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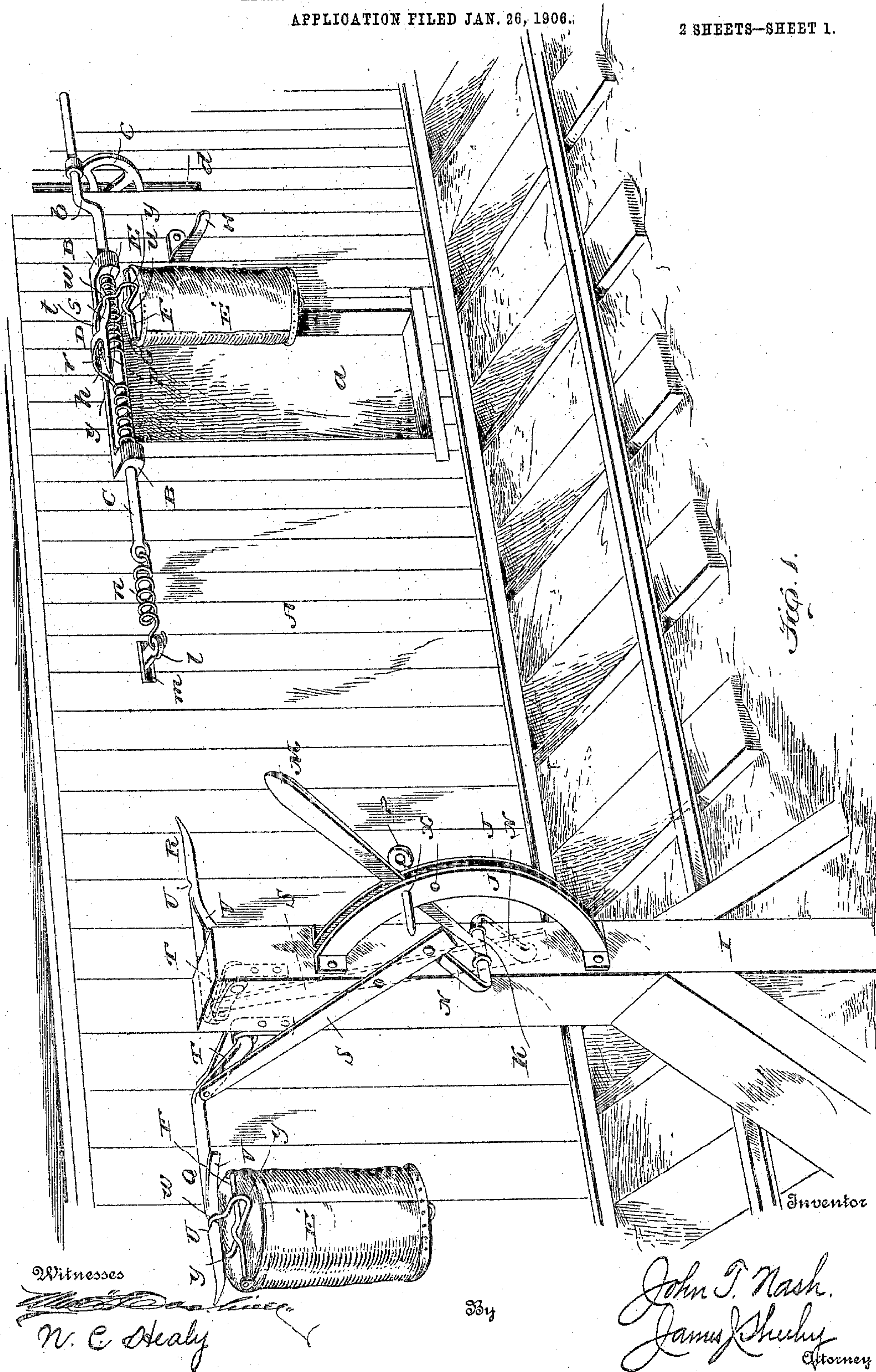
PATENTED APR. 3, 1906.

J. T. NASH.

MAIL BAG DELIVERY APPARATUS.

APPLICATION FILED JAN. 26, 1906.

2 SHEETS—SHEET 1.



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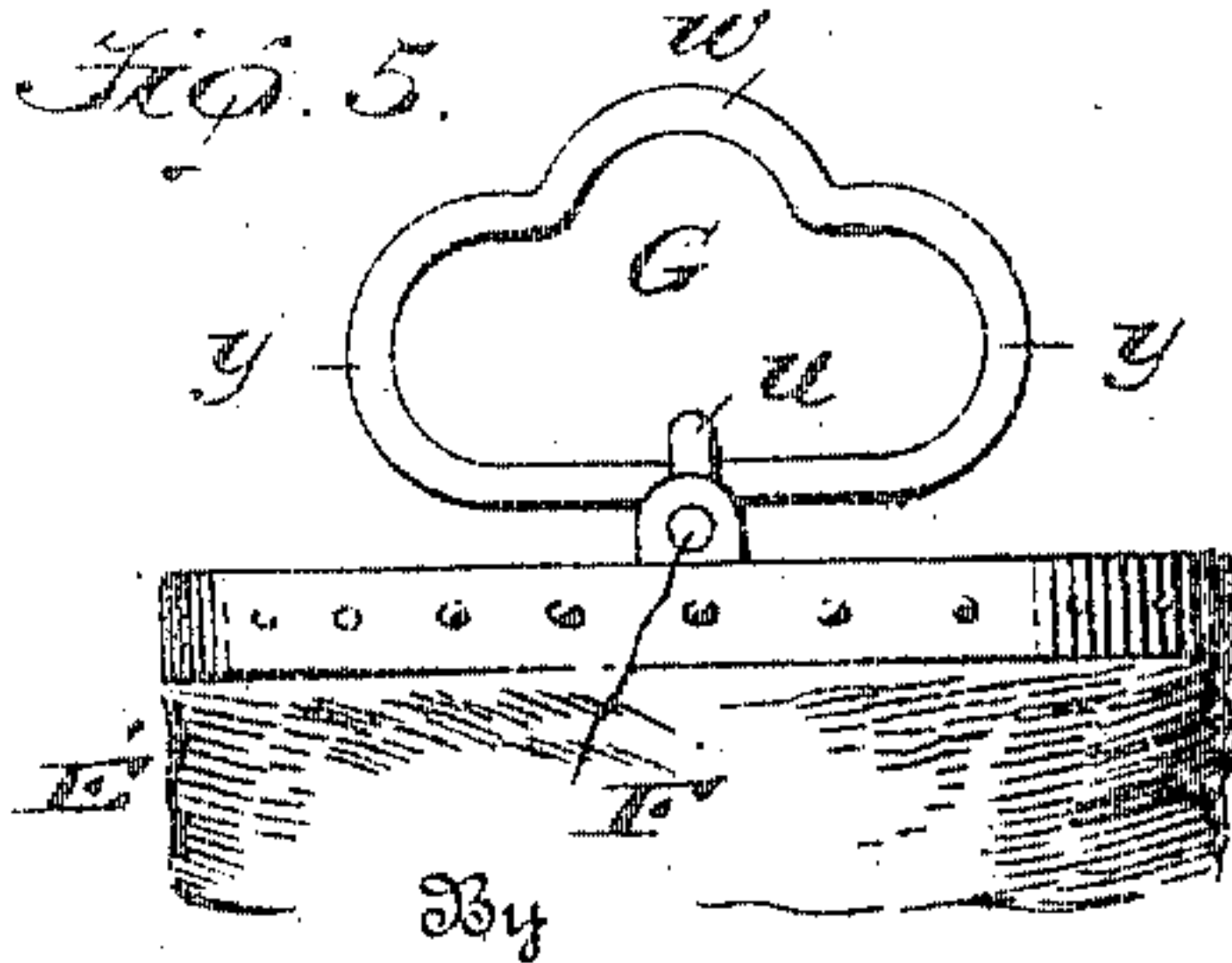
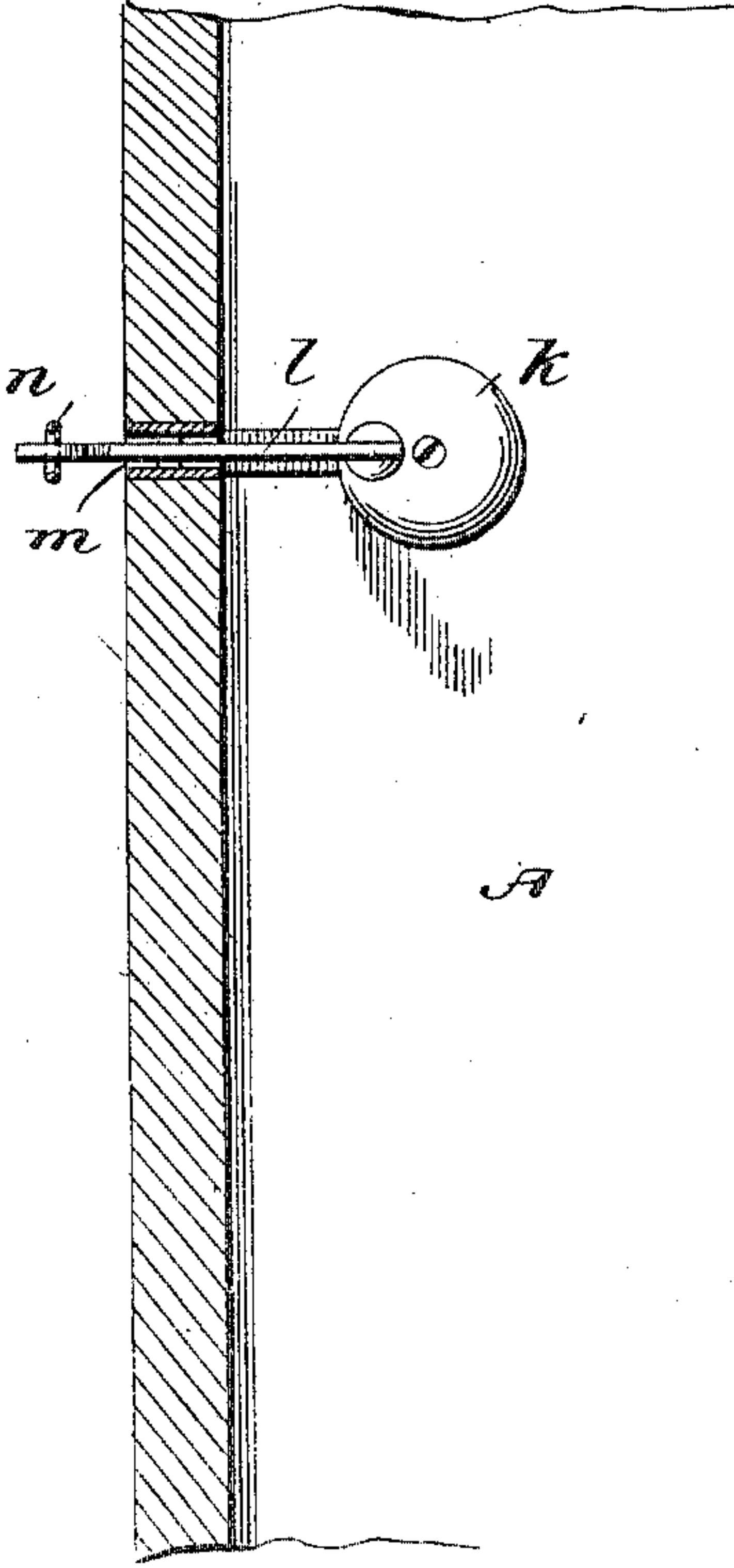
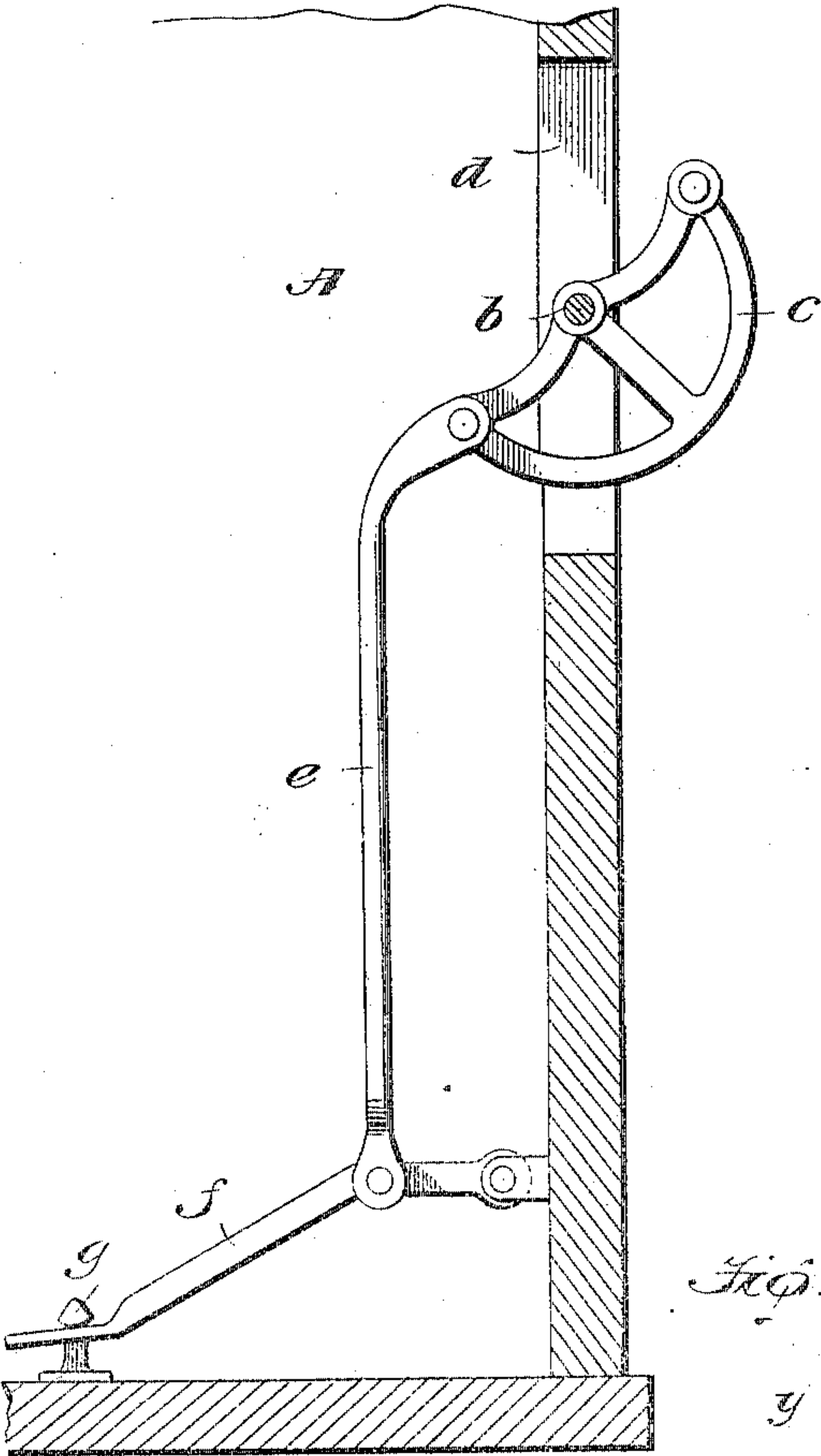
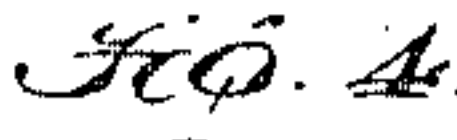
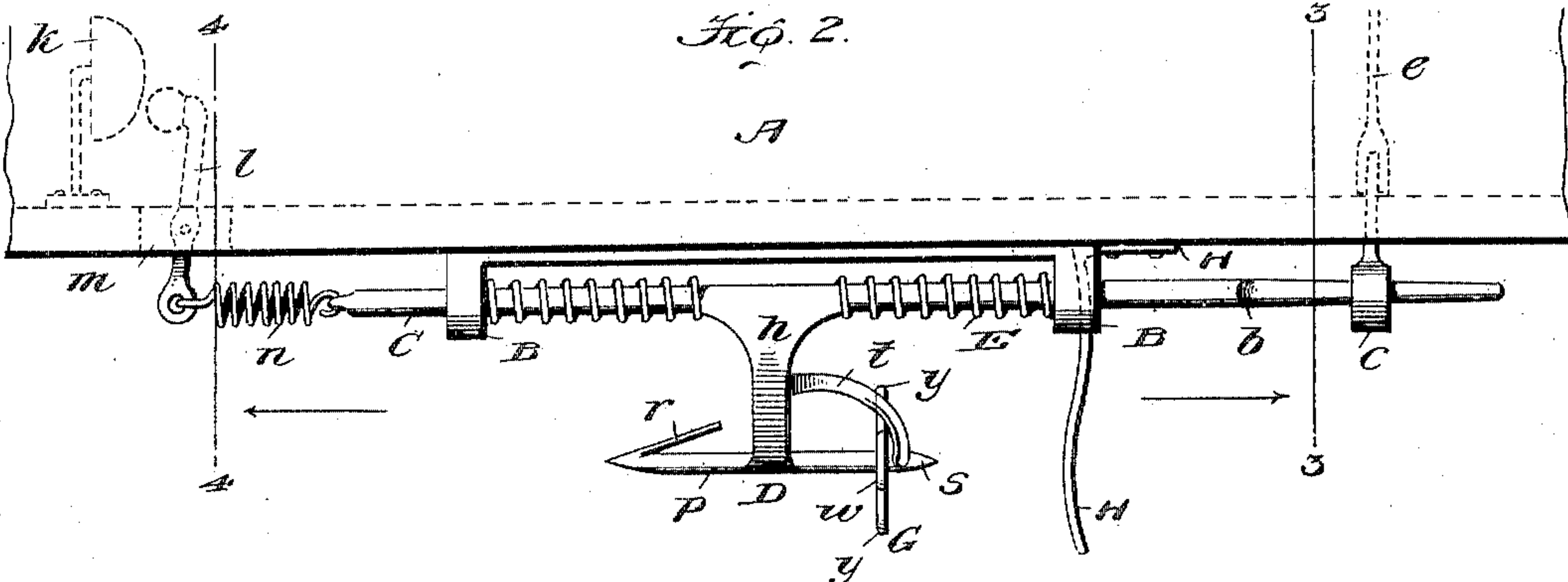
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2 SHEETS--SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN T. NASH, OF LEXINGTON, KENTUCKY.

MAIL-BAG-DELIVERY APPARATUS.

No. 816,878.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed January 26, 1906. Serial No. 298,061.

To all whom it may concern:

Be it known that I, JOHN T. NASH, a citizen of the United States, residing at Lexington, in the county of Fayette and State of Kentucky, have invented new and useful Improvements in Mail-Bag-Delivery Apparatus, of which the following is a specification.

My invention pertains to mail-bag delivery, and has for one of its objects to provide a simple, durable, and reliable equipment for delivering mail-bags to and taking mail-bags from a car of a moving train, and this without subjecting the attendants to any danger whatever.

Another object of the invention is the provision of a mail-bag crane susceptible of being expeditiously and easily reversed and in that way adapted for proper operation irrespective of the direction in which an approaching train is moving.

Another object is the provision in a mail-bag-delivery equipment of means whereby the car attendant is apprised of the fact when a mail-bag is delivered from or received on the bag-holders of the car device and means whereby such attendant is enabled to so position the car device relative to the interior of the car that he can place a bag on or take a bag from said device without hazard and can then replace the car device in its proper working position with respect to the crane.

Still another object is the provision in a mail-bag-delivery equipment of an eye adapted for connection to a bag and constructed with a view of assuring proper operation of the apparatus notwithstanding swaying or lateral movement of the mail-car while the same is passing the crane.

Other advantageous features of my invention will be fully understood from the following description and claims when the same are considered in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view illustrating the car device and the crane of my improved apparatus in proper juxtaposition and ready for operation. Fig. 2 is a detail top plan view showing the car device in proper position for operation. Fig. 3 is a detail transverse section taken through the car in the plane indicated by the line 3 3 of Fig. 2 and illustrating the means whereby the attendant within the

car is enabled to swing the car device outwardly from the doorway of the car, so as to properly position said car device for operation in connection with the crane. Fig. 4 is a detail transverse section taken in the plane indicated by the line 4 4 of Fig. 2 and showing the means for notifying the car attendant when a bag is delivered from or taken on the car device. Fig. 5 is a detail view of one end of the bag and the eye connected therewith.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is a mail-car which is provided with a doorway *a* and is otherwise of the ordinary or any other construction compatible with the purposes of my invention.

B B are longitudinally-disposed horizontal bearings fixedly connected to the side wall of the car about in line with the upper end of the doorway *a*.

C is a shaft disposed longitudinally of the car and arranged to move endwise and turn on its axis in the bearings B, and D is the car device, carried by the said shaft C. The shaft C is provided at its rear end with a crank *b*, and this crank is connected with a lever *c*, which is fulcrumed in and works through a transverse slot *d* in the wall of the car and is connected in turn to a rod *e*, Fig. 3, through which it is connected with a pedal-lever *f*, fulcrumed inside of the car and arranged to be placed in engagement with and disengaged from a keeper *g*. By noticing the arrangement of the device D relative to the shaft C it will be apparent that when the pedal-lever *f* is released from the keeper *g* the said device D will gravitate to a position adjacent to the doorway *a*, so as to enable the car attendant to place a bag on or take a bag from the device without hazard. It will also be apparent that when the car attendant depresses the lever *f* with his foot and places said lever in engagement with the keeper *g* the device D will be moved to and secured in its extended position, ready for coöperation with the crane hereinafter described.

With a view of cushioning the shaft C when a bag is taken on or delivered from the device D, as well as to return the said device D to and normally hold the same in the position shown—i. e., in transverse alinement with the doorway *a*—I provide the coiled spring

E, which surrounds the said shaft C and is interposed between the shank *h* of the device D and the rear bearing B.

To apprise the car attendant of the fact when a bag is taken on or delivered from the device D, I provide the gong *k*, mounted within the car, Figs. 2 and 4, a lever *l*, fulcrumed and working in a horizontal slot *m* in the side wall of the car and arranged to strike the gong *k*, and a connection *n*, preferably a coiled spring, interposed between and connected to the outer arm of the lever *l* and the adjacent end of the shaft C. In virtue of this provision it will be apparent that when the device D coöperates with the crane either to deliver or take a bag the shaft C will be moved endwise in a rearward direction and the lever *l* will be rocked to forcibly carry its inner arm against the gong *k*. In this way the car attendant is put on notice when the car device D has operated and is apprised of the fact that it is incumbent on him to remove the bag from the device D and take the same into the car.

The car device D is clearly shown in Figs. 1 and 2, and it comprises in addition to the shank *h* a forwardly-extending bag-holder *p*, having a bag-retainer *r*, a rearwardly-extending bag-holder *s*, and a guard *t* of resilient material connected at one end to the shank *h* and having its free portion resting adjacent to the holder *s*. When the device D is in proper position for coöperation with the crane, as shown in Figs. 1 and 2, it will be seen that the bag-holder *s* lies in a plane slightly below that of the holder *p*. From this it follows that as the car device D passes the crane the bag previously placed on the holder *s* by the car attendant will be delivered to the rear bag-holder of the crane during the traverse of the car device above said bag-holder, while a bag previously placed on the forward bag-holder of the crane will be taken from said bag-holder by the forward bag-holder *p* of the car device. When a bag is placed on the holder *s* of the car device D, the guard *t* obviously precludes casual removal or displacement of said bag and yet gives and permits the release of the bag when the eye of the same is engaged by the rear bag-holder of the crane. The retainer *r* of the forward bag-holder *p* on the device D serves, on the other hand, to permit the eye of a bag to assume a proper position on holder *p* and then precludes casual release of the eye, for it will be seen that when taken on the holder the eye will rest between the main portion thereof and the retainer *r*.

In Fig. 1 is shown a bag E' adapted for use in connection with the car device D and the crane, hereinafter described. At one end the said bag E' is provided with a metallic bar F. This bar F, which is secured in the material of the bag, so as to lend strength and

durability thereto, is provided at its middle with a loop *u*. In this loop *u* is arranged the metallic or other suitable eye G, which is peculiar and advantageous in that it has the lateral portions *v* of considerable length and the upwardly-extending loop *w*, said loop *w* being adapted to receive the bag-holders of the car device and the crane. By virtue of the eye G having the upwardly-extending loop *w* and the lateral portions *v* of considerable length it will be apparent that when placed either on the car device or the crane the said eye will allow for considerable lateral rocking of the car while passing the crane, and hence will assure the proper delivery of the mail-bag from the crane to the car device D, or vice versa.

H, Figs. 1 and 2, is a spring-arm attached to and extending laterally from the wall of the car at a point in rear of the doorway *a*. This arm H is adapted to cushion the bag on the holder *s* of device D when the said device D coöperates with the crane and in that way prevent injury to the bag or any of the working parts of my apparatus while the bag is being delivered from the device D to the crane. When the eye G of the bag is engaged by the bag-holder R of the crane and the bag strikes against the spring-arm H, the said spring will give or bend backward and in toward the side of the car and in that way enable the bag to readily pass it and be taken on the said holder R.

The crane is clearly shown in Fig. 1, and it comprises a fixed upright I, of wood or other suitable material, one or more segmental bars J, arranged vertically on the rear side of the upright and having two transverse apertures *x*; a rock-shaft K, fulcrumed or journaled on the rear side of the upright and having a lever-arm M, movable alongside the segmental bar or bars J, and also having oppositely-directed crank-arms N; a removable pin P, adapted to be placed in the apertures *x* of the segmental bars J and a similar aperture in the lever-arm M with a view of adjustably fixing the lever-arm in the position desired; a bag-holder Q, extending forwardly from the upright with reference to the direction in which the car A is designed to move for the proper operation of my improvements, a bag-holder R, extending rearwardly from the upright, and links S, connecting the crank-arms N and the bag-holders Q and R. The said bag-holders Q and R have angular arms T, pivoted to the upright and arranged to permit of the bag-holders being swung vertically, and each bag-holder also has a notch U and a retainer V, extending inwardly from said notch. In Fig. 1 the bag-holders Q and R of the crane are shown in such positions as to enable the holder Q to take a bag from the holder *s* of the device D on the car moving toward the left, while the holder R is arranged

to permit the holder *p* of the car device to take a bag from said holder *R*. Now when it is desired to have the crane properly co-operate with the device *D* on a car moving toward the right it is simply necessary for the crane attendant to remove the pin *P* and swing the arm *M* downwardly and secure it in such position, when, as will be readily apparent, the holder *R* will rest in a plane above that of the holder *Q*. In these positions of the holders *Q* and *R* the holder *Q* will take a bag from the car device, while the holder *R* will deliver a bag to the car device in the manner before described in detail. This adaptability of the crane to be adjusted for use in connection with a car traveling in either direction constitutes an important feature of my invention, and while I have entered into a detailed description of the specific construction of the present crane I do not desire to be understood as confining myself to the construction herein disclosed or any other specific construction, as such changes or modifications may be made in practice as fairly fall within the scope of my invention as claimed.

With the parts in the relative positions shown in Fig. 1 it will be observed that the car device *D* will pass over the bag-holder *R* of the crane and under the bag-holder *Q*, with the result that the bag on the holder *s* will be left on the holder *R* of the crane, while the holder *p* of the car device will take from the crane-holder *Q* a bag previously placed on said holder *Q*.

The notches in the upper sides of the holders *Q* and *R* are designed to receive the loop *u* of the eye *G*, while the retainers on the said holders *Q* and *R* have for their function to enable the holders to readily enter and occupy the eye, while precluding casual removal or displacement of the eye from the holders.

It will be gathered from the foregoing that in addition to the advantages ascribed to my improvements the same are simple and inexpensive in construction, are adapted to be properly adjusted with but little effort, and are well adapted to withstand the rough usage to which such devices are ordinarily subjected.

I claim—

1. In a mail-bag-delivery apparatus, the combination of a car, a longitudinally-movable spring-backed device carried by the car and arranged to deliver mail-bags to and take mail-bags from a stationary device, and a signal arranged to be actuated by movement of the said device.

2. In a mail-bag-delivery apparatus, the combination of a car, a movable device carried by the car and arranged to deliver and take mail-bags, and a signal arranged to be actuated by movement of said device.

3. In a mail-bag-delivery apparatus, the combination of a car, a longitudinal shaft carried by the car and arranged to move end-

wise and turn on its axis and having a crank, a device arranged on the shaft in position to deliver and take mail-bags, a spring for cushioning the shaft, a signal arranged to be actuated by endwise movement of the shaft, a movable device within the car, a keeper for said device, and a connection between said device and the crank of the endwise-movable and rocking shaft.

4. In a mail-bag-delivery apparatus, the combination of a car, an endwise-movable and swinging device carried by the car and arranged to deliver and take mail-bags, a signal arranged to be actuated by endwise movement of said device, and means within the car connected with and arranged to swing the said device.

5. In a mail-bag-delivery apparatus, the combination of a car, a longitudinal shaft carried by the car and arranged to move endwise and turn on its axis and having a crank, a device arranged on the shaft in position to deliver and take mail-bags, a spring for cushioning the shaft, a gong disposed inside the car, a lever connected with the shaft and arranged to strike the gong, a lever arranged within the car, a keeper for said lever, and a connection between the lever and the crank of the shaft.

6. In a mail-bag-delivery apparatus, the combination of a car, a device carried by the car and arranged to deliver bags to and take bags from a stationary device, and a resilient buffer device extending laterally from the car at a point in rear of the device for carrying bags.

7. In a mail-bag crane, the combination of a suitable support, and bag-holders carried by the support and extending in opposite directions and arranged in different horizontal planes; the said bag-holders being adjustable whereby either may be disposed in a plane above the other.

8. In a mail-bag crane, the combination of a suitable support, bag-holders carried by the support and movable up and down, and means for synchronously moving one bag-holder up and the other down.

9. In a mail-bag crane, the combination of a suitable support, bag-holders carried by the support and movable up and down, means for synchronously moving one holder up and the other down, and means for adjustably fixing the said adjusting means.

10. In a mail-bag crane, the combination of a suitable support, vertically-swinging bag-holders carried by the support, a rock-shaft journaled on the support and having oppositely-directed arms, links connecting said arms and the bag-holders, and means for adjustably fixing the rock-shaft in different positions.

11. In a mail-bag-delivery apparatus, the combination with a crane comprising a support, bag-holders carried by the support and

arranged in different horizontal planes, and
means for synchronously moving one holder
up and the other down; of a car, and a device
carried by the car and movable over one
5 holder of the crane and under the other
holder thereof and having bag-holders ar-
ranged to take and deliver bags.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

JOHN T. NASH.

Witnesses:

E. WHITSON,

C. A. HALLENKAMP.