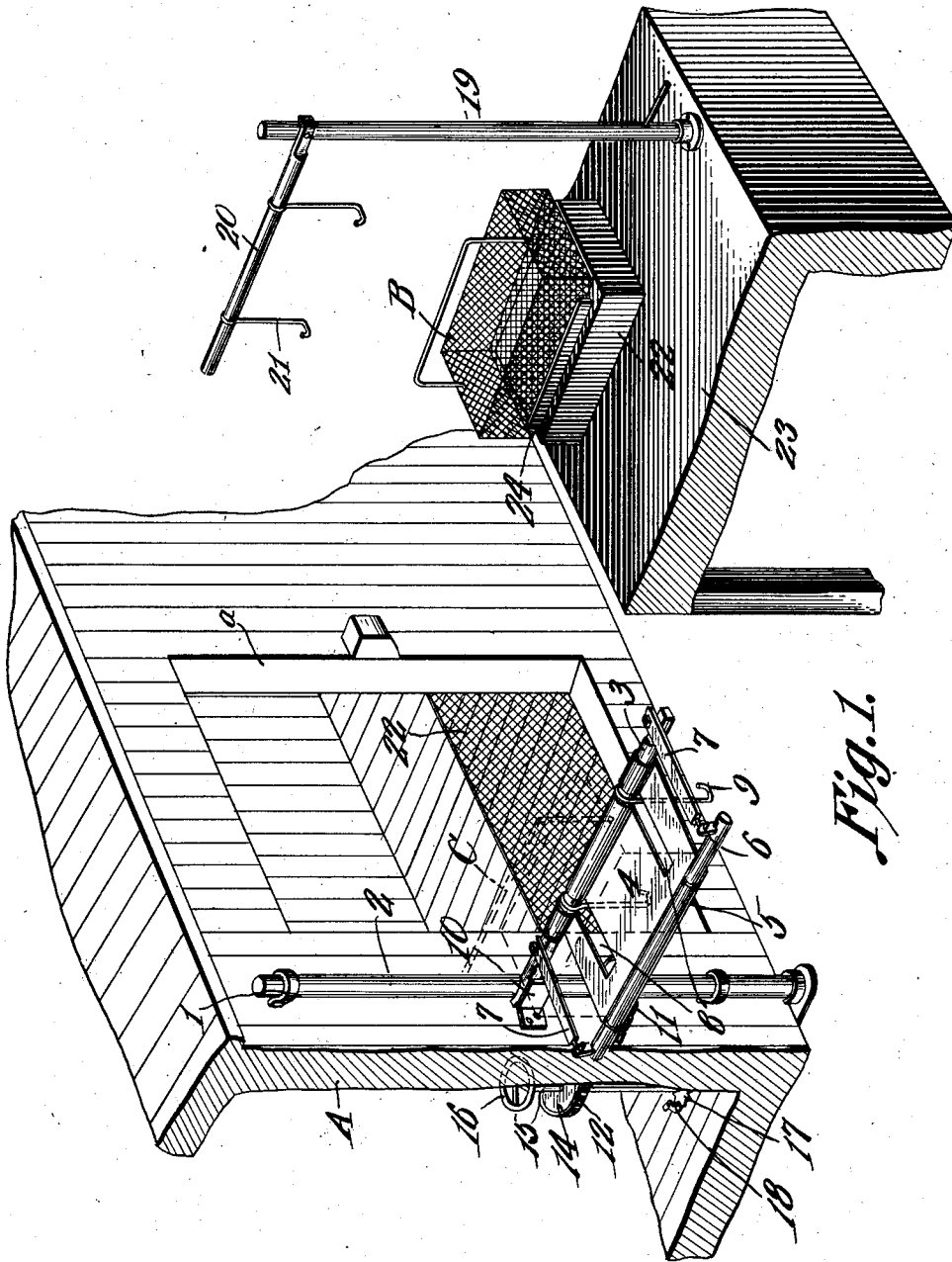


Fig. 1.

Witnesses

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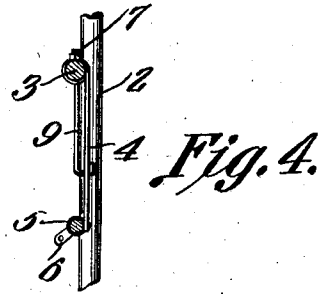
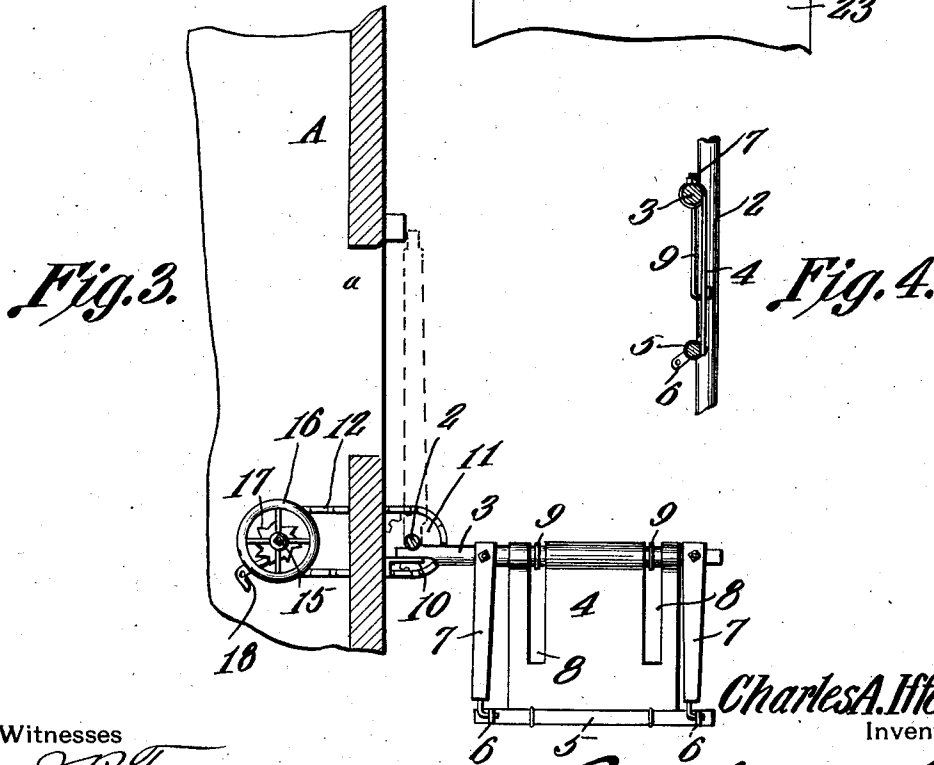
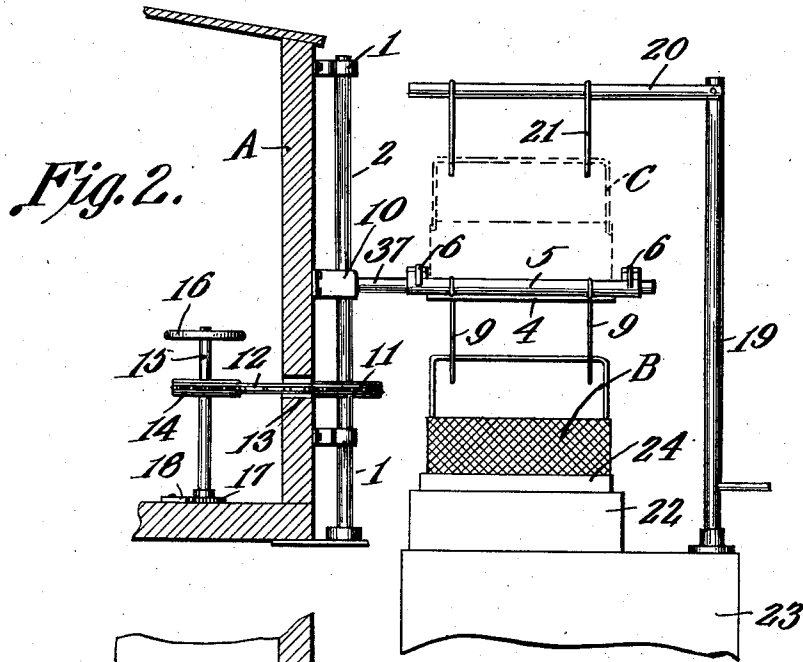
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# UNITED STATES PATENT OFFICE.

CHARLES A. IFFERT, OF MONROE, WISCONSIN.

MAIL DELIVERING AND RECEIVING APPARATUS.

1,022,028.

Specification of Letters Patent.

Patented Apr. 2, 1912.

Application filed February 9, 1912. Serial No. 676,573.

*To all whom it may concern:*

Be it known that I, CHARLES A. IFFERT, a citizen of the United States, residing at Monroe, in the county of Green and State of Wisconsin, have invented a new and useful Mail Delivering and Receiving Apparatus, of which the following is a specification.

This invention relates to apparatus for use in effecting the interchange of mail between stations and moving cars, one of the objects of the invention being to provide improved means whereby the transfer of mail can be carried out without danger of injury to the bags or pouches in which the mail is contained or injury to any parts of the mechanism constituting the present invention.

A further object is to provide mechanism of this type which is simple and durable in construction and which can be readily applied to railway mail cars in use.

A further object is to provide mechanism which will operate without danger of injury to persons within the car.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

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

In said drawings:—Figure 1 is a perspective view of the mechanism constituting the present invention, the parts being shown in the positions assumed by them immediately prior to the exchange of mail. Fig. 2 is a rear elevation of said mechanism, a portion of the car structure being shown in section. Fig. 3 is a plan view of the car supported mechanism, one of the positions of said mechanism being indicated by dotted lines. Fig. 4 is an end elevation of a portion of the structure shown in Fig. 3, said structure

being shown collapsed and suspended out of active position.

Referring to the figures by characters of reference A designates a portion of a car structure having a door opening *a*. Brackets 1 extend outwardly from the wall of the car structure close to one side of the opening *a* and journaled within these brackets is a revoluble standard 2 having an arm 3 extending radially therefrom and adapted to move therewith. A shelf 4 is supported by and mounted to swing relative to the arm 3 and is formed along its free longitudinal edge with a retaining flange or rib 5 having ears 6 upstanding from the ends thereof. These ears are adapted to be engaged by hooks 7 pivotally connected to the arm 3 adjacent the ends of the shelf 4. When the ears are thus engaged, the shelf is supported in a horizontal position, as shown in Fig. 1. Openings 8 are formed in the shelf and hooked arms 9 are suspended from the arm 3 and project through these openings, said hooks being adapted to swing freely and the ends of the hooks being extended in the direction of movement of the car A. A stop bracket 10 is secured to the side of the car structure in the path of the arm 3 and is adapted to limit the horizontal swinging movement of said arm so that, when the arm is swung outwardly into position perpendicular to the wall of the car, it will be brought into contact with the stop bracket.

A sprocket 11 is secured to the standard 2 and is engaged by a chain 12 extending through an opening 13 in the wall of the car structure. Said chain also engages a sprocket 14 secured to a shaft 15 which is mounted in the car structure and is adapted to be rotated by means of a hand wheel 16 or the like. A ratchet wheel 17 is secured to the shaft 15 close to the floor of the car structure and is normally engaged by a spring pressed pawl 18 whereby the shaft is held against rotation in one direction.

The mechanism used at each station for cooperating with the crane on the car structure, includes a standard 19 having an arm 20 extending radially from the upper end portion thereof, there being hooked mem-

bers 21 suspended from this arm and adapted to swing freely thereon. The terminal portions of these hooked members extend in a direction opposite to that in which the car A is moving. A supporting block 22 or the like is mounted on the platform 23 from which the standard 19 extends and this block has an upstanding flange 24 adjacent one side thereof.

In using the apparatus baskets, such as shown at B and C are employed, these baskets being similar in construction. The basket to be delivered to the moving car is placed on the block 22 and against the flange 24 while the basket to be delivered from the car to the station is placed on the shelf 4. The arm 3 is then swung outwardly by rotating the shaft 15 and when thus located the basket supported by the shelf 4 has its bail or handle in position to move against the hooked members 21. Furthermore the hooked arms 9 are suspended in position to move into engagement with the bail or handle of the basket B. Thus it will be seen that as the car passes the station, the hooked members 21 engage the basket C while, at the same time, the hooked members 9 engaged the basket B. The basket C is left suspended from the arm 20 while basket B is held suspended by the hooks 9. By then rotating shaft 15 arm 3 can be swung inwardly toward the opening  $\alpha$  and the basket B which has been transferred to the hooks 9, is thus brought into position where it can be conveniently reached by an occupant of the car A. After the interchange of mail has been effected, the hooks 7 can be disengaged from ears 6 whereupon the shelf 4 will swing downwardly and be suspended substantially vertically from the arm 3, as illustrated in Fig. 4.

Any suitable means, such as a panel 22 formed of any suitable material such, for example, as interwoven metal rods, can be arranged across the lower portion of the door opening  $\alpha$  so as to afford protection to the occupants of the car while the car supported crane is in outwardly extended or active position.

What is claimed is:—

1. The combination with a car structure, of a standard mounted for rotation thereon, means within the structure for rotating the standard, a shelf outstanding from and movable with the standard, and means detachably engaging the shelf for holding it in substantially horizontal position.

2. The combination with a car structure, of a standard mounted for rotation thereon, a shelf suspended from and mounted to swing relative to the standard, means for holding the shelf in a substantially horizontal position, and means within the structure

for rotating the standard to move the shelf toward or away from the structure.

3. The combination with a car structure, of a standard mounted for rotation thereon, an arm outstanding from the standard, a shelf mounted to swing relative to, and suspended from the arm, means on the arm and cooperating with the shelf for holding the shelf in a substantially horizontal position, and means within the car structure for rotating the standard.

4. The combination with a car structure, of a standard mounted for rotation thereon, an arm extending from the standard, a shelf suspended from and adapted to swing relative to the arm, cooperating means upon the shelf and arm for holding said shelf in a substantially horizontal plane, and hooked elements suspended from and adapted to swing freely relative to the arm.

5. The combination with a car structure, of a standard mounted for rotation thereon, an arm extending from the standard, a shelf suspended from and adapted to swing relative to the arm, cooperating means upon the shelf and arm for holding said shelf in a substantially horizontal plane, hooked elements suspended from and adapted to swing freely relative to the arm, and means within the car structure for rotating the standard.

6. The combination with a car structure, of a standard mounted for rotation thereon, an arm extending from the standard, a shelf suspended from and adapted to swing relative to the arm, cooperating means upon the shelf and arm for holding said shelf in a substantially horizontal plane, hooked elements suspended from and adapted to swing freely relative to the arm, means within the car structure for rotating the standard, means for limiting the rotation of the standard in one direction, and means under the control of the operator for holding the standard against movement in the opposite direction.

7. The combination with a car structure, of a standard mounted for rotation thereon, an arm projecting therefrom, a shelf suspended from and adapted to swing relative to the arm, cooperating means upon the arm and shelf for holding said shelf in a substantially horizontal plane, hooked elements suspended from and adapted to swing relative to the arm, there being openings in the shelf through which the elements project, a shaft journaled within the structure, means operated thereby for rotating the standard, and separate means for limiting the rotation of the standard in opposite directions respectively.

8. The combination with a crane including an arm, and hooked elements suspended therefrom, and means under said elements for supporting a mail holding structure, of

a car supported crane including a standard,  
a shelf supported by the standard and mov-  
able between said hooked elements and the  
supporting structure, and means suspended  
5 from the shelf for engaging a holder mount-  
ed on said supporting structure.

In testimony that I claim the foregoing

as my own, I have hereto affixed my signa-  
ture in the presence of two witnesses.

CHARLES A. IFFERT.

Witnesses:

FRED W. FAESER,  
E. L. EDELMAN.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,  
Washington, D. C."

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