

No. 763,078.

PATENTED JUNE 21, 1904.

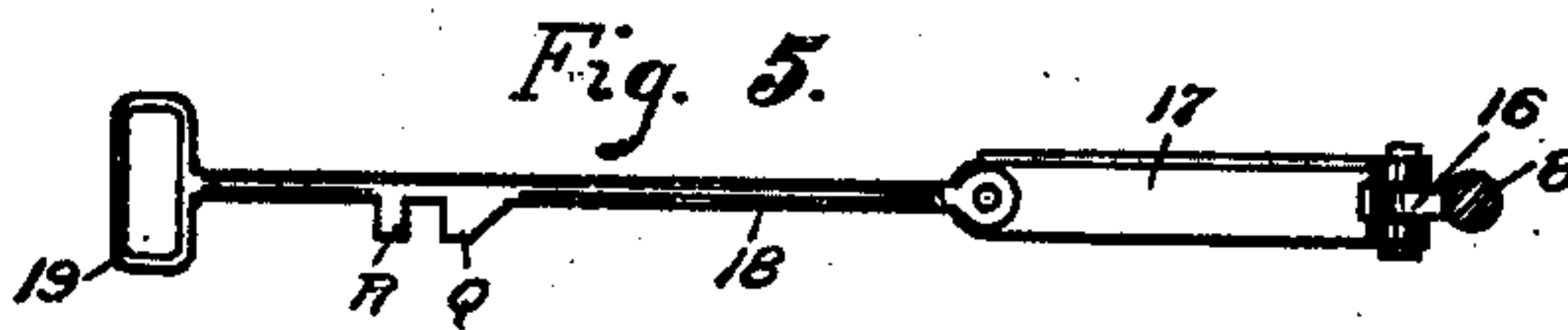
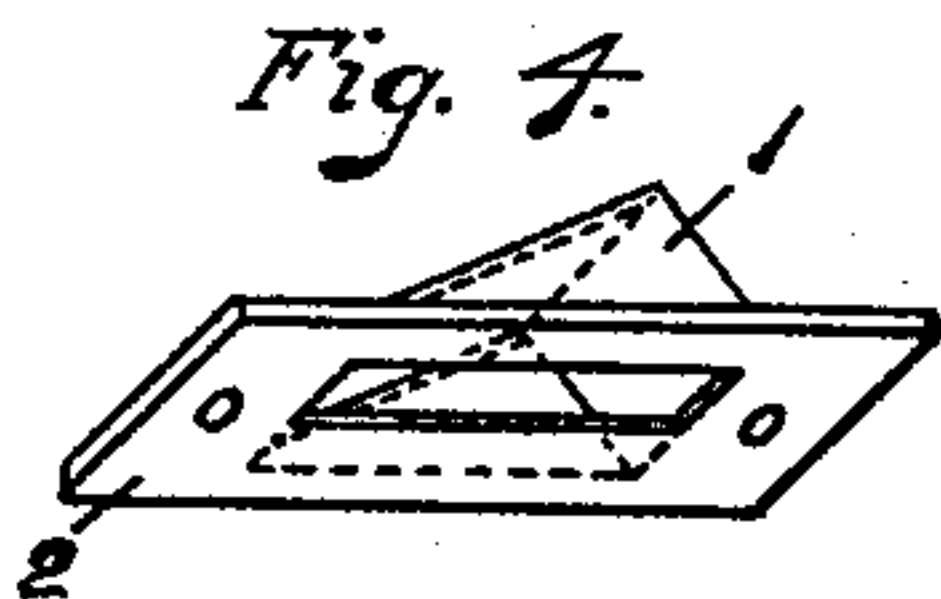
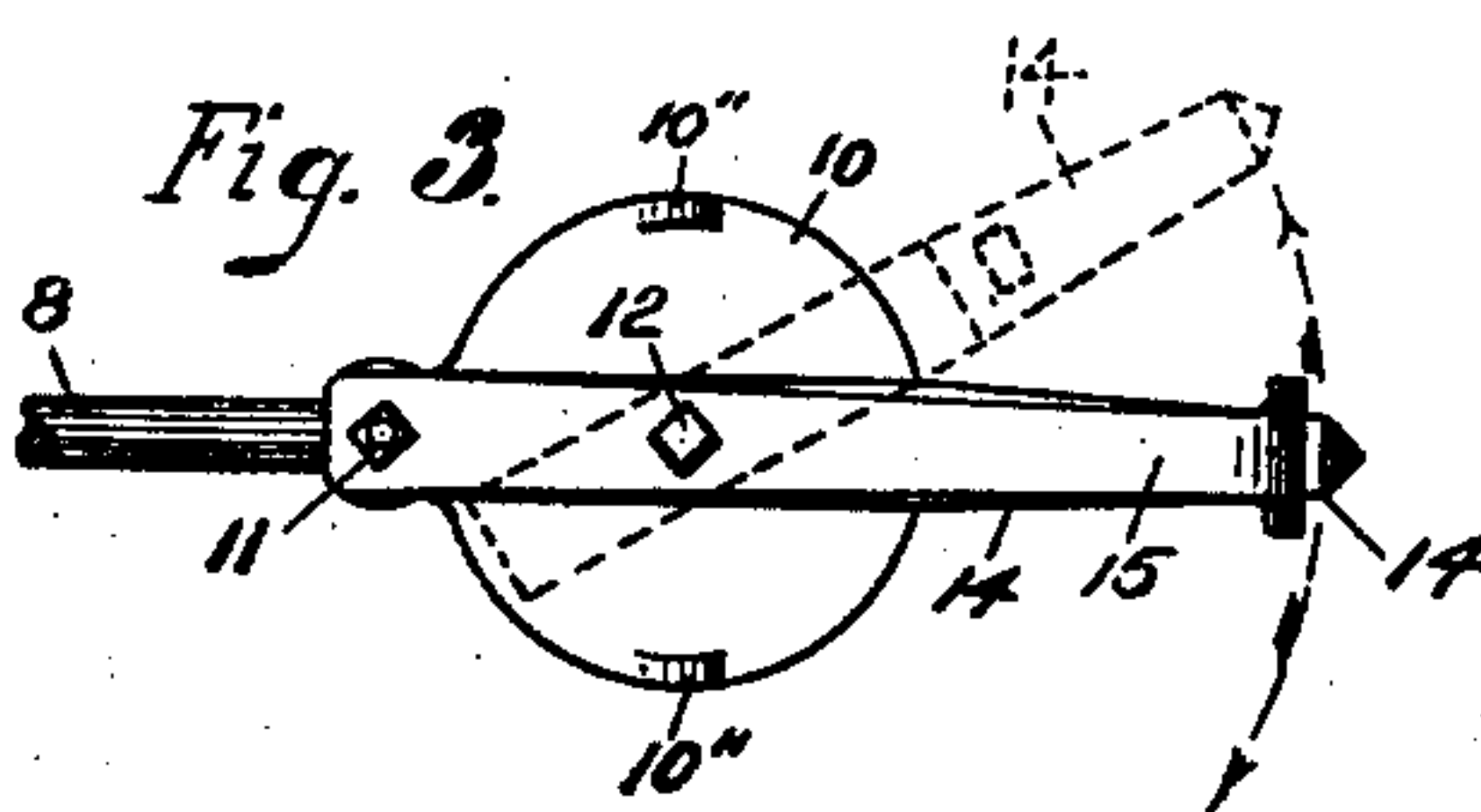
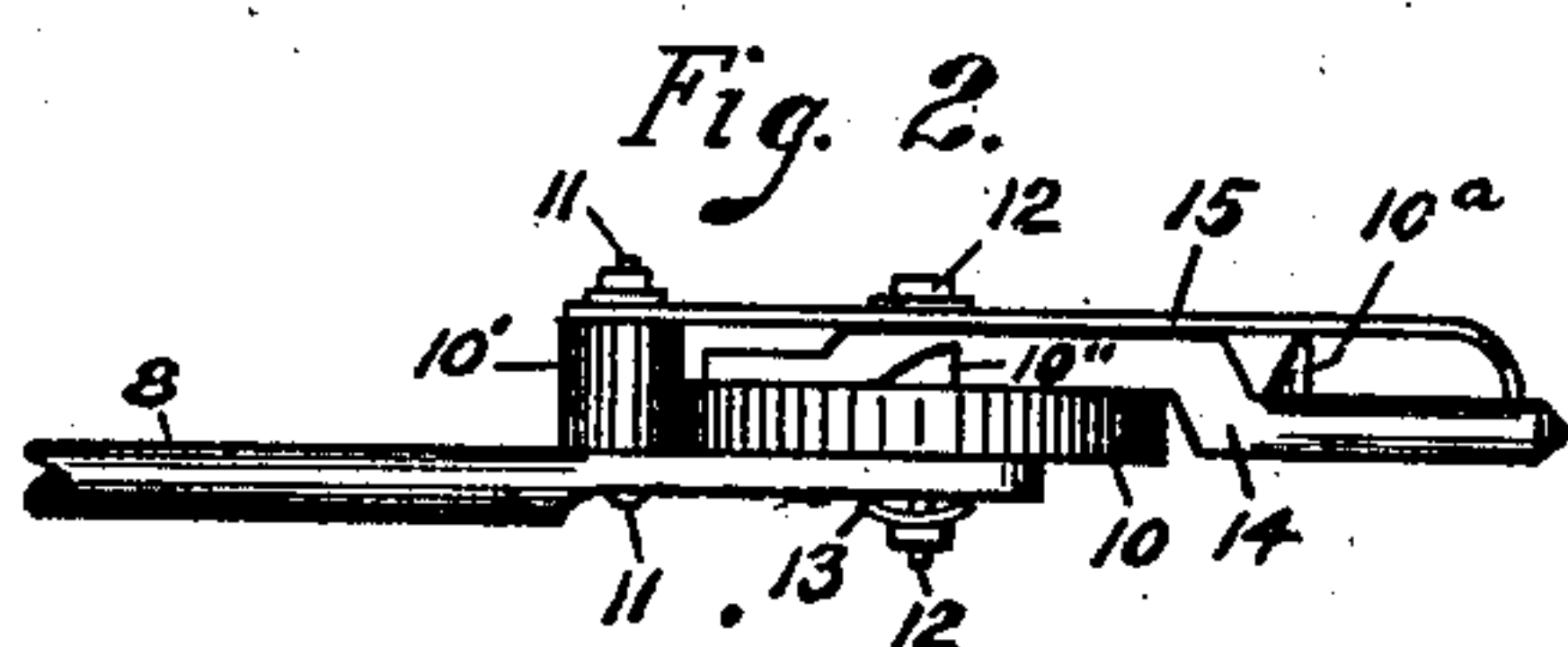
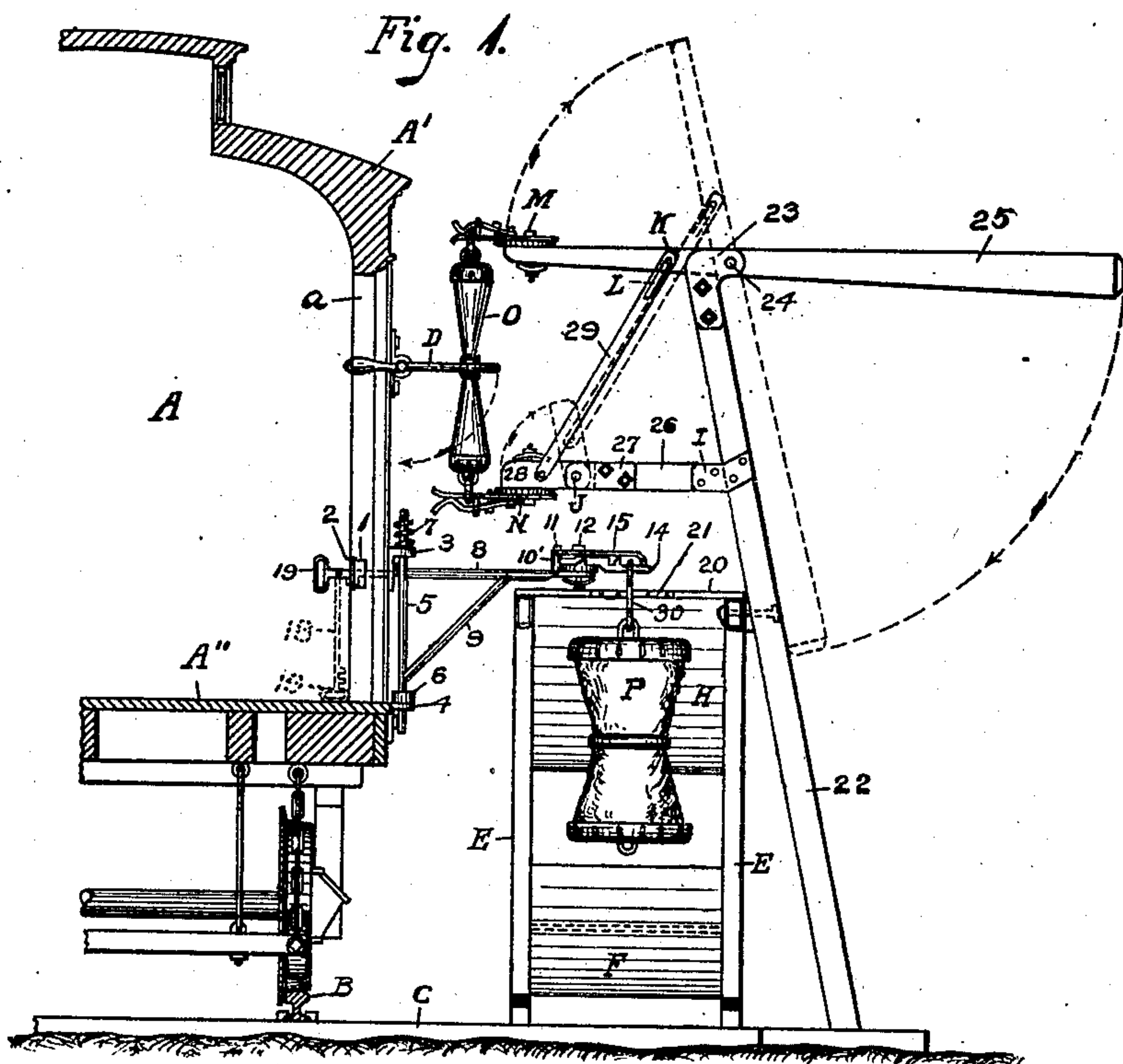
J. SWIHART.

MAIL BAG CATCHING AND DELIVERING DEVICE.

APPLIOATION FILED SEPT. 26, 1903.

NO MODEL.

2 SHEETS--SHEET 1.



WITNESSES:

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ATTORNEY.

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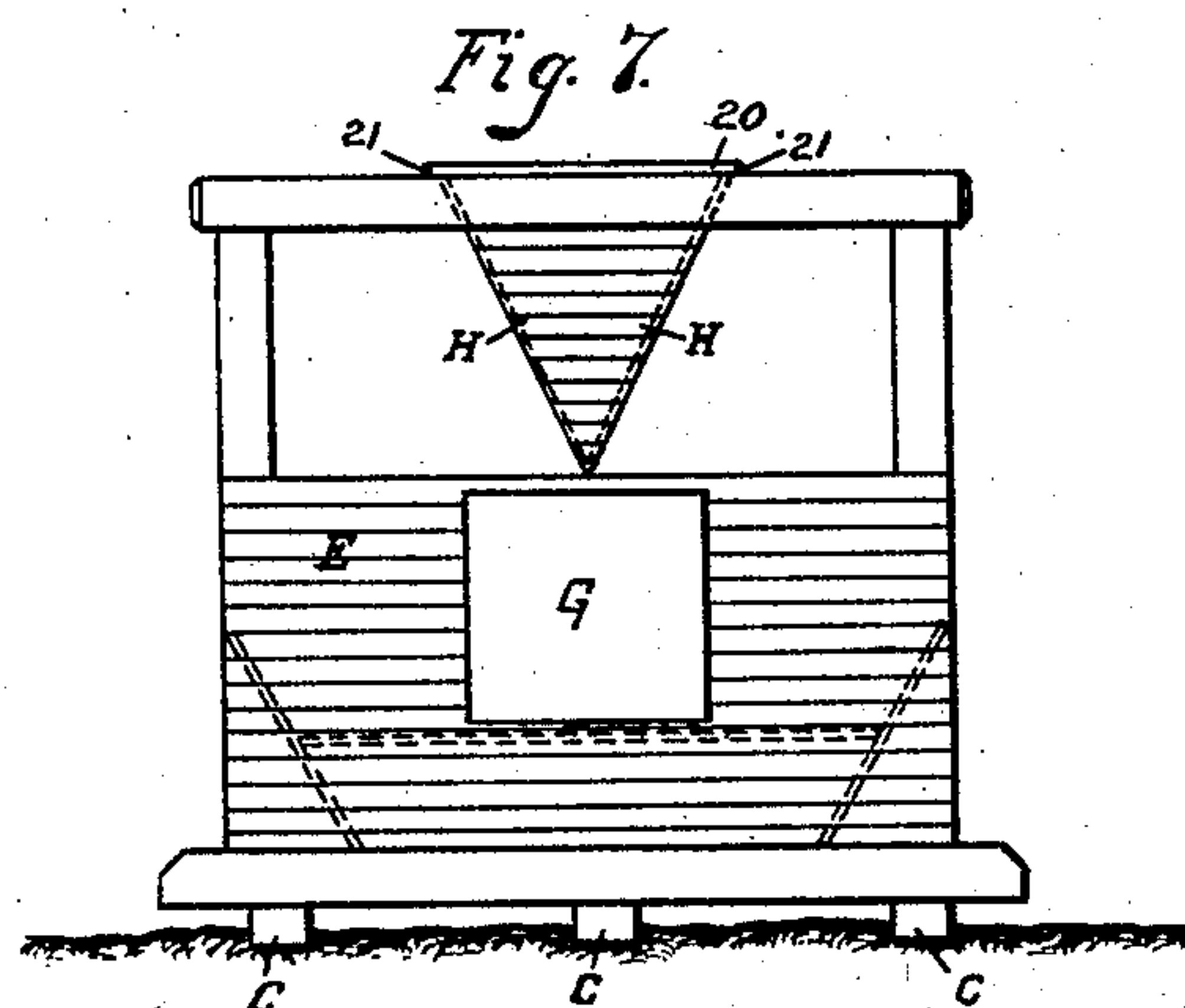
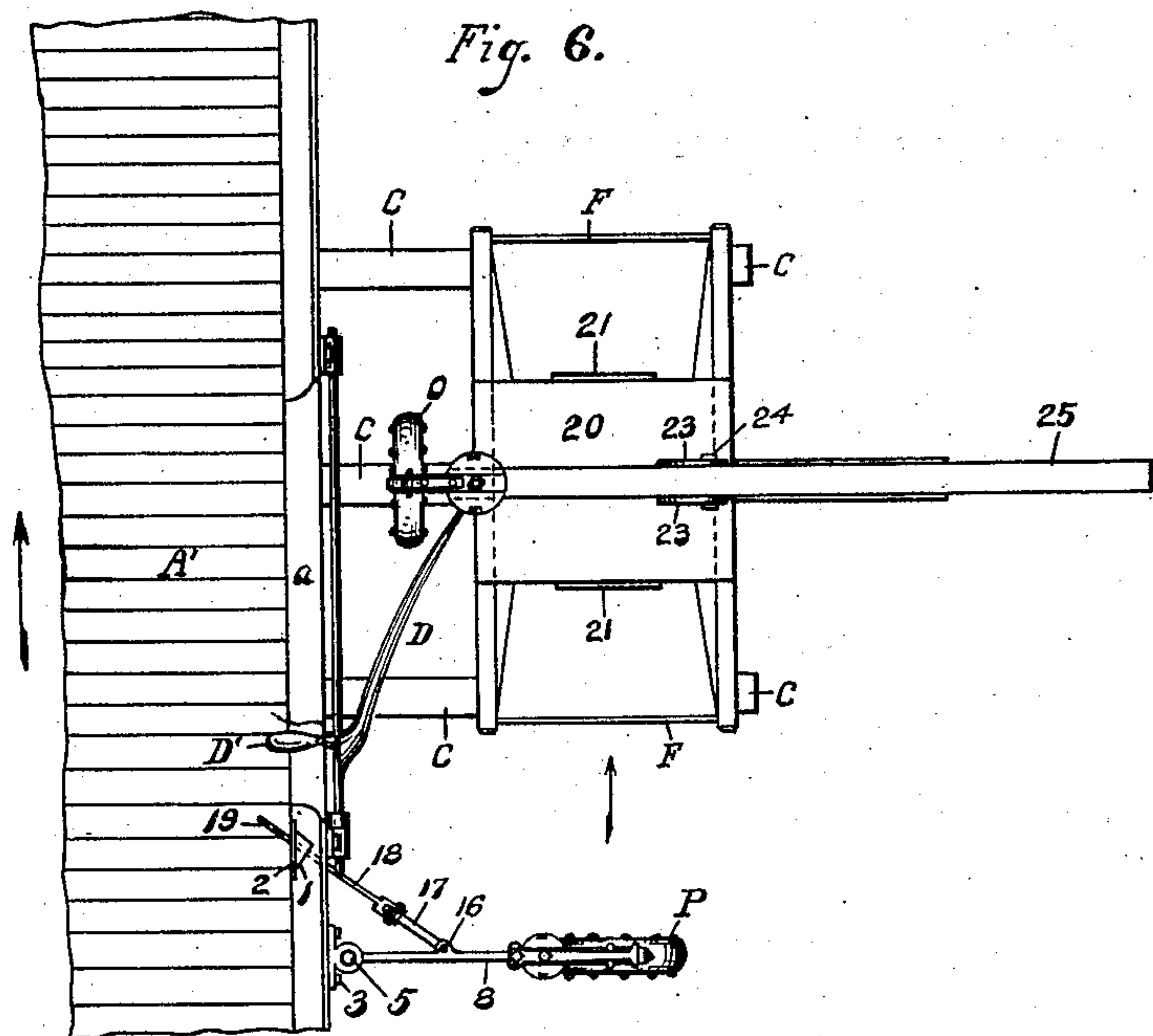
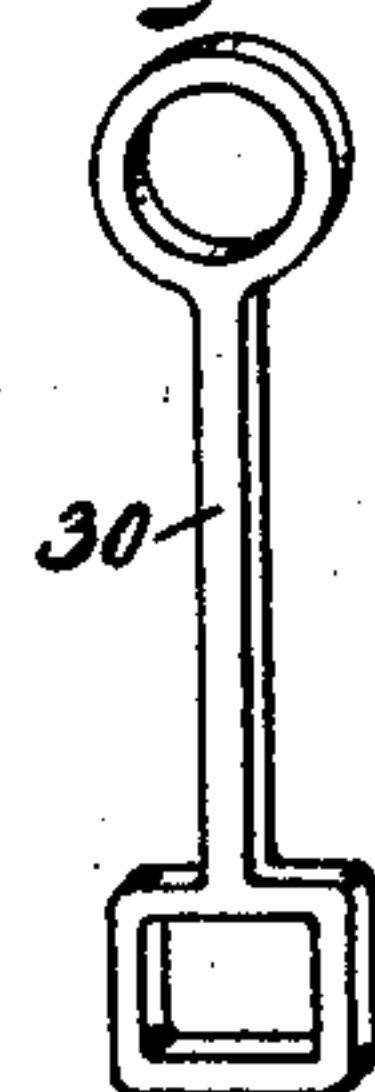


Fig. 8.



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UNITED STATES PATENT OFFICE.

JAMES SWIHART, OF NEW LEBANON, OHIO.

MAIL-BAG CATCHING AND DELIVERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 763,078, dated June 21, 1904.

Application filed September 26, 1903. Serial No. 174,746. (No model.)

To all whom it may concern:

Be it known that I, JAMES SWIHART, a citizen of the United States, residing in New Lebanon, in the county of Montgomery, and in the State of Ohio, have invented certain new and useful Improvements in Mail-Bag Catching and Delivering Devices, of which the following is a full, clear, lucid, and exact specification, such as will enable others skilled in the art to which it appertains to make and use the same.

This present invention relates to postal equipment, and more particularly to mechanisms for delivering mail to and receiving mail from a moving train or postal car expeditiously and with certainty and precision and with the two operations simultaneously accomplished.

In addition to the above another object of my invention is to provide a construction for the purpose stated which will be simple in construction, positive in action, easily operated and controlled, and which can be manufactured at a comparatively low price.

A further object is to provide mechanisms of the character stated composed of a minimum of component interdependent and coöperating parts of resistant material to produce commensurate results for the better adaptation of the work to be performed thereby and the mitigation of the labor of the personnel, while at the same time performing the work accurately and with a material saving in time and expense, and, finally, another object of my invention is to provide a combination of tested instrumentalities which will be compact in form and construction, easy and inexpensive of maintenance, and to generally improve and simplify the construction and operation of devices of this general character.

Other specific objects and advantages of my invention will be apparent from the following detail description and from an inspection of the accompanying drawings, forming a part thereof.

My improvements are fully illustrated in the accompanying drawings, in which—

Figure 1 shows an elevation of my invention in a direction parallel to the railway-track, together with a cross-section of a mail-car and the railway-track. Fig. 2 is a side elevation of one of the bag-holding devices. Fig. 3 is a top plan of same. Fig. 4 is a detail perspective of the securing device for the delivering-lever. Fig. 5 is a detail side elevation of the delivering-lever. Fig. 6 is a top plan of my improvements entire. Fig. 7 is a side elevation of my delivering-receptacle, and Fig. 8 is a detail of the bag-holding link.

Similar reference characters denote like parts throughout the several views of the drawings, which occupy two separate sheets.

In patents heretofore issued to me—to wit: No. 611,801, dated October 4, 1898, entitled "Mail-bag holder," and No. 713,362, dated November 11, 1902, entitled "Mail-bag-delivering device"—I have set out at large and claimed the improvements in general constituting the basic principles of my present invention. As the present invention is subordinate to said patents and addressed to a combination of the principles thereof and assumes for its practical success some of the earlier stages thereof, I will herein confine myself more particularly to the improvements over and the combination of the points covered by said patents.

This specification is confined to the mechanical improvements which I have effected with reference to the making of a mail-bag catching and delivering device, attempting as near as possible to fulfil the requirements desired by the United States Post-Office Department.

I will now take up the description of my invention, describing the various improvements and their operation in detail, which I will refer to as briefly and compactly as I may.

Referring to the drawings in detail, the letter A denotes the interior of a mail-car; A', the roof; A'', the floor, and a the side door thereof. The car is mounted on wheels in the usual manner and movable on rails B, as indicated at one point. The rails are secured to the ties C, and at least two of the ties should

extend some distance out from the track for the support of my delivering device hereinafter described.

The letter D denotes an arm removable from and pivoted to the side of the car in the usual manner and of a construction now in common use, movable by the handle D', by which it may be swung out horizontally, as in Figs. 1 and 6, or allowed to hang down parallel with the car or entirely removed, if desired. Some distance below said catching-lever and to one side of the door I form an aperture through the wall of the car, in which I fit the mouth member 1, which has integral thereof the plate 2 with a horizontal slot therethrough, as shown in Fig. 4. On the outside of the car just above said aperture is a hanger 3, some distance below which is a similar hanger 4, each of said hangers having projections with vertical holes therethrough to receive the vertical bar 5. The bar 5 is revolvably supported in said holes by the collet 6, secured thereto and adapted to contact with the upper face of the hanger 4, as in Fig. 1. The upper end of the bar 5 projects above the hanger 3, with a coil-spring 7 surrounding said projection. The upper end of the spring 7 is secured to the rod 5 and the lower end to the hanger 3.

Extending out at right angles from the bar 5 is the arm 8, which is permanently secured to the bar 5 opposite said aperture in the side of the car and below the hanger 3. Connecting the arm 8 and the bar 5 is an angularly-disposed brace 9, by which said arm is supported, as shown.

On the outer end of the arm 8 is bolted a circular plate 10, having the inwardly-projecting lug 10', which rises higher than the surface of the plate 10, with a bolt 11 passing vertically and centrally therethrough and also through the outer portion of the arm 8, as shown in Figs. 2 and 3. The bolt 12 passes centrally and vertically through the plate 10, with a spring-washer 13 on the under side of the arm 8, as shown. Integral of and rising from the outer edge of the face of the plate 10 are the two stops 10'', as shown in Figs. 2 and 3. Pivoted on the plate 10 by the bolt 12 is a finger 14, which extends outward over the face of said plate, then downward the thickness of said plate, and then outward, terminating in a point or outer portion, as shown in the drawings. Rising from the finger 14 some distance in from the extreme point thereof is a small lug 10^a, whose height is slightly less than said offset in the finger 14. Extending out over the lug 10' and the finger 14 above the plate 10 and secured by the bolts 11 and 12 is a spring-plate 15, whose outer portion is curved down, touching the outer end of the point of the finger 14, as in Fig. 2, and with oppositely-disposed projections extending to the right and left therefrom, as in

Fig. 3. The outer end of the spring-plate 15 is adapted to be sprung away from the point of the finger 14, but to normally contact therewith, as shown.

On the side of the arm 8 next the door of the car and some distance out from the bar 5 is a hanger 16, to which is pivoted the outer end of the bar 17 for horizontal movement. The bar 17 is of a thickness substantially the same as the thickness of the wall of the car, and on the inner end of the bar 17 is pivoted the arm 18, having on its inner end the handle 19. Said arm 18 is adapted to slide in and out through said aperture in the side of the car and through the slot in the plate 2.

Located at the side of the railway is a receptacle, preferably rising from and secured to the extensions of the ties C and consisting of the two parallel sides E E, disposed parallel with the track B and having the ends F F all secured together in a substantial manner and provided with a bottom or floor either level with or above the base of the receptacle. The ends F F extend up from the base a little less than half the distance of the height of the receptacle, as shown in Fig. 1, and in one of the sides of the receptacle an opening G may be formed by which access may be obtained to the interior of the receptacle. From the upper edge of each of the ends F F a partition should extend inward and downward to the base or to the floor or false bottom, as indicated by the dotted lines in Fig. 7. Extending across from side to side of the receptacle, resting on the top thereof and covering approximately one-third of the top of the receptacle, is a platform 20, as shown in Figs. 1, 6, and 7. On the center portions of the edges of said platform 20 are rubber contacts 21, as shown and for the purpose hereinafter appearing. Extending across the interior of the receptacle, extending from the edges of the platform 20 downward and toward the center, are the two converging partitions H H, as shown in Fig. 7, which meet at a point above the level of the ends F F, also as shown in Fig. 7.

The post 22 for supporting the catching device should rest on and be secured to a tie C some distance in the rear and central of said receptacle and then extend upward and inward at an angle, touching and secured to the upper edge of the rear side of the receptacle by a bolt or the like, and then extending on upward and inward, as shown in Fig. 1. Permanently secured on each side of the upper end of the post 22 are identical inverted-L-shaped plates 23 23, which extend above and rearward from the post 22, as in Fig. 1. Through the rear extensions of the plates 23 23 are horizontal oppositely-disposed holes to receive a pivotal bolt or pin 24.

The numeral 25 denotes an arm pivotally

mounted by the bolt or pin 24 on the upper end of the post 22 in a position whereby it may be turned horizontally, as shown, or allowed to rest parallel with the post 22, as indicated by the dotted lines in Fig. 1. The arm 25 is pivoted somewhat forward of its center in order that normally it may assume the position as indicated by said dotted lines. This object is further accomplished by making the rear end of said arm 22 somewhat larger than the forward end.

Secured on the sides of the post 22 and extending inward are a pair of plates I, (only one of which appears in the drawings,) between which is secured the block 26. Secured on each side of the block 26 and extending inward are a pair of plates 27, (only one of which appears in the drawings,) through the free ends of which are oppositely-disposed horizontal holes to receive the bolt or pin J. Mounted between the plates 27 by the pin J is the block-finger 28, pivoted to stand horizontal or to be turned up, as indicated by the dotted lines in Fig. 1.

The numeral 29 denotes a pair of bars (only one of which appears in the drawings) of identical construction set at an angle, pivoted at their lower ends to either side of the block-finger 28 and at their upper ends to the sides of the arm 25 forward of the pivotal point of the latter by the bolt K, which passes through the arm 25. The openings in the upper portions of the bars 29 for the bolt K are longitudinal slots, (represented by the letter L,) whereby said bars 29 may be lengthened or shortened.

Secured to the inner end on the upper face of the arm 25 and projecting toward the car is a sack-holding device M, and secured to the inner end and on the under face of the block 28 and projecting toward the car is a sack-holding device N, similar to the above, but oppositely disposed. Said sack-holding devices are shown and specifically described in my patent on "Mail-bag holder," No. 611,801, dated October 4, 1898. If desired, the construction of the holders M and N may be substantially the same as the holder above described as shown attached to the outer end of the arm 8.

The numeral 30 represents a link having a relatively long shank expanding into an upper portion having a round eye therethrough and also expanding into a lower portion having a square eye therethrough, as shown in Fig. 8. The link 30 is intended to be detachably secured to the end of the mail-bag P by a strap or the like passing through the square eye thereof, and the round eye of the link is adapted to pass over the point of the finger 14 by lifting up the outer end of the spring 15 and disposing it as shown in Fig. 1.

The letter P denotes the mail-bag to be de-

livered from the train or car to the receptacle, while D represents the mail-bag to be caught by the swinging arm of the mail-car, the latter being suspended between the holders M and N, as in Fig. 1.

Integral of and extending down from the arm 18 are two lugs Q and R, with a space therebetween to receive the lower edge of the slot of the plate 2, and said lugs are located on the arm 18 at a distance such that when the arm 8 is extended out at right angles from the car that the said lugs will straddle said plate, as in the positions shown in Figs. 1 and 6. The outer edge of the lug Q is beveled, as shown in Fig. 5, in order that as the arm 18 is pushed out the said bevel will cause the arm 18 to raise and allow the lug 1 to pass over the edge of the plate 2, and when the lugs Q and R are astride the plate 2 the arm 8 will be locked in its extended position.

Operation: Normally the movable parts of the device located at the side of the track are in the position shown by the dotted lines in Fig. 1, while the arm I is turned back against the side of the car with the arm 18 hanging down within the car, as shown by dotted lines in Fig. 1. Before the arrival of the car a person may ascend to the platform 20 and move the arm 25 to a horizontal position and connect one end of the bag O in the holder M and the lower end thereof in the holder N, which will suspend the bag O in the position shown in Fig. 1, and by reason of the arm 25 being pivoted to describe a larger segment of a circle than is the finger 28 and also by reason of the weight of the mail-bag and its contents the device will be retained in the position shown. Before arriving at the receptacle the mail-clerk in the car will prepare the bag P, connecting to one end the link 30, as stated, and will then hang the bag P on the finger 14, as stated and as shown in Fig. 1. The arm 8 being extended and locked as shown and described, the two bags are ready to be exchanged. The exchange of the bags is accomplished by the movement of the car passing in either direction and without manual supervision. As the car passes the point of exchange the arm D will catch the bag O in the manner described in the above-named patent, and the arm 25 being released the holders M and N will immediately be turned back out of the way, and substantially synchronously with the above or just before or after the catching of the bag O by the arm D the link 30 will strike the rubber contact 21, causing the finger 14 to turn on the bolt 12, as indicated by the dotted lines in Fig. 3, thus allowing the link to slide off the point of the finger 14 and be released, and by its momentum the bag P will strike one side of the converging partition H and be conducted to the bottom of the receptacle at angles tending to break

the sudden contact with stationary objects. By raising the handhold 19 the spring 7 will return and hold the arm 8 against the side of the car, and the arm 18, dropping down by gravity parallel with the wall of and inside the car, will lock the device until again desired for use. In the arrangement of said parts my object has been as nearly as possible to reduce the operations to automata.

My invention herein described although embodying many parts is simple and durable in construction and operation and accurate in the accomplishment of its objects, while every contingency liable to occur in its operation is carefully and amply provided for that the chances for error are practically *nil*.

From the above description, taken in connection with the accompanying drawings, it will be apparent that I have produced improvements in mail-bag catching and delivering devices embodying the objects elsewhere referred to in this specification.

While I have illustrated and described the best means now known to me for carrying out my invention, I wish it to be understood that I do not restrict myself to the exact details of construction shown and described, but hold that any slight changes or variations in such details as would suggest themselves to the ordinary mechanic would clearly fall within the limit and scope of my invention.

The terms "in," "out," "right," "left," "vertically," "horizontally," and other similar terms are used for convenience of description only, and it is not intended by the use of such terms to limit the arrangement and operation of the several parts to the precise positions indicated.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a mail-bag catching and delivering device, the combination with a mail-car having a side door and an aperture through the wall of the car at one side of the door, of a vertical bar pivoted to the side of the car, an arm extending out at right angles from said bar, a brace extending at an angle from said bar to said arm, a spring surrounding a portion of said bar with one end secured to said bar and the other to one of the hangers of the said bar, a bar 17 pivoted to the side of said arm and of a length to extend through said aperture in the wall of the car, an arm 18 pivoted to said bar 17 and adapted to pass through a slot in the plate 2, the plate 2 fitted on the inside of the car over said aperture, a pair of lugs on the under side of the arm 18 adapted to straddle the thickness of said plate, a finger pivoted on the outer end of the arm 8 with a flat spring extending over and touching the point of said finger, a link adapted to be suspended from said finger for supporting a mail-

bag therefrom, a receptacle located at the side of the track, means for removing said bag and the link from said finger by the movement of the car, and means for catching a second mail-bag suspended from above said receptacle, all substantially as shown and described.

2. In a mail-bag catching and delivering device, the combination with a mail-car having a side door, an aperture through the wall of the car at one side of said door, and a device for catching a mail-bag located on the other side of the door, of a vertical bar pivoted to side of the car near said aperture, an arm integral with and extending out at right angles from said bar, a brace integral with said bar and arm and extending at an angle therebetween, a spring for normally retaining said arm parallel with the car, a bar pivoted to the side of said arm and adapted to extend through said aperture in the car, means for moving said arm from within the car and for locking it extended or in its position parallel with the car, means secured on the outer end of said arm, for detachably suspending a mail-bag therefrom, a mail-bag receptacle permanently located near the track, a platform extending across the top of said receptacle at a height somewhat below said arm on the car and providing means for engaging a mail-bag suspended by said arm on the car, a post extending up at an angle from the rear of and above said receptacle, and means for suspending a mail-bag from said post above said receptacle to be caught by said catching device on the car, all substantially as shown and described.

3. A mail-bag catching and delivering device, the combination, a receptacle permanently located at the side of a railway and consisting of the two sides parallel with the railway and having ends of a height less than the said sides, a platform across the center of the top of the receptacle and extending between said sides, converging partitions extending down some distance from the edges of said platform, a post secured in the rear of and extending at an angle over and above the center of said receptacle, means secured to the upper end of said post for detachably suspending a mail-bag therefrom, means secured to said post below said suspending means for detachably securing the lower end of a mail-bag, means located on a car for engaging and removing a mail-bag supported by said post, and means located on a car for holding out a mail-bag to be disengaged therefrom by the edge of said platform of the receptacle, all substantially as shown and described.

4. A mail-bag catching and delivering device, the combination with a railway, a mail-car movable on the railway, a door in the side of the car, a mail-bag-catching device located at the side of the door, and an aperture through

the wall of the car near said door, of the mail-
bag-suspending device located at the side of
the door with means for its operation from
within the car, a receptacle permanently lo-
5 cated at the side of the railway for disengag-
ing and receiving therein a mail-bag from said
suspending device of the car, a post secured
to the rear of said receptacle and having arms
extending toward the railway, devices secured
10 on the ends of said arms of the post for hold-
ing a mail-bag in suspension, and means for
automatically turning back said arms and the

devices secured thereto after the mail-bag has
been disengaged therefrom, all substantially
as shown and described and for the purposes 15
set forth.

In testimony whereof I have hereunto signed
my name to this specification in the presence
of two subscribing witnesses.

JAMES SWIHART.

Witnesses:

R. W. RANDLE,

R. E. RANDLE.