

(No Model.)

M. POLLITZER.

KNIFE CARRYING CRANK LEG FOR COTTON GINS.

No. 313,685.

Patented Mar. 10, 1885.

Fig. 1.

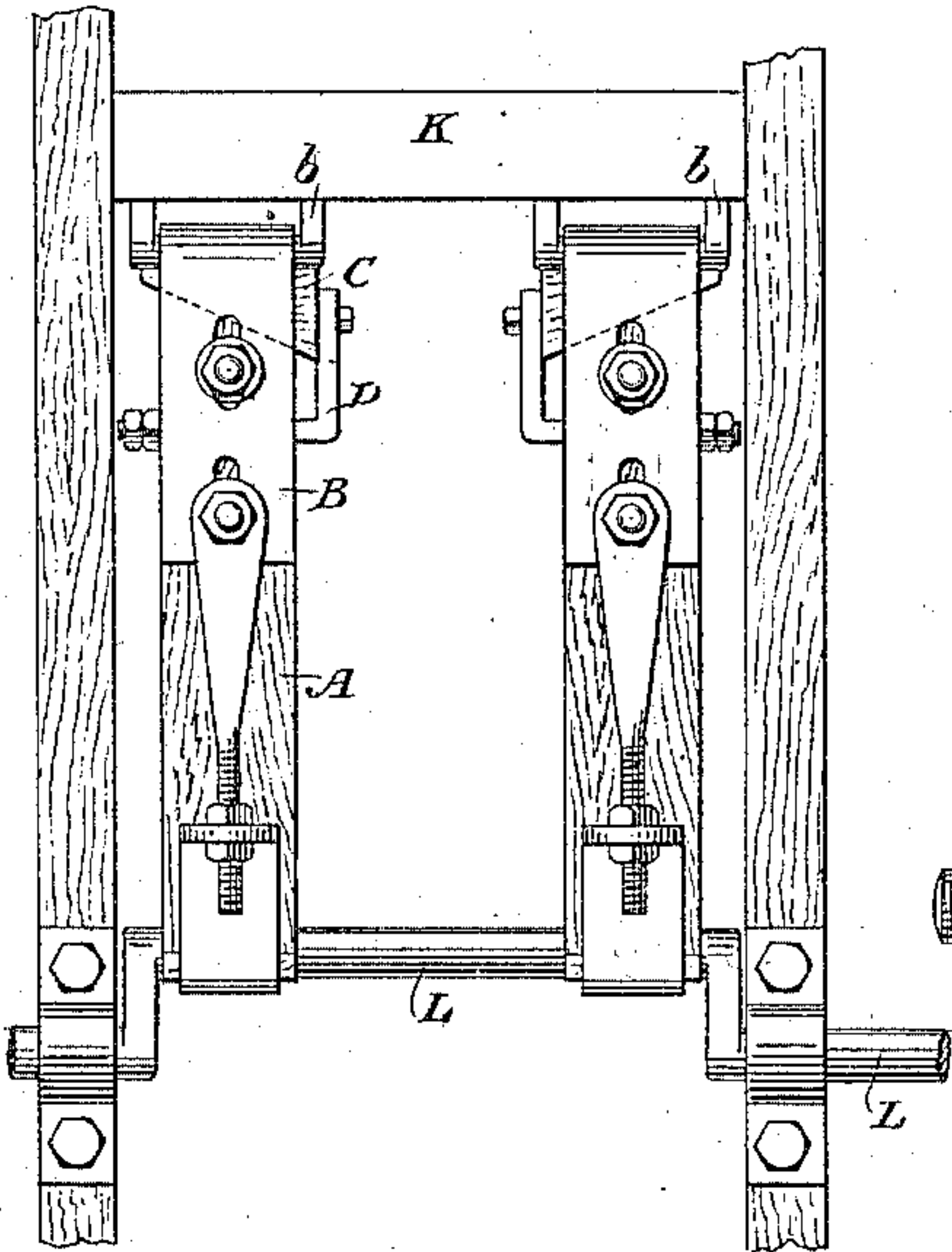


Fig. 2.

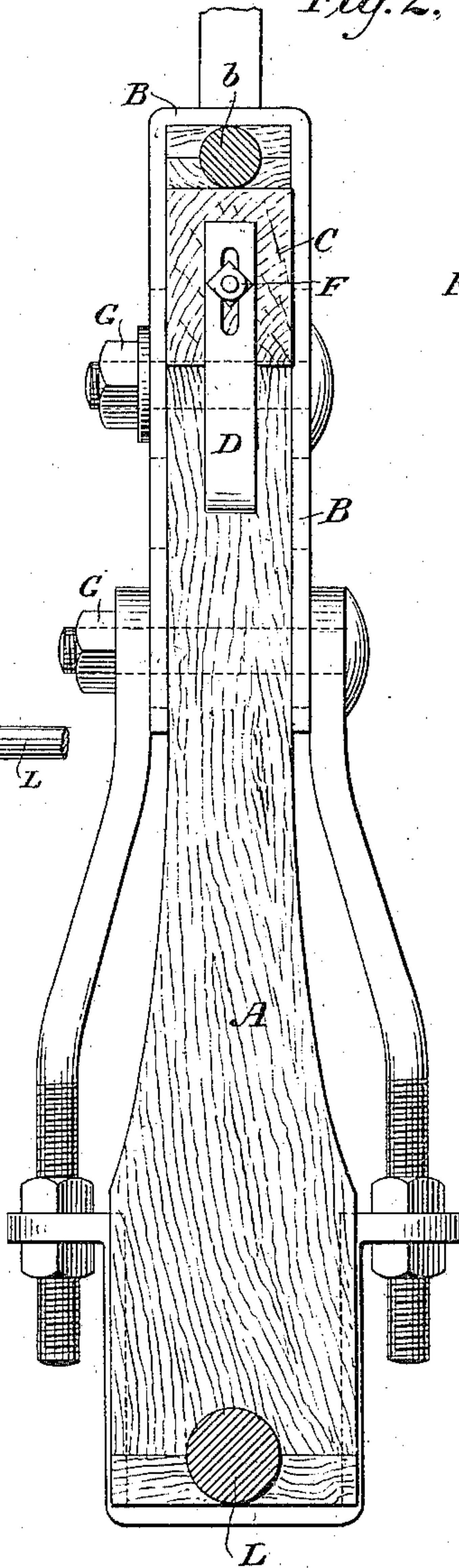
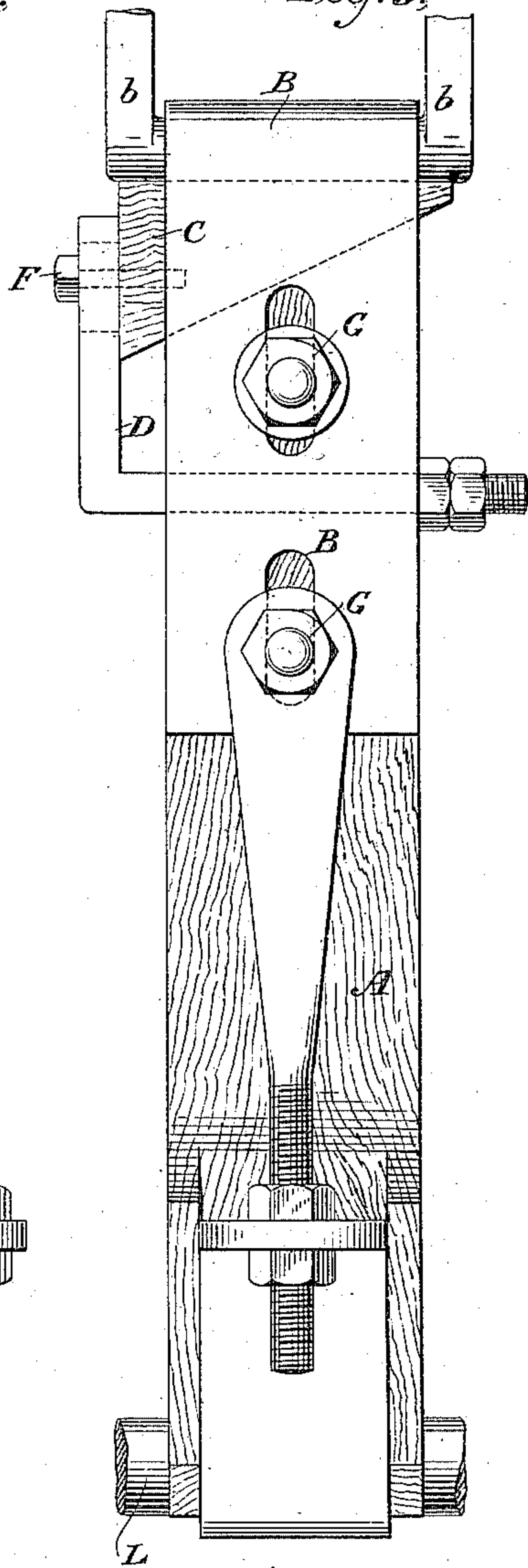


Fig. 3.



Witnesses

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MORITZ POLLITZER, OF BEAUFORT, SOUTH CAROLINA.

KNIFE-CARRYING CRANK-LEG FOR COTTON-GINS.

SPECIFICATION forming part of Letters Patent No. 313,685, dated March 10, 1885.

Application filed November 20, 1834. (No model.)

To all whom it may concern:

Be it known that I, MORITZ POLLITZER, a citizen of the United States, residing in Beaufort, in the county of Beaufort, State of South Carolina, have invented a certain new and useful Improvement in Knife-Carrying Crank-Legs for Cotton-Gins, of which I declare the following to be a full, clear, and exact description, so that any person skilled in the art or science to which it appertains can make, construct, and use the same, reference being had to the accompanying drawings, which form part of this specification, and to the letters and figures of reference thereon.

The invention relates to cotton-ginning machinery in which both a fixed and a reciprocating knife are employed.

The object of the invention is to provide means for carrying the movable knife, which shall make the position of the knife in the line of its reciprocation readily adjustable, and thus make the whole cotton-gin readily capable of adaptation to gin cotton of any length of staple.

The invention consists of the devices hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a diagram illustrating the connection of the different parts of the knife-carrying mechanism. Fig. 2 is a side view, and Fig. 3 a front view, of a knife-carrying crank-leg embodying my invention.

Like letters of reference in the several figures indicate like parts.

K is the movable knife reciprocating in suitable guides.

A is the shaft of the knife-carrying crank-leg. It may be constructed in any suitable way to secure strength and lightness, and of any suitable material. It receives its motion from the crank-shaft L below.

B is the cap or extension of the shaft A, securely bolted to the shaft A, preferably by means of bolts G G, although any suitable means may be employed to securely fasten the shaft and its extension together so that they will act as one piece during the operation of the machine. This means of securing the shaft and cap together must, however, be such that the cap can, when it is desired, be loosened from and moved up or down on the shaft

and securely fastened again in the new position, and the cap or extension and shaft must be so constructed with reference to each other that the cap, when unsecured, can be slid up or down along the length of the shaft, thereby changing the effective length of the crank-leg as a whole and so the position of the reciprocating knife in the line of its reciprocation with reference to the fixed knife.

The cap is in any suitable way secured to the movable knife so that the cap carries the knife. This connection, in the form of the device shown in the drawings, is a hinge-connection, to permit of the crank motion of the crank-leg, the bolt *b* being rigidly secured to the knife and passing loosely through a hole cut through the top of the cap. The particular form of cap shown in the drawings, to which, however, I do not wish to limit myself, consists of angle-iron covering the top and two sides of the crank-leg and extending part way down the two sides of the shaft A, and a wooden block driven under the top of the cap, and large enough to furnish the necessary bearing for the bolt *b*. The large bolts G G pass through the cap on both sides and through the body of the shaft.

The shaft A is preferably made of wood with iron sheathing and bracing on its lower part, as shown in the drawings.

C is a wedge-shaped piece of wood or iron, preferably of a width equal to the thickness of the shaft A. The upper end of the shaft A is cut off at the same angle as the angle of the wedge-piece C, so that when one side of the wedge is placed upon it the upper side of the wedge will be horizontal. This wedge is interposed in the crank-leg between the sloping upper edge of the shaft A and the under edge of the upper part of the cap B, and by its lateral adjustment it determines the distance to which the cap B shall be extended whenever the nuts G G are sufficiently loosened. The sides of the cap B are of course slotted, as shown, to allow of this play of the parts when the nuts are loosened.

I do not wish to confine myself to any particular means for adjusting this wedge C as to its lateral position; but I prefer the means shown in the drawings, in which the adjustment is secured by an L-shaped bolt, D, pass-

ing through the shaft A, and adapted to be forced in or out by means of nuts, as shown, the vertical part of the bolt bearing against the broad end of the wedge-piece C, and so
 5 holding it in place, pressing it farther into its seat or letting it move farther out, with the effect of raising or lowering the cap B on the shaft.

In connection with the use of the L-bolt D, I prefer to use a bolt, F, connecting the wedge C with the bolt D in such a way that the wedge will follow every horizontal movement of the bolt D, while at the same time the bolt F will rise or fall with the wedge, moving
 15 readily up or down in a slot in the bolt D.

The operation of my improved device is as follows:

Whenever it is desired to change the position of reciprocation of the movable knife, the nuts G G are loosened, the bolt D is by means of the nuts moved in or out for the proper distance, thereby moving the wedge and so sliding the cap B along the shaft A, and the nuts G G are then tightened again in
 25 the new position, and the machine is ready for the cotton of the new length of staple. Of course, if the knife is so long as to require more than two supports, the crank-leg described may be repeated as often as desired; but I do
 30 not limit myself to the use of any particular number of crank-legs to carry the movable knife.

Figure 1 illustrates diagrammatically how my improved crank-leg is employed in the finished machine in connection with the movable knife; but the parts are not shown in their proper proportions as actually used, the length
 35 of the knife and the distance apart of the

crank-legs from each other being of course very much greater in practice. The figure 40 merely illustrates their connection.

I am aware that gibs and adjustable keys have been used to tighten bearings, and do not claim the same.

What I claim as new, and desire to secure 45 by Letters Patent, is—

1. In the knife-carrying crank-leg of a cotton-gin, the combination, with the shaft A and slotted cap B, of an interposed wedge, C, having suitable adjusting devices, whereby the 50 position of the cap on the shaft, and so the effective length of the crank-leg, is adjusted, substantially as and for the purposes set forth.

2. In the knife-carrying crank-leg of a cotton gin, the combination, with the shaft A and slotted cap B, of an interposed wedge, C, and adjusting-bolt D, whereby the position of the cap on the shaft, and so the effective length of the crank-leg, is adjusted, substantially as 60 and for the purposes set forth.

3. In the knife-carrying crank-leg of a cotton-gin, the combination, with the shaft A and cap B, of an interposed wedge, C, and a slotted adjusting-bolt, D, and connecting-bolt F, substantially as and for the purposes set forth. 65

4. In the knife-carrying crank-leg of a cotton-gin, the combination, with the shaft A and slotted cap B, of an interposed adjustable wedge, C, having suitable adjusting devices, and securing-bolts G G, substantially as and 70 for the purposes set forth.

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Witnesses:

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