(No Model.)

B. S. REDDING.

BELT SHIFTER.

No. 509,604. Patented Nov. 28, 1893.

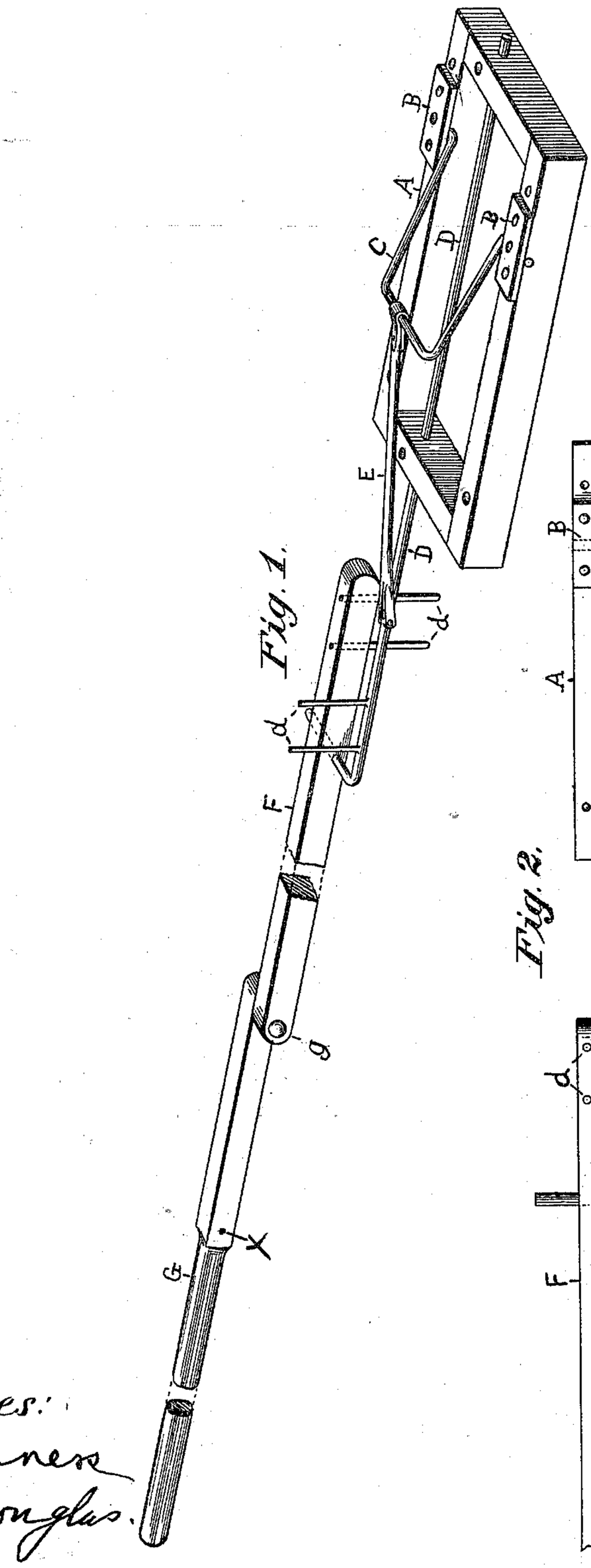

Fig. 1.

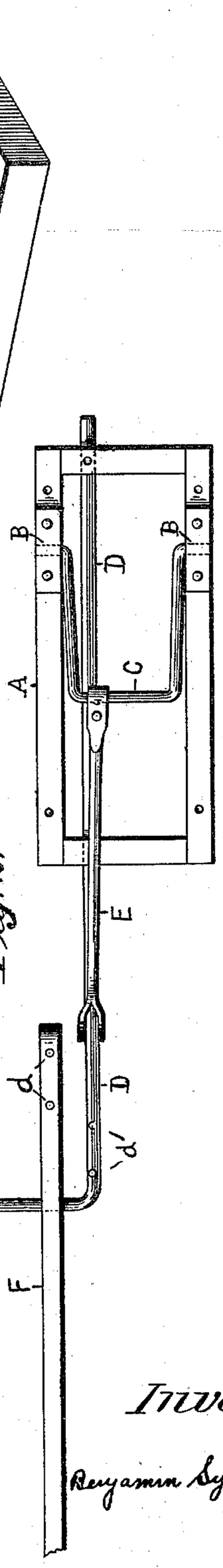

Fig. 2.

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BENJAMIN SYD REDDING, OF GREENSBOROUGH, ALABAMA.

BELT-SHIFTER.

SPECIFICATION forming part of Letters Patent No. 509,604, dated November 28, 1893.

Application filed July 28, 1893. Serial No. 481,786. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN SYD REDDING, of Greensborough, in the county of Hale and State of Alabama, have invented a new and useful improvement in belt-shifters for use on steam cotton-presses and other purposes where an automatic shifting of the belt may be desired, the following being a full and exact description thereof.

My invention relates to an improvement in belt shifters and has for its object to provide an exceedingly simple, durable and economical shifter capable of automatic shifting, and wherein the shifter may be placed in such a position as to shift the belt automatically on the coming up or going down of the block which presses the bale known as the follower-block.

The invention consists in the novel construction and combination of the several parts as will be hereinafter set forth in the claim.

Figure 1 is a perspective of the shifter showing all of its parts. Fig. 2 is a plan view of the shifter showing the slide F. and guide rod D connected together, also showing the openings in the slide F and guide rod D, for the staple *d*.

To construct the device first make a frame A of wood, say two by three inch scantling, and make the frame A twenty-two inches long and ten inches wide. A crank C, is made to work near one end of the frame A. A lever E is so fastened to this crank C. as to work in it while the other end of the lever E is so fastened as to work on a guide rod D which slides backward and forward through openings in each end of the frame A. The lever E is moved by the rising or descending of the crank C. There is attached to the guide rod D at some point beyond its juncture, a slide F. At one end of the slide F in the guide rod D a guide staple is fixed through which passes the belt connecting the power with the press shaft. The slide F on the guide rod D has also a lever G pivoted to end *g* of slide F or the guide rod D, which lever is perpendicularly pivoted at X to the press frame or at some suitable point as may be desired which lever may be pulled when it is desired to throw the belt running in the guide staple *d* from the loose pulley to the tight pulley to start the press. This pulling of the lever G also sets the shifter in a position to work automatically. The frame of the shifter is placed on the sill of the press when it is desired to shift the belt in the descent of the follow-block. If desired to shift the belt in the ascent of the follow-block, the shifter should be reversed, turned bottom side upward and be placed at some convenient place so that the iron on one end of the follow-block will strike the crank of the shifter thus moving the crank and lever attached downward and outward and pushing the belt which is working in the guide staple *d*, which staple is fixed on the guide rod D or the slide F, onto the other pulley which is loose and so stopping the press at once. By thus automatically stopping the press at a given point all danger of breaking it is avoided as well as all attention to shifting. If it is desired to shift the belt both on the ascent and descent of the follow block, two of these devices can be used and in such a position as the iron on one end of the follow block will strike the crank of shifter thus causing it to work automatically. This shifter can be used on any press where the belts are shifted from one pulley to another and can be used in machine shops where the belts are shifted from one pulley to another. It is simple in construction, durable and can be made at a low price. The guide rod D and lever E and crank C. should be made of three-fourths inch wrought iron. The crank should be six inches wide and nine inches long from center of box B. to center of crank C. The lever E should be twenty-two inches long and work on the crank C by means of a collar which is to have a small bolt to tighten or loosen the collar. A small piece of iron is bolted to one end of follow block of the press so as to strike the crank of shifter causing it to work automatically.

Now I desire to secure by Letters Patent—

A belt shifting device consisting of a frame, a crank, and guide rod therein, a slide connected to the guide rod, a guide staple on the slide, and a lever for moving the slide in one direction, the crank being adapted to engage a reciprocating part to move the slide in the other direction, substantially as described.

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