

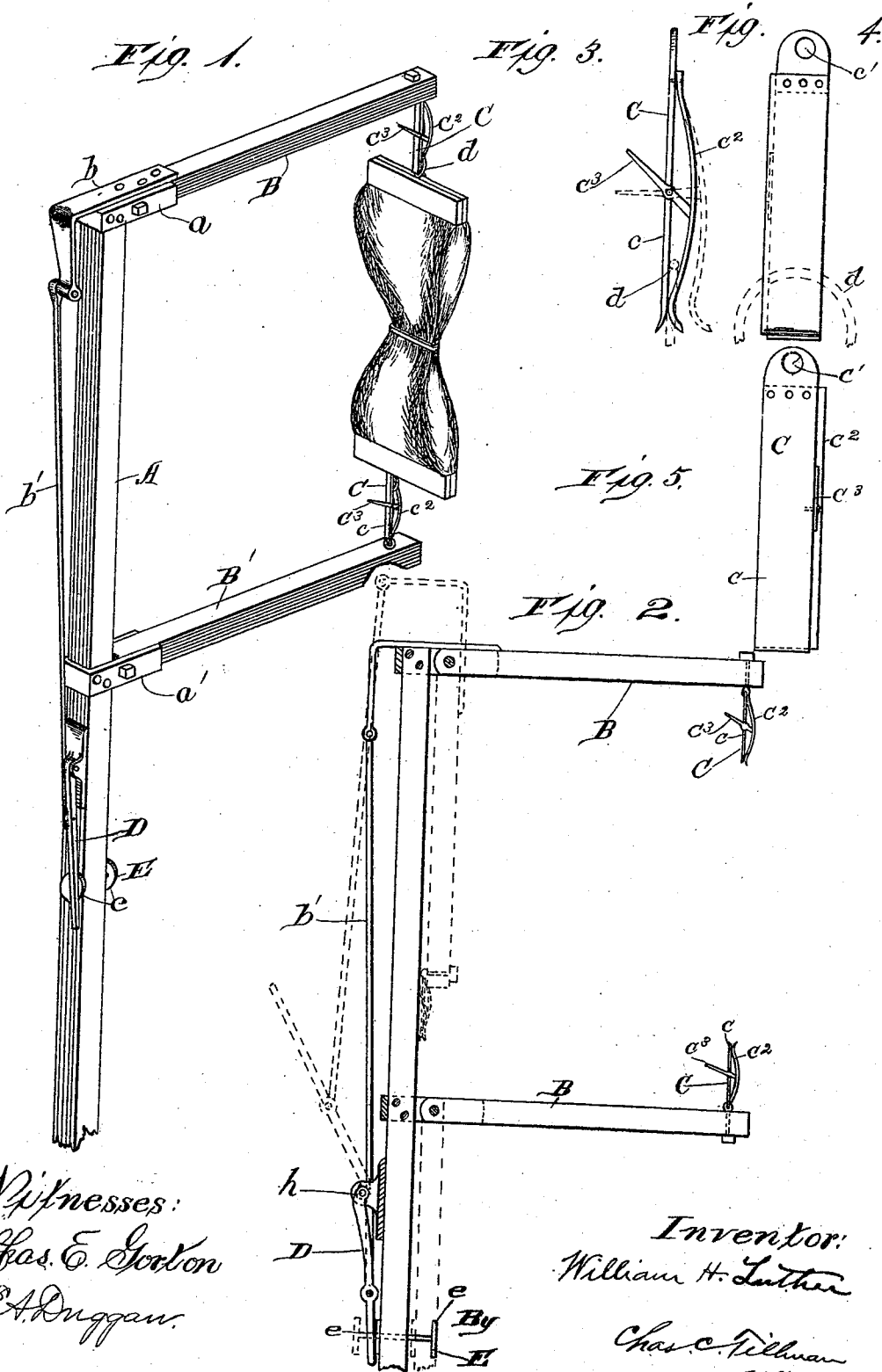
(No Model.)

W. H. LUTHER.

AUTOMATICALLY FOLDING CRANE FOR MAIL BAGS.

No. 501,150.

Patented July 11, 1893.



Witnesses:
Chas. E. Gordon
C. A. Duggan.

Inventor:
William H. Luther
Chas. C. Tillman
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM H. LUTHER, OF GLEN ELLYN, ILLINOIS.

AUTOMATICALLY-FOLDING CRANE FOR MAIL-BAGS.

SPECIFICATION forming part of Letters Patent No. 501,150, dated July 11, 1893.

Application filed January 19, 1893. Serial No. 458,888. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. LUTHER, a citizen of the United States, residing at Glen Ellyn, in the county of Du Page and State of Illinois, have invented certain new and useful Improvements in Automatically-Folding Cranes for Mail-Bags, of which the following is a specification.

This invention relates to improvements in cranes or supports, designed to be placed or set up near, and project toward the rail-way tracks, so that the mail bags which are supported by the arms of the crane, may be taken therefrom by the fast mail or express trains as they pass the station without stopping; and it consists in certain peculiarities of the construction, novel arrangement and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The mail cranes generally in use at the present, are provided with horizontally extending arms, which are rigidly fixed to the upright post or standard and as the upper arm to which the mail bag is suspended must necessarily be somewhat higher from the ground than a person can reach, in order that the bag may be properly seized by the passing train, it becomes necessary for the person who places the bag on said arm to have a ladder or similar assistance to reach the same. As the aforesaid arms extend very close to the track or the side of the train it becomes dangerous to brakemen and others of the trains crew, and the upright or post is commonly pivoted so that it can be turned, that the arms may be placed parallel with the track, and thus prevent accidents.

The objects therefore of my invention are, first, to provide a crane for mail bags, which shall be simple and inexpensive in construction, yet strong and durable, and to which a mail-bag may be securely suspended, yet easily taken therefrom in the passage of the train; second, a crane for such a purpose, the arms of which, when not in use or engagement with the bag, will fall or close to a vertical position, thus preventing accidents to the train crew and others, and enabling the operator to more readily secure the bag to the supporting arms, and raise the same to the required position.

In order to enable others skilled in the art, to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1, is a perspective view of my crane, as it appears when the bag is in position to be taken therefrom by the passing train. Fig. 2, is a view in side elevation, partly in section, showing the bag removed, and illustrating the folded position of the parts by dotted lines. Fig. 3, is an edge view of one of the bag-securing springs or clamps detached from the arms. Fig. 4, is a front view thereof, and Fig. 5, is a rear view of said spring or clamp.

Similar letters refer to like parts throughout the different views of the drawings.

A, represents an upright or post, which is made of any suitable size, length, and material, and preferably rectangular in form, and of a sufficient length or height, that when planted in the ground or set up, its top will be about level with the upper surface of the mail coach. To the upper part of the upright or post A, is secured a bracket *a*, which extends horizontally a slight distance from the post A, and has its extended portion bifurcated, within which bifurcation is placed and pivotally secured an arm B, to the outer end of which is loosely secured a spring or clamp C, to engage the upper portion of the mail-bag, as will be presently explained. To the upper surface of the inner end of the arm B, or that portion secured within the fork of the bracket *a*, is secured a strap *b*, which is bent at substantially a right angle, so as to be parallel with the post A, when the arm B, is in its horizontal position. To the free end of the strap *b*, or its bent portion, is secured an operating rod *b'*, which also extends alongside the post A, and is pivotally connected at its lower end to a lever D, which lever is fulcrumed to the post A, at a suitable point, and usually below the juncture of the arm B', with said post.

At a proper point below the arm B, the post A, is provided with a bracket *a'*, which is similar in construction and form to the bracket *a*, above described, and which is rigidly secured to the post, and has its extended portion bifurcated, within which bifurcation is pivotally secured an arm B', to

the outer end of which is loosely secured a spring or clamp C. The springs C, which are secured to or near the free ends of the arms B, and B', are formed of a stiff plate or piece c, having at one of its ends an opening c', for engagement with a hook or ring to secure it to the arms, and its other end slightly bent as shown in Fig. 3.

Near the end of the plate c, having the opening therein, is riveted or otherwise secured a spring c², which is slightly bowed, and impinges at its free end with the plate c, from which point it is outwardly curved, as is clearly seen in Fig. 3, to admit of the insertion of the ring d, on the mail-bag. Near the middle of the plate c, is fulcrumed a lever c³, which is designed to act on the spring c², and to separate it at its free end from the free end of the plate c, so that the ring of the mail-bag can be easily inserted. By reference to the drawings it will be seen and understood, that one of these springs is secured to or near the ends of the arms B, and B', and that the spring on the upper arm depends for engagement with the upper part of the mail-bag, while the spring on the lower arm is adapted to engage with the lower portion thereof by means of its lower ring. It is also obvious that when the mail-bag is in position as shown in Fig. 1, that the arms, operating rod and lever D, will assume the position indicated by continuous lines in Figs. 1, and 2, and that as soon as the bag is removed from the springs by the passing train, that the lower arm B', will by reason of its gravity, fall to a vertical position, shown by dotted lines in Fig. 2, and will strike the push-pin E, which is passed horizontally through the post A, and is provided at each end with a head e, one of which heads engages with the lever D, near its free end, and when struck by the arm B', will force the lever and operating rod b', upward to the positions indicated by dotted lines, in Fig. 2, when the arm B, will assume the vertical position indicated by dotted lines in said figure. When the parts are in this position, that is indicated by dotted lines, it is apparent that the mail-bag may be easily secured to the spring on the arm B, and that said arm together with the bag may be readily raised to a horizontal position by lowering the lever D, when its free end will strike the head of the push-pin E, and cause the same to be held in the position shown by continuous lines in Fig. 2, until the lower arm, whose spring has been secured to the lower portion of the bag and has been raised to a horizontal position shall again strike the pin in its downward movement.

By reference to Fig. 2, of the drawings it will be seen that when the arm B, is in its horizontal position, the operating rod b', which

is connected at its lower end to the lever D, will be somewhat nearer the post A, than the fulcrum point h, of said lever and will lock the same or cause it to rest against the head of the pin till its other head is struck by the lower arm, when the operation above described will take place.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a mail crane the combination with a post of two arms pivotally secured thereto, one above the other and having near their free ends devices adapted to engage the mail-bag, an operating rod connected to the upper arm and at its lower end to a lever, said lever fulcrumed to the post or upright, and a push-pin on said post and adapted to engage the lever and lower arm, substantially as described.

2. In a mail crane the combination with a post of two arms pivotally secured thereto one above the other, each having near its free end a spring or clamp, consisting of the plate c, spring c², and lever c³, loosely secured to engage the bag, an operating rod connected to the upper arm and at its lower end to a lever, said lever fulcrumed to the post or upright, and a push-pin on said post, and adapted to engage the lever and lower arm, substantially as described.

3. In a mail crane the combination with a post having the brackets a, a', of two arms pivotally secured in the bifurcations of said brackets, and having near their free ends devices to engage the mail-bag, the strap b, secured to the upper arm, an operating rod secured to the free end of said strap and at its lower end to a lever, said lever fulcrumed to the post or upright, and a push-pin on said post and adapted to engage the lever and lower arm, substantially as described.

4. In a mail crane the combination with a post having the brackets a, a', of two arms B, B', pivotally secured in the bifurcations of said brackets, and each having near its free end a spring C, composed of the plate c, spring c², and lever c³, to engage the bag, the strap b, secured to the upper arm, an operating rod secured to the free end of said strap and at its lower end to the lever D, said lever fulcrumed to the post or upright, and a push-pin on said post, all constructed, arranged and operating substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand and affixed my seal this 13th day of January, 1893.

WILLIAM H. LUTHER. [L. s.]

Witnesses:

FREDRICK LUDEKE,
FRANCES A. LUTHER.