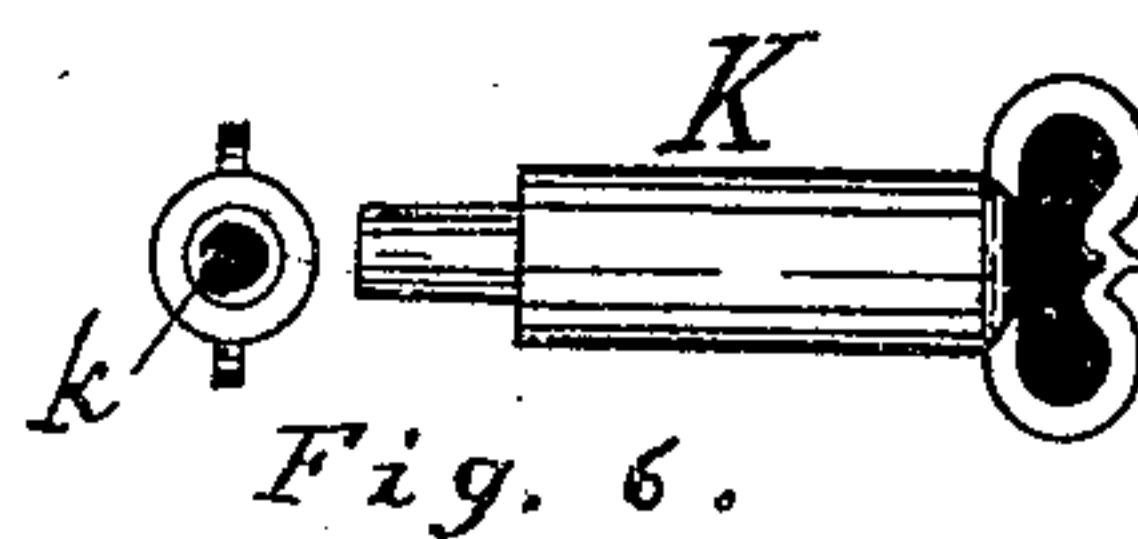
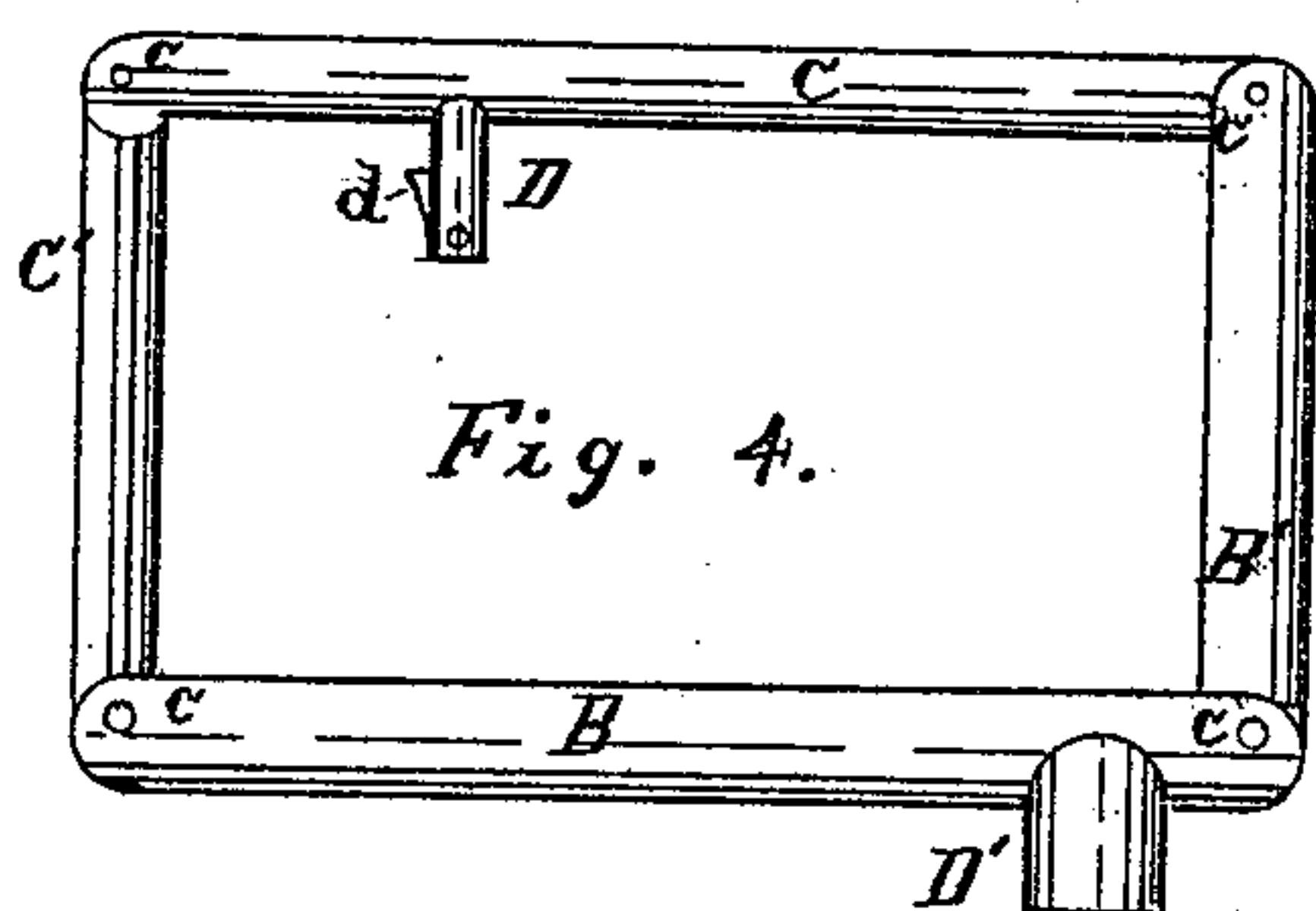
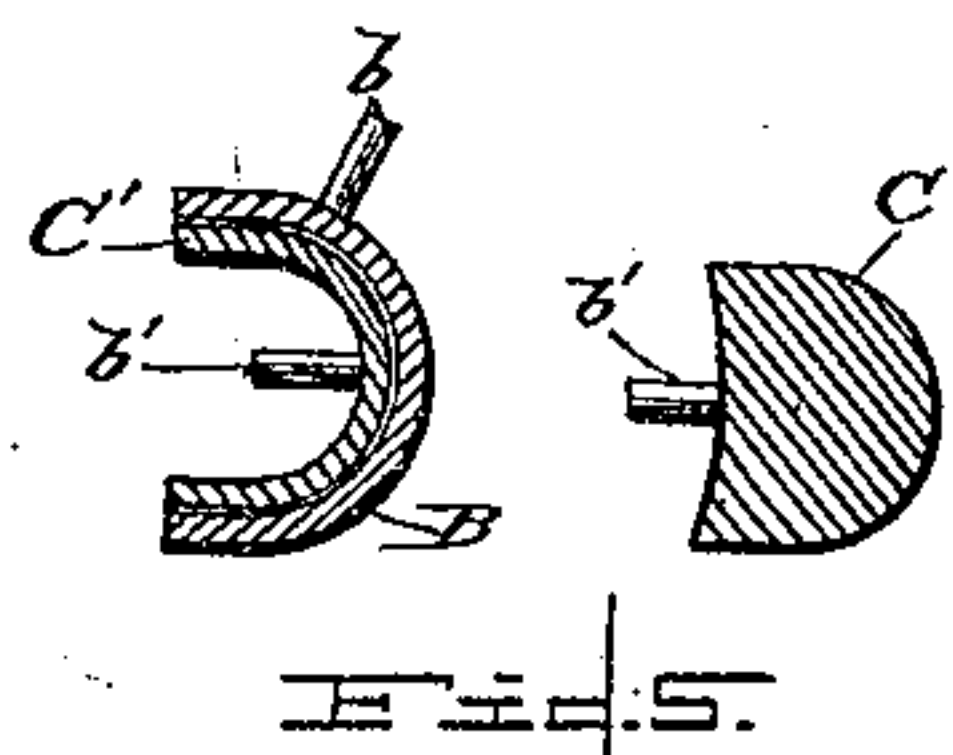
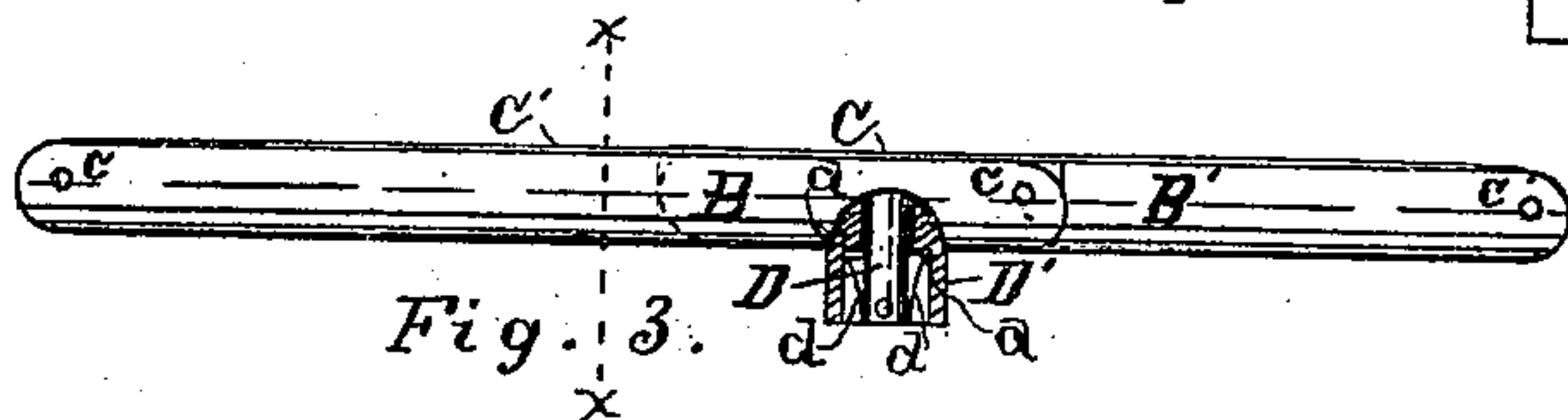
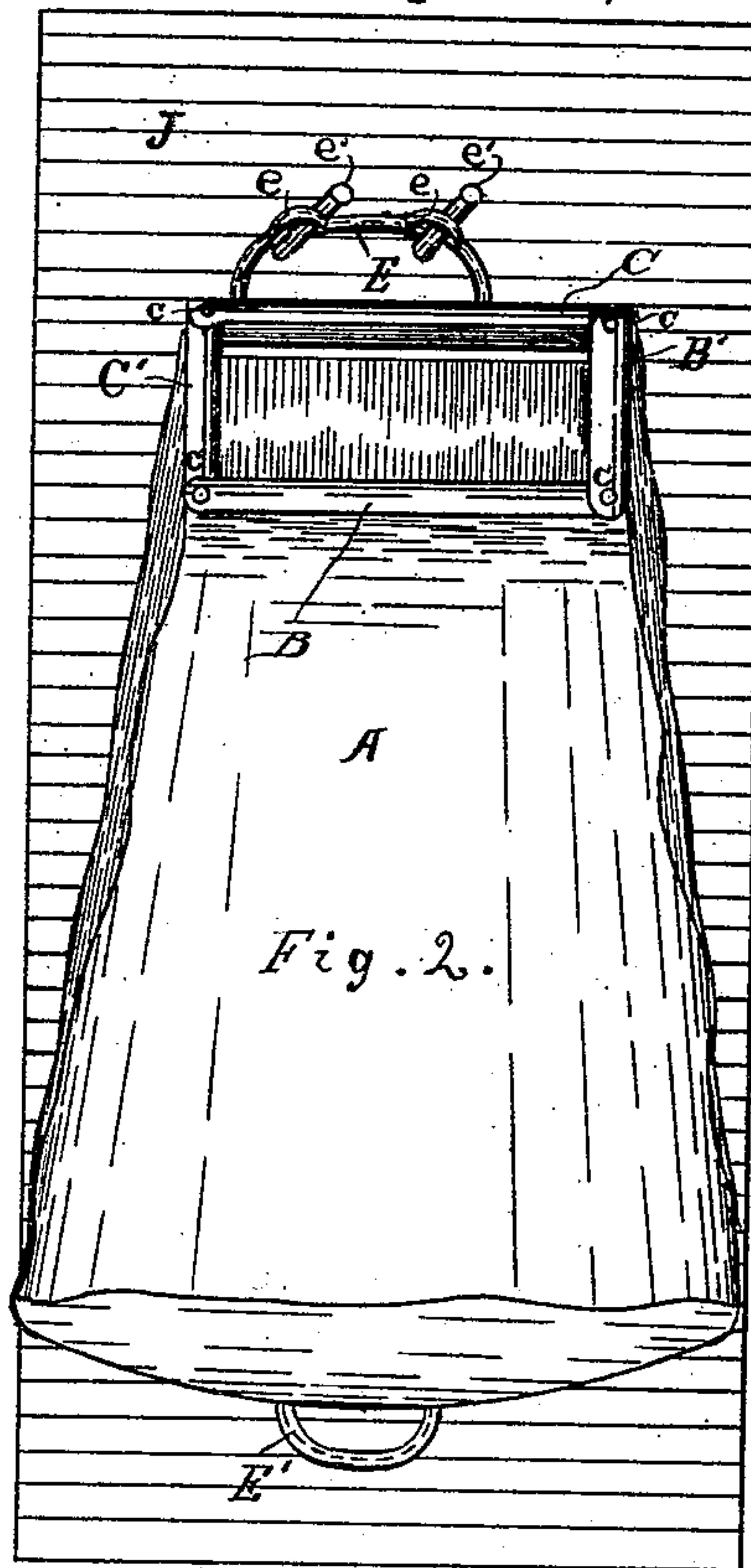
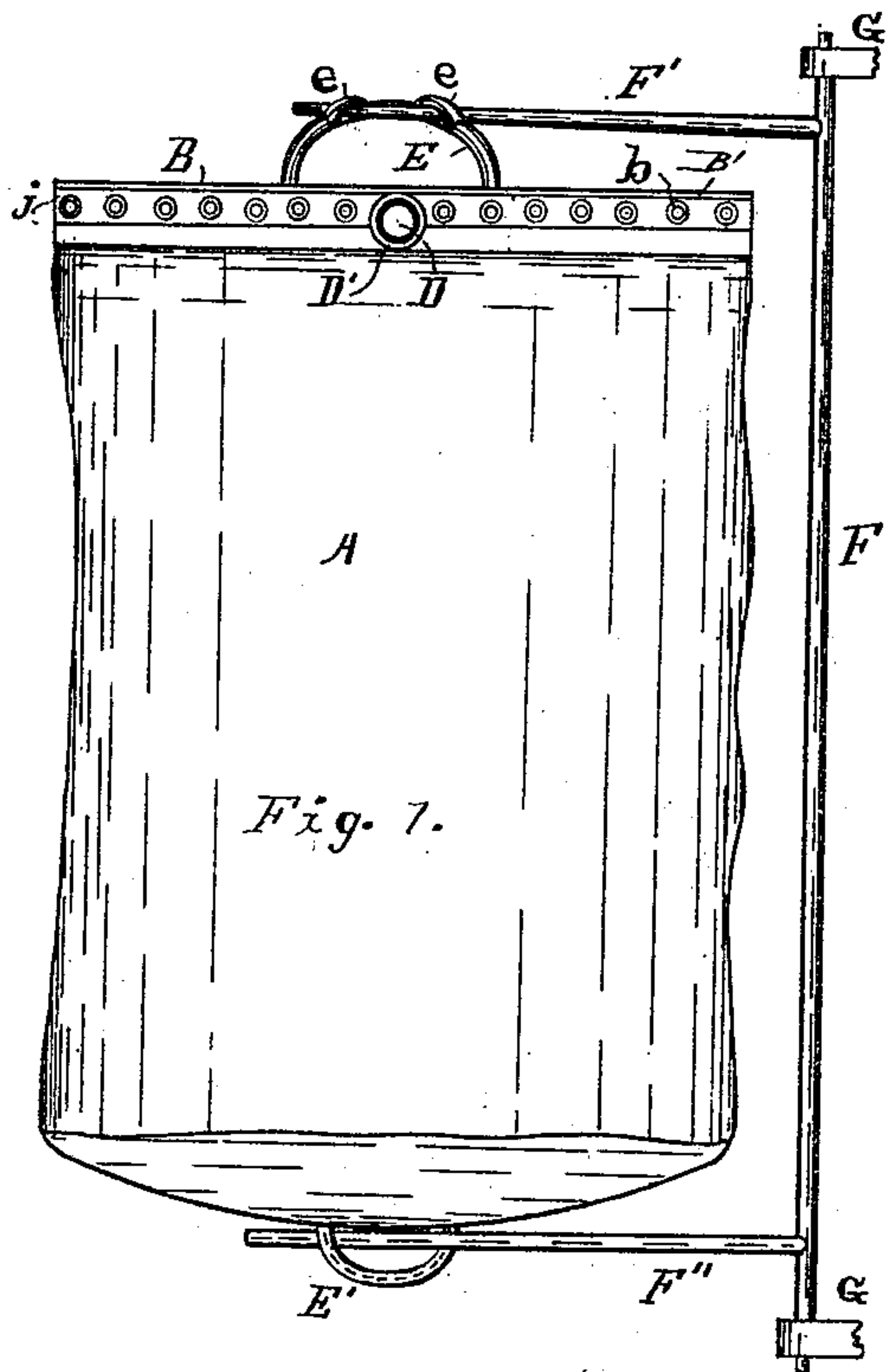


(No Model.)

H. L. BOYLE.
MAIL BAG.

No. 459,864.

Patented Sept. 22, 1891.



Witnesses.

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UNITED STATES PATENT OFFICE.

HOMER L. BOYLE, OF GRAND RAPIDS, MICHIGAN.

MAIL-BAG.

SPECIFICATION forming part of Letters Patent No. 459,864, dated September 22, 1891.

Application filed July 17, 1890. Serial No. 359,012. (No model.)

To all whom it may concern:

Be it known that I, HOMER L. BOYLE, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Mail-Bags, of which the following is a specification.

My invention relates to improvements in mail-bags for use upon railway-trains; and its objects are, first, to facilitate the catching of a mail-bag by the mail-bag catch upon railway-trains; second, to facilitate the locking and unlocking of mail-bags; third, to provide a light strong support for the opening of a bag, that may be opened to form a rectangular mouth for receiving the mail or may be closed one side within the other in such a manner that each side will brace the other and close the mouth of the sack snugly and firmly, and, fourth, to facilitate the hanging of the bag upon the wall of a car or other place for filling. I attain these results by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows my mail-bag closed and supported upon a crane ready to be taken upon a moving train. Fig. 2 is the same opened and hung upon hooks ready for receiving mail. Fig. 3 is a top view of the mouth frame or clasp folded to the position it takes when the mail-bag is closed, with the clasp shown in section to show the means of locking. Fig. 4 is the same open, ready to receive or discharge mail. Fig. 5 is an end view of the bars cut off on the line $x x$ of Fig. 3, and Fig. 6 is an end and a side view of the key.

Similar letters refer to similar parts throughout the several views.

A is the mail-bag.

B B' and C C' are the several sides of the frame.

D D' is the lock.

E and E' are loops for supporting the bag.

F F' F'' is a swinging crane for supporting the bag preparatory to being taken by a moving train.

G and G are boxes for supporting the crane, and J is the side of the car.

I construct the mail-bag in the usual form

and provide it with a frame in the opening, constructed of concavo-convex metallic bars, as follows: One side B and one end B' of the frame I make of concavo-convex bars, the bar B being somewhat longer than B' and provided with a portion of the locking device, (in this case a hollow projection D',) which I provide with a shoulder a (see Fig. 3) for the reception of spring-catches upon the projection D on the opposite bar of the frame. This projection is placed at a short distance from one end of the bar C and in such a position that it will fit the hollow projection on the opposite bar when the frame is folded. The bars B and B' are hinged at the ends, so that they may be extended, as shown in Fig. 3, or may be turned down at right angles, as shown in Fig. 4, being pivoted upon a rivet c , which passes through both walls of the outer bar in the hinge and through the end of the inner bar. The opposite side of the frame I make of two similar bars C and C', of the same length of B and B', the four pieces being pivoted together at the ends to form a rectangular frame, as shown in Fig. 4, and the bars C and C' being of a proper size and form to fit within the bars B and B', as indicated in Figs. 3 and 5. The bars C and C' may be made of concavo-convex form, or they may be made solid, as shown at C' and C'' in Fig. 5; but I greatly prefer the concavo-convex form.

The bar C is provided with a projection D (or a staple, if desired) to unite with the hollow projection D' on the bar B to form a locking device for the mail-bag.

My object in making the bars B and C longer than the bars B' and C' is twofold: first, to render the opening in the mail-bag oblong in form, and, second, to cause the ends of the long bars to lap by each other with the locking device between them, so as to form a rigid support for the mouth of the bag when closed. I design these bars to be manufactured of malleable iron or other suitable material, and cast the rivets b for the bars B and B' upon the outside and the rivets b' for the bars C and C' upon the inside of the bars, as shown in Fig. 5. The object of these rivets

is to secure the mail-bag to the bars, and the object of placing them in the position mentioned is to secure the fabric of the bag on the outside of the bars, so that the bars will be hidden from view. I re-enforce the sack on the line of riveting by a narrow band or strip *j* of leather or other suitable material.

For a lock for use upon this bag I form a hollow projection *D'*, having a shoulder *a* in position to receive catches *d*, that are secured to the post *D* on the bar *C*, the portion of the hole in the projection *D'* outside of the shoulder being enough larger than the post to allow a key to pass over and around the end of the post and between it and the walls of the projection. I then form a post *D* upon the bar *C* in a proper position to enter the hole in the projection when the mouth of the bag is closed and of a proper size to fit freely in the smaller portion of the hole through said projection and provide it with one or more spring-catches *d*, set in proper position to engage with the shoulder *a* and hold the bars firmly together, the construction being such that the simple closing of the bag will insure its locking in all instances without the aid of a key; and for unlocking the bag I provide a key *K*, formed with a hole *k* in the end to fit over the end of the post *D*, and a body that will fit between the post and the walls of the projection *D'*, the entrance of which will force the catches *d* back into the post and permit it to be readily withdrawn from the projection.

My device for hanging the mail-bag upon a crane preparatory to being taken by the mail-bag catch upon a train consists of a large bail or loop *E*, secured firmly to the frame-bar *B* or *C* at the upper end of the mail-bag of a proper size to allow the catch on the train to enter the loop below the arm of the crane and transfer the bag to the moving train. The appliance for securing it to the arm of the crane consists of two loops *e e*, securely attached to the upper part of the main loop or bail *E*, in position so that the arm of the crane may pass through them and leave the entire size of the loop *E* below the arm for the reception of the catch-arm. These loops may also be utilized for hanging the open mail-bag upon the wall of the car or other support, as shown in Fig. 2, for receiving mail. I provide for preventing the bag from swinging upon the crane by passing the lower loop *E'* over an arm *F''* upon the crane in proper position to allow the loop to be suddenly withdrawn from it without catching and cramping upon it. My form of mouth-piece is peculiarly adapted to use in this connection. The concavo-convex form of the bars, with the bars upon one side fitting snugly within the bars on the other side and overlapping each other and provided with the locking device about midway between their overlapping ends, renders the mouth-piece of sufficient strength not to be likely to be in-

jured by the sudden action of the catch-arm when removing it from the crane, and at the same time renders the frame sufficiently light not to be cumbersome to handle and provides an overlapping support for both ends of the rivets, forming a perfect hinge-joint that is very strong and at the same time renders it impossible to introduce any instrument between the bars and pry them open when locked. My appliance is also applicable for use as an opening-frame for traveling-bags, satchels, &c.

In this specification I have described the preferable construction of the several features mentioned therein; but it is manifest many modifications may be made in the same without departing from the spirit of my invention, and I do not wish to be understood as confining myself to the exact construction of the features shown and described.

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

1. The combination, with a mail-bag, of a frame consisting of concavo-convex bars pivoted to form a rectangular opening in the mouth of the bag, one pair of bars fitting into the other when closed, a lock, a large bail or loop, supplemental loops for the reception of a crane-arm, and rivets, substantially as and for the purpose set forth.

2. The combination, with a mail-bag, of a frame made of two large and two small concavo-convex bars pivoted together at the ends to form a rectangular opening, the two longer bars being provided, respectively, with a hollow projection and a projecting post, the projection having a shoulder and the post provided with a catch to form a lock midway between the overlapping ends of the bars, substantially as specified.

3. The combination, with a mail-bag, of a long and a short concavo-convex bar provided with rivets cast upon their outer surface, a long and a short concavo-convex bar fitted to fold into the concave surface of the former bars and having rivets cast upon their inner surface, the four bars being pivoted together at the ends to open and form a rectangular mouth to the bag, the ends of the two longer bars overlapping when closed and provided with a locking device between the overlapping ends, a hollow projection upon the large bar, having a shoulder within it, a post secured to the smaller long bar, having catches, a large bail, small loops upon the bail, and a loop *E'*, substantially as and for the purpose set forth.

4. The combination, with a mail-bag, of a frame constructed of a long and a short large concavo-convex bar and a long and a short small concavo-convex bar of a proper size to fit into the concave side of the large bars, all pivoted together at the ends to form a rectangular opening, the ends of the longer bars overlapping when closed, a locking device

5 between the overlapping ends, a large loop attached to the frame, rivets secured to the bars, and a re-enforcing band riveted with the bag upon the bars, substantially as specified.

5. A mail-bag having a large loop secured thereto, which is provided with smaller loops, substantially as and for the purpose set forth.

10 6. A mail-bag having a frame comprising pivoted bars, two of which are of channeled or grooved metal and the other two of which

are constructed to conform and be practically inclosed within the grooves or channels in the first-mentioned bars, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses. 15

HOMER L. BOYLE.

Witnesses:

J. L. GERRY,

W. H. PUMPHREY.