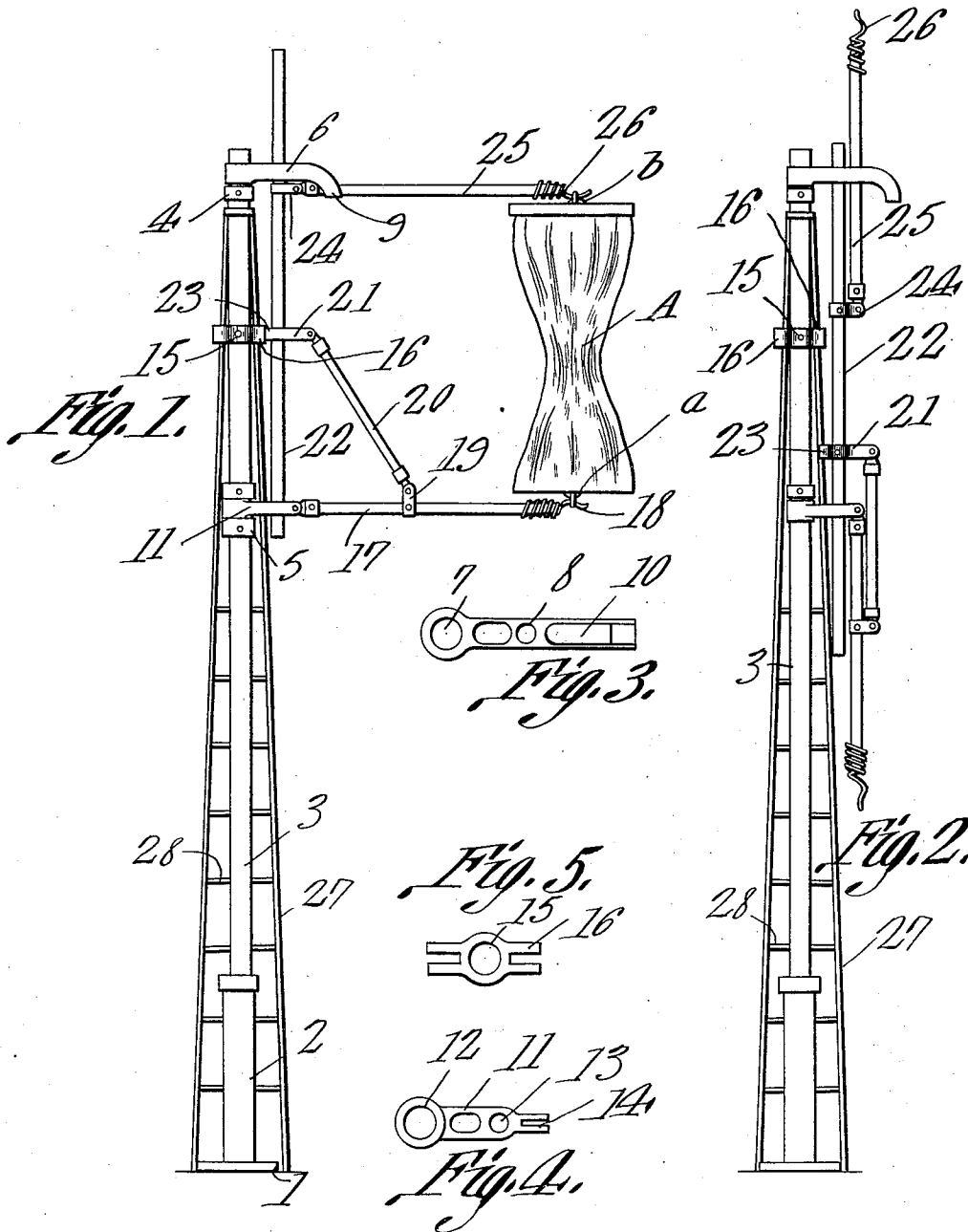


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MAIL CRANE.
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1,017,902.

Patented Feb. 20, 1912.



Witnesses

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UNITED STATES PATENT OFFICE.

RICHARD L. PORTER, OF VICKSBURG, MISSISSIPPI.

MAIL-CRANE.

1,017,902.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RICHARD L. PORTER, a citizen of the United States, residing at Vicksburg, in the county of Warren and State of Mississippi, have invented a new and useful Mail-Crane, of which the following is a specification.

This invention relates to cranes for use in delivering mail bags or pouches to cars while in motion, the principal object of the invention being to provide a crane which is comparatively cheap to manufacture and which is compact in construction, said crane being of such a nature as to be especially designed for use between two tracks so as to be used for delivering a bag or pouch to a car moving along either track.

Another object is to provide a crane having means for locking it against swinging movement while the bag or pouch is being supported thereby, said crane becoming automatically locked as soon as the bag or pouch is removed therefrom so as to swing freely away from the car.

A further object is to provide a crane the principal parts of which can be formed of metal tubing.

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 side elevation of the crane, the same being shown with a pouch supported thereby. Fig. 2 is a similar view showing the positions of the parts after the pouch has been removed therefrom. Fig. 3 is a plan view of the upper guide arm of the crane. Fig. 4 is a plan view of the lower guide. Fig. 5 is a plan view of the locking collar or keeper.

Referring to the figures by characters of reference 1 designates a base ring having a tubular pedestal 2 upstanding therefrom and from which extends a tubular standard

3, said base being designed to be anchored in any suitable manner so as to hold the standard 3 fixedly in a vertical position. Collars 4 and 5 are secured to the standard, the upper collar supporting a guide arm 6 having an eye 7 through which the standard 3 extends, said arm being mounted to freely rotate upon the standard. A guide opening 8 is formed within the arm and said arm is downwardly curved at its free end, as indicated at 9, said curved portion being slotted longitudinally, as shown at 10. Collar 5 supports a guide arm 11 having an eye 12 through which the standard 3 extends, said arm being mounted to rotate freely upon the standard and having a guide opening 13 in vertical alinement with the opening 8. This arm 11 is also slotted at its free end, as indicated at 14. A collar 15 is secured to the standard at a point between the collars 4 and 5 and has oppositely extending ears 16 arranged in pairs. This collar does not rotate on the standard but is fixedly held thereto in any manner desired.

An arm 17 is pivotally connected to the forked portion 14 of the arm 11 and is provided, at its free end, with a spring finger 18 for engaging the lower ring *a* of a mail pouch A. Ears 19 extend from the arm 17 adjacent the center thereof and are pivotally connected to a rod 20, this rod, in turn, being pivotally attached to an arm 21 fixedly attached to a rod 22 which is slidably mounted within the registering or alining openings 8 and 13. A tongue 23 extends from arm 21 and in the direction of the standard 3. Ears 24 extend from rod 22 at a point above the arm 21 and are pivotally connected to an arm 25 which is slidably and tiltably mounted within the slot 10, said arm carrying, at its free end, a spring finger 26 adapted to engage the upper ring *b* on the pouch A.

It will be apparent that when the crane is not in use, the arm 17 hangs vertically from arm 11 and rod 20 thus supports rod 22 in lowered position as indicated in Fig. 2, and with tongue 23 below the collar 15. Arm 25 is also held in a vertical or substantially vertical position by arm 6. When it is desired to use the crane, the lower arm 17 is swung upwardly and thus causes the rod

20 to push upwardly on arm 21. Rod 22 is therefore slid upwardly within the openings 8 and 13 and arm 25 is projected through the slot 10 so as to assume a horizontal position, as indicated in Fig. 1. The parts are so arranged and proportioned that, when the ears 24 come into contact with the guide arm 6, the tongue 23 assumes a position between the ears 16 of one pair, thus holding the arms 6 and 11 and the parts connected thereto against rotation about the standard 3. Also, when the parts are thus located, the arms 17 and 23 are extended horizontally and parallel and the fingers 18 and 26 can then be placed in engagement with the rings *a* and *b* on the pouch A. With the pouch thus located, it serves to hold the arms 25 and 17 against relative movement. When a mail car passes the crane, the hook, which is ordinarily provided thereon, will engage the pouch A and pull it off of the fingers *a* and *b*. As soon as the pouch is thus removed and the connections between the hooks 18 and 26 therefore are broken, the arm 17 will swing downwardly by gravity pulling on rod 22 through rod 20 and causing the arm 25 to swing upwardly and back toward the standard 3. At the same time tongue 23 will drop out of engagement with the ears 16 and the arms 6 and 17 will thus be free to rotate upon the standard 3.

By reason of the compact construction of the crane, it is possible to erect it between two tracks so as to be used for delivering pouches to cars moving along either of the tracks.

As heretofore stated all parts of the crane except the guide arms and the locking members can be made of ordinary piping.

As shown in the drawings, a light metal ladder may be combined with the crane, this ladder consisting of side strips 27 mounted at their lower ends upon a block or the like, these side strips converging upwardly and being suitably secured to upper portion of the mast. The rungs 28 of the ladder may be of light metal rods the ends of which are upset. By providing this ladder the crane can be easily ascended for the purpose of placing a mail bag or pouch in position.

What is claimed is:—

1. A mail crane including a standard, guide arms mounted for rotation thereon, pouch holding means movably engaging the guide arms, means for holding said arms against rotation about the standard, and means for shifting said holding means to release the arms when the pouch is removed from the crane.

2. A mail crane including a standard, guide arms mounted for rotation thereon, means for locking said arms against rotation about the standard, pouch holding

means, and means under the control of the pouch holding means for automatically unlocking the guide arms when a pouch is removed from the crane.

3. A mail crane including a standard, guide devices mounted for rotation thereon, means for locking said devices against rotation about the standard, pouch holding means movably engaging the arms, said means being movable automatically toward the standard when the pouch is removed from the crane, and means for automatically unlocking the guide arms during such movement of the pouch holding means.

4. A mail crane including a standard, guide arms mounted for rotation thereon, a pouch holding arm pivotally connected to one of the guide arms, a rod slidably mounted within said guide arms, a pouch holding arm pivotally connected to the rod and slidably and pivotally engaging the other guide arm, cooperating means upon the rod and standard for holding the arms against rotation about the standard, and means connected to one of the pouch holding arms and actuated thereby to unlock the arms from the standard when a pouch is removed from the crane.

5. A mail crane including a standard, guide arms mounted for rotation thereon, a lower pouch engaging arm pivotally connected to the lower guide arm, a rod slidably mounted within the guide arms, an upper pouch engaging arm pivotally connected to the rod and slidably and tiltably mounted within the upper guide arm, cooperating means upon the rod and standard for holding said arms against rotation about the standard, and a connection between the lower pouch engaging arm and one of said locking means for automatically unlocking the arms to permit rotation thereof when a pouch is removed from the crane.

6. A mail crane including a standard, guide arms mounted for rotation thereon, a lower pouch holding arm pivotally connected to the lower guide arm, a rod slidably mounted within the guide arms, an upper pouch holding arm pivotally connected to the rod and slidably and tiltably mounted within the upper guide arm, a locking tongue movable with the rod, oppositely extending tongue engaging portions upon the standard, said tongue being movable into engagement therewith to hold the arms extended in either of two directions from the standard when the arms are in pouch holding position, and a connection between the lower pouch holding arm and the rod for lowering the rod and tongue when said arm is swung downwardly.

7. A mail crane including a standard, upper and lower guide arms extending therefrom, a rod slidably mounted within

said arms, a lower pouch holding arm pivotally connected to the lower guide arm, an upper pouch holding arm pivotally connected to the rod and mounted for sliding and swinging movement within the upper guide arm, and a connection between the lower pouch holding arm and the rod for lowering said rod during the downward swinging movement of the lower pouch holding arm

to swing the upper pouch holding arm in an upward direction.

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

RICHARD L. PORTER.

Witnesses:

MAMIE CLARE WALKER,
A. L. WILLIAMS.

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