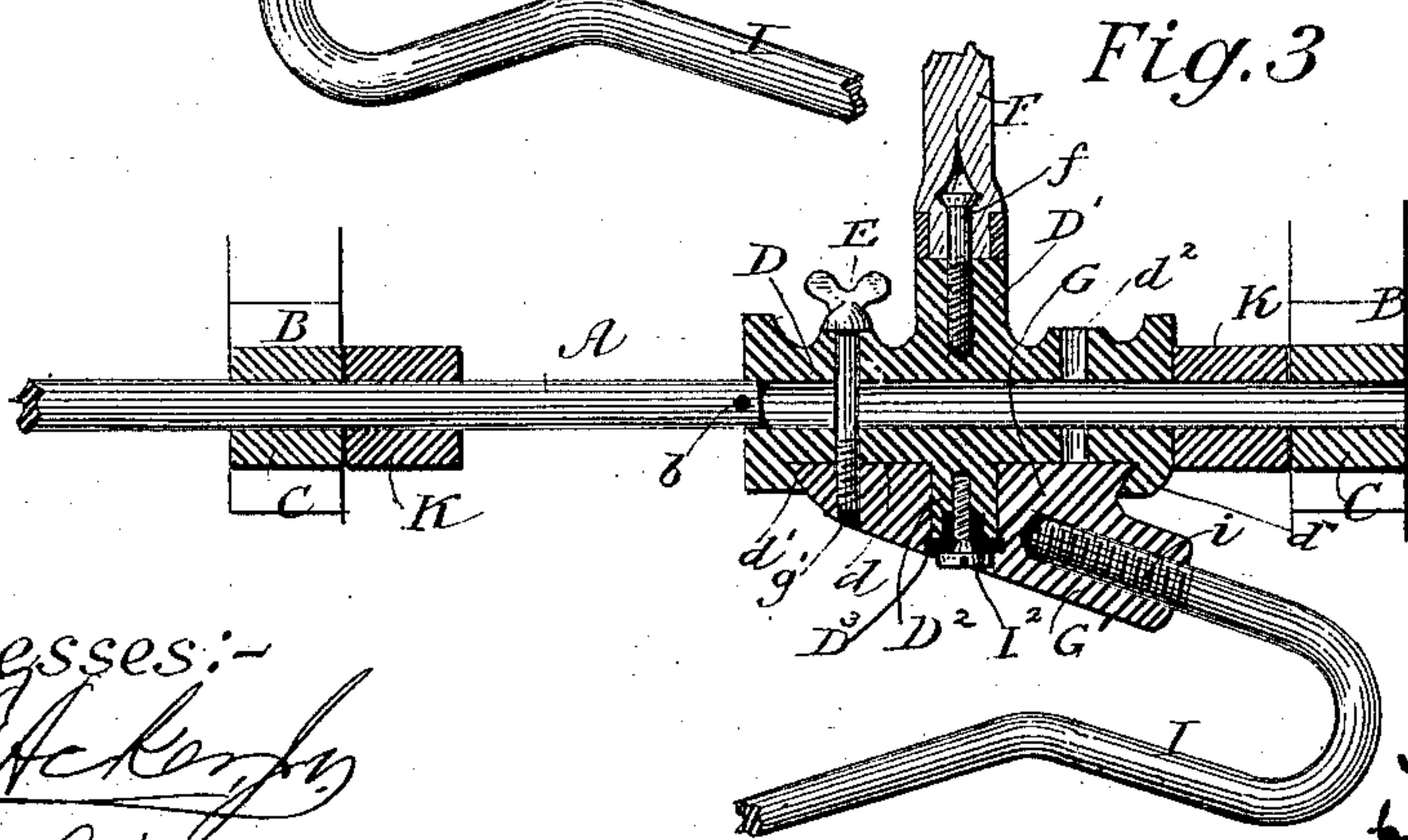
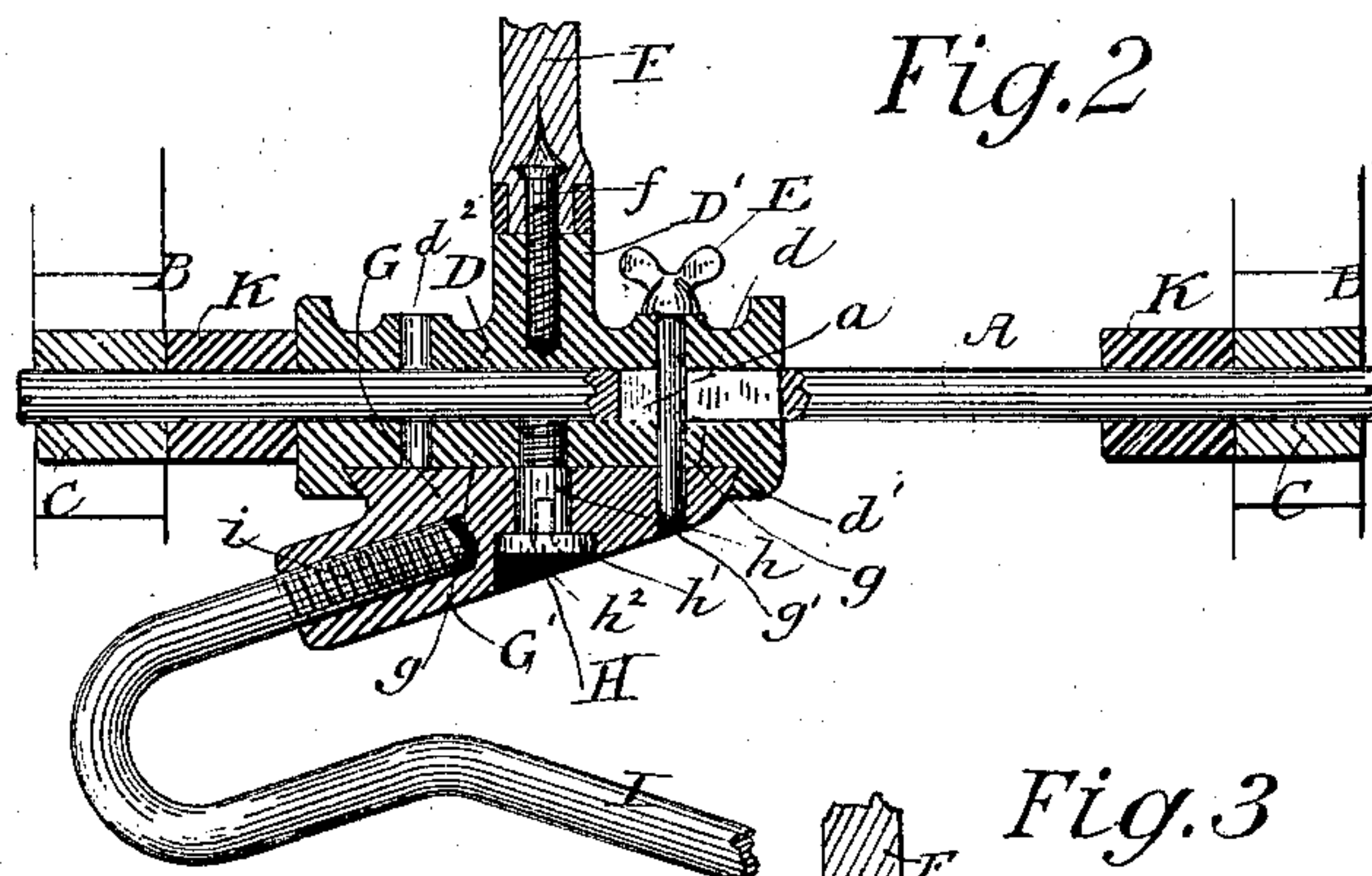
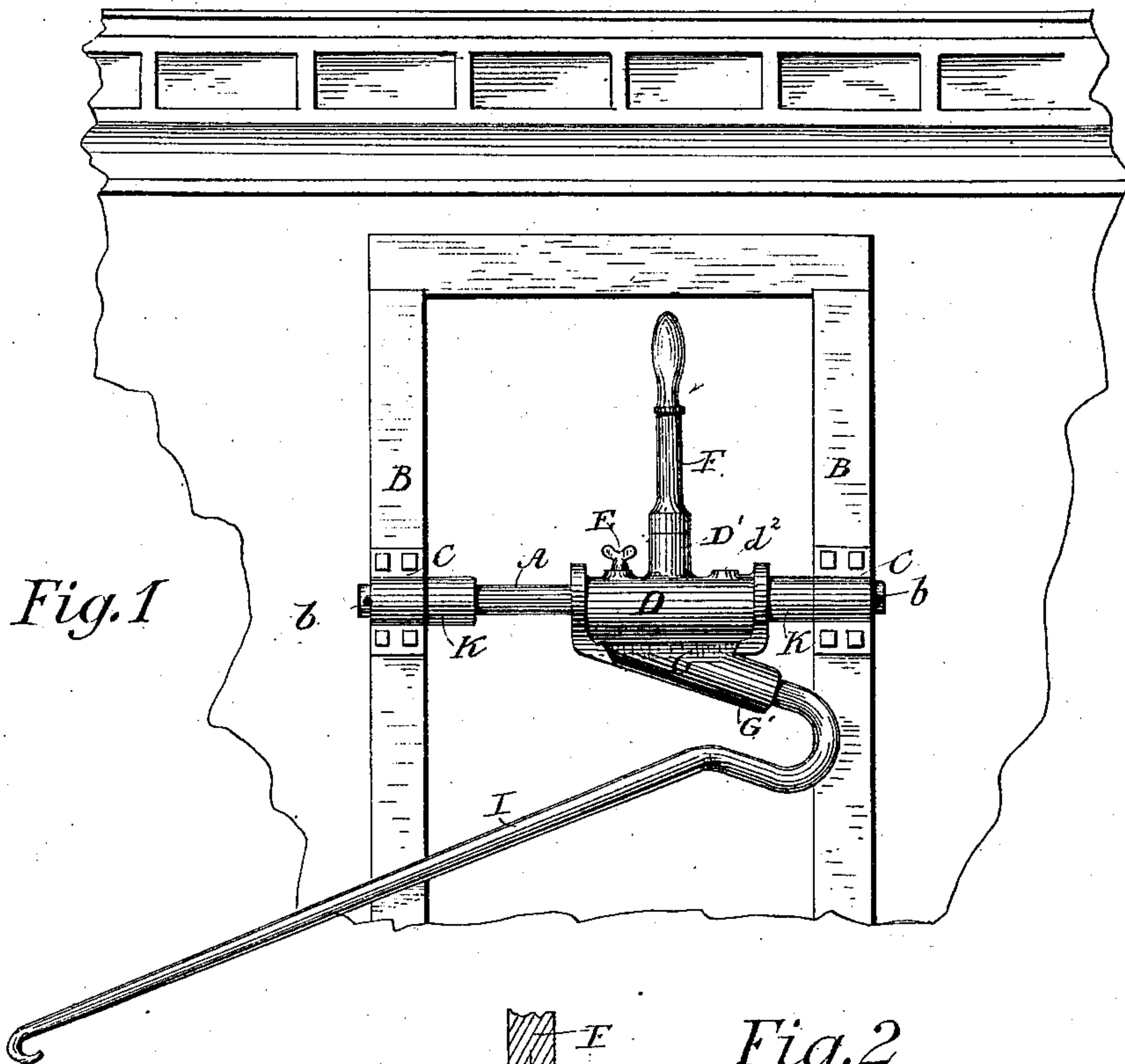


(No Model.)

A. C. CROOK.  
MAIL BAG CATCHER.

No. 301,865.

Patented July 15, 1884.



Witnesses:-

*J. H. K. K. K.*  
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Inventor:  
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by his atty.  
*W. H. Row*



# UNITED STATES PATENT OFFICE.

A. CRAWFORD CROOK, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO  
P. D. FINNEGAN, OF SAME PLACE.

## MAIL-BAG CATCHER.

SPECIFICATION forming part of Letters Patent No. 301,865, dated July 15, 1884.

Application filed August 3, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, A. CRAWFORD CROOK, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Mail-Bag Catchers, of which the following is a specification, reference being had therein to the accompanying drawings.

10 My invention relates to a mail-bag catcher consisting of an arm secured to a shaft arranged across the door of a car, which may be oscillated upon or with the shaft to deliver the mail-bag from the arm to the interior of  
15 the car, and in which the arm may be reversed upon the shaft to catch the bag in either direction in which the car may be moving.

The object of my invention is mainly to provide an improved device of simple, strong, and durable construction, which may be readily operated to catch the bag, may be quickly reversed to be operative in whichever direction the car may be moving, and which will admit of the convenient removal of the catcher-arm from the shaft without completely removing the shaft from its bearings and exposing an open door through which the operator may be thrown while the car is in motion.

To these ends my improvements consist in  
30 the combination, in a mail-bag catcher, of a shaft supported upon the door-frame, a body formed of two sections, one of said sections being secured to the shaft, and the other section secured to the catcher-arm and journaled one  
35 upon the other in such manner that the catcher-arm may be reversed upon the shaft without disconnecting the bearing-surfaces of the sections, and means for locking the sections and catcher-arm in either position.

40 My invention further consists in combining and arranging the above-described parts in such manner that the catcher-arm and section to which it is attached may be reversed and secured in either position upon the other section independently of the handle.

45 My invention further consists in securing the catcher-arm to its shaft by means of two sections pivoted one upon the other, one of said sections forming a sleeve to fit the shaft

and have a longitudinal movement thereon, 50 and also to means for limiting such longitudinal movement.

My invention further consists in combining the above-described parts and in forming the pivoted sections with dovetailed interlocking 55 ends and bearing-surfaces, and also in a novel means for locking the sections securely together to hold the catcher-arm in either position.

In the accompanying drawings, Figure 1 is 60 a side elevation of my improved mail-bag catcher applied to the door of a car; Fig. 2, an enlarged sectional view of the catcher with the crane or catcher-arm in a position reverse from that shown in Fig. 1; and Fig. 3, a sectional view of the catcher, showing modifica- 65 tions of the means for securing the shoe to the body of the catcher, and also showing the shaft withdrawn sufficiently to be removed from the body of the catcher. 70

The shaft A is secured to uprights B of the door of the car by means of bearing-brackets C, in which the shaft freely turns, but is prevented from moving longitudinally in said bearings by pins *b*, that pass through the ends 75 of the shaft outside of the bearing-brackets. It is preferred to make the shaft A free from shoulders, so that it can be removed from its bearings, when desired, by withdrawing the pins *b* from either or both ends of the shaft, 80 as will hereinafter appear. A sleeve or body, D, is secured to the shaft, to oscillate with it, by means of a pin, E, that passes through the sleeve, and also through a slot or longitudinal channel, *a*, as shown in Fig. 2, by breaking 85 away the shaft, whereby an endwise movement on the shaft is admitted, said movement being limited by the length of the slot or channel.

A handle, F, is preferably secured to the 90 sleeve or body D in the following-described manner: The handle is of wood, and is split and bored out at one of its ends, as shown in Fig. 2, and is then sprung over the head of bolt *f*, and securely held thereon by a ring or 95 ferrule forced upon the end of the handle and around the bolt. The bolt *f* is threaded at its end and screws into the threaded boss D' upon



the upper side of the sleeve D. The lower side of the sleeve is formed with a smooth flat surface,  $d$ , and at the ends of which segmental dovetailed ears  $d'$   $d'$  are accurately formed and turned out. A shoe, G, with a corresponding surface and interlocking dovetailed projections, fits snugly upon the bottom of sleeve D, and is secured thereto by a stud-bolt, H, that screws into the sleeve, and is provided with a smooth journal-surface,  $h$ , upon which the shoe may be freely revolved. The shoe G is formed with a barrel or heel,  $G'$ , into which the end of a goose-neck, I, of well-known form, may be secured by screw-threads  $i$ , or in any well-known or preferred manner.

In order that the shoe may be locked upon the body, so that the goose-neck will be held firmly in either its forward or reverse positions, the pin E passes diametrically and entirely through the body D and shaft A, and also passes into or through the shoe. The body or sleeve is formed with diametrical holes  $d^2$  at each of its ends, so that the pin E may be passed through either of them into the hole  $g'$  of the shoe, which is preferably screw-threaded to hold the pin in place, and is so arranged that it will fall directly below either one or the other of the holes  $d^2$  of the sleeve to hold the catcher-arm in either one or the other of its positions.

The shoe G may be held in place upon the body by a stud-bolt, H, that screws into the sleeve, and has a smooth-surfaced shank or journal,  $h$ , that fits the bore of the shoe, and around which it may freely revolve.

The head  $h'$  of the stud-bolt may be made removable, and may screw into or be held upon the end of the stud-bolt by a small screw,  $h^2$ , if desired, so that the shoe may be removed from the body without removing the stud-bolt therefrom.

Fig. 3 shows a modification of the device for securing the shoe to the body, and consists in a boss or trunnion,  $D^2$ , cast upon the sleeve D, which is recessed to receive a cap,  $D^3$ , which cap serves to hold the shoe upon the trunnion, and is itself held in place thereon by a screw-bolt,  $I^2$ , formed with a conical head that fits a corresponding recess in the cap, and is formed with a screw-thread upon its end, that screws into the sleeve or body D, and holds the parts securely together without cramping or binding the shoe to prevent its free movement upon the spindle. Rubber buffers or cushions K may be held upon the ends of the shaft inside the supporting-brackets, against which the sleeve may impinge when the bag strikes the catcher, to relieve it from sudden shock and undue strain. The dovetailed connection between the shoe and sleeve will hold their bearing-surfaces closely together, and strengthen each other when severely strained. As the dovetailed bearings are segmental only and do not form a complete circle around the pivot-bolt, the shoe may be turned until its dovetailed segments shall have been released from the correspond-

ing segments of the body, and permit the said parts to be disconnected from each other by removing the pivot-bolt. The pieces may by this means be readily fitted together, and whole parts easily substituted for broken ones. Similar advantages result from placing the sleeve upon a shaft to slide longitudinally thereon. Furthermore, the entire catcher may be removed from the shaft and transferred to the shaft upon the opposite side of the car, should the other catcher become disabled, without entirely removing either of the shafts from their bearings in the door-frame, and thereby remove the danger to which operators are subjected when the doorway is completely unbarred while the car is in rapid motion.

It will be readily understood that by removing the pin from one end of the shaft the shaft may be disengaged from one of its bearings and moved longitudinally through the other bearing a sufficient distance to slip the sleeve from the end of the shaft, as shown in Fig. 3, without removing the shaft from both of its bearings or exposing a sufficient space in the doorway through which the operator may be thrown.

Various changes may be made in the construction of the device without departing from my invention. The sleeve may be held upon the shaft by a key and key seat or slot, which will admit of its oscillation with and longitudinal movement upon said shaft.

When it is desired to reverse the position of the catcher-arm upon the sleeve, the pin E is withdrawn and the sleeve moved longitudinally upon the shaft until the hole in the opposite end of the sleeve comes above the slot  $a$  of the shaft. The pin is then passed through said hole and slot and screwed into the toe of the shoe G, which has in the meantime been turned upon its stud or journal in a position diametrically opposite that previously held by it, in which new position the catcher-arm will be held to catch a bag when the car is moving in the opposite direction.

When a very wide door is used, it may be necessary to employ two slots,  $a$   $a$ , in the shaft to hold the catcher in proper relation to the buffers or cushions upon the shaft, to avoid cutting the shaft away and weakening it by an unnecessarily long slot.

One of the most important advantages derived from the above-described means of securing the catcher-arm to the shaft is, that the catcher-arm may be reversed without shifting, unscrewing, or otherwise manipulating the handle, thus allowing the handle to be firmly grasped to hold the catcher while the arm is placed and secured in the desired position. The catcher-arm is freely swiveled upon the body, and the weight of the arm need not be overcome to unlock it from the body or its keeper before it can be turned upon its bearings to change its position.

I claim as my invention and desire to secure by Letters Patent—

1. In a mail-bag catcher, the combination,



with the supporting-shaft, of the body, the shoe, and the reversible catcher-arm pivotally connected to the body, and a detachable locking-bolt independent of said pivotal connection, to admit of the movement of the shoe upon the body without displacement of their adjacent bearing-surfaces, substantially as described.

2. In a mail-bag catcher, the combination, with the supporting-shaft, of the body, the handle secured to and oscillating with the body, the shoe and catcher-arm pivotally connected to the body independently of the handle, and a separable locking device between the body and the shoe, substantially as described.

3. In a mail-bag catcher, the combination, with the shaft supported in bearings upon the door-frame of a car, of a sleeve secured to the shaft to oscillate therewith and slide longitudinally thereon, and a reversible catcher-arm pivoted to the sleeve to move therewith when operating in either direction independently of the supporting-shaft.

4. In a mail-bag catcher, the combination of the oscillating shaft provided with a longitudinal slot or channel, cushions arranged at either end thereof, a sleeve or body to which the catcher-arm is secured, fitted to the shaft

to slide longitudinally thereon, and a pin or bolt to pass through the sleeve and into or through the slot, to limit the longitudinal movement of the catcher in either direction, substantially as described.

5. In a mail-bag catcher, the combination, with the shaft and body, of the shoe provided with a reversible catcher-arm journaled to turn upon the body, and formed with dove-tailed ends and bearing-surfaces to interlock with correspondingly-dovetailed ends and surfaces upon the body, and a pin or set-screw for holding the parts together, substantially as described.

6. In a mail-bag catcher, the combination, with the shaft, of the sleeve or body secured to slide thereon, provided with a handle and holes bored diametrically through the ends thereof, a shoe provided with a catcher-arm journaled to revolve upon the body, and a pin to pass through the shaft and either end of the body for locking the catcher in either position.

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

A. CRAWFORD CROOK.

Witnesses:

P. D. FINNEGAN,  
W. J. BALLARD.