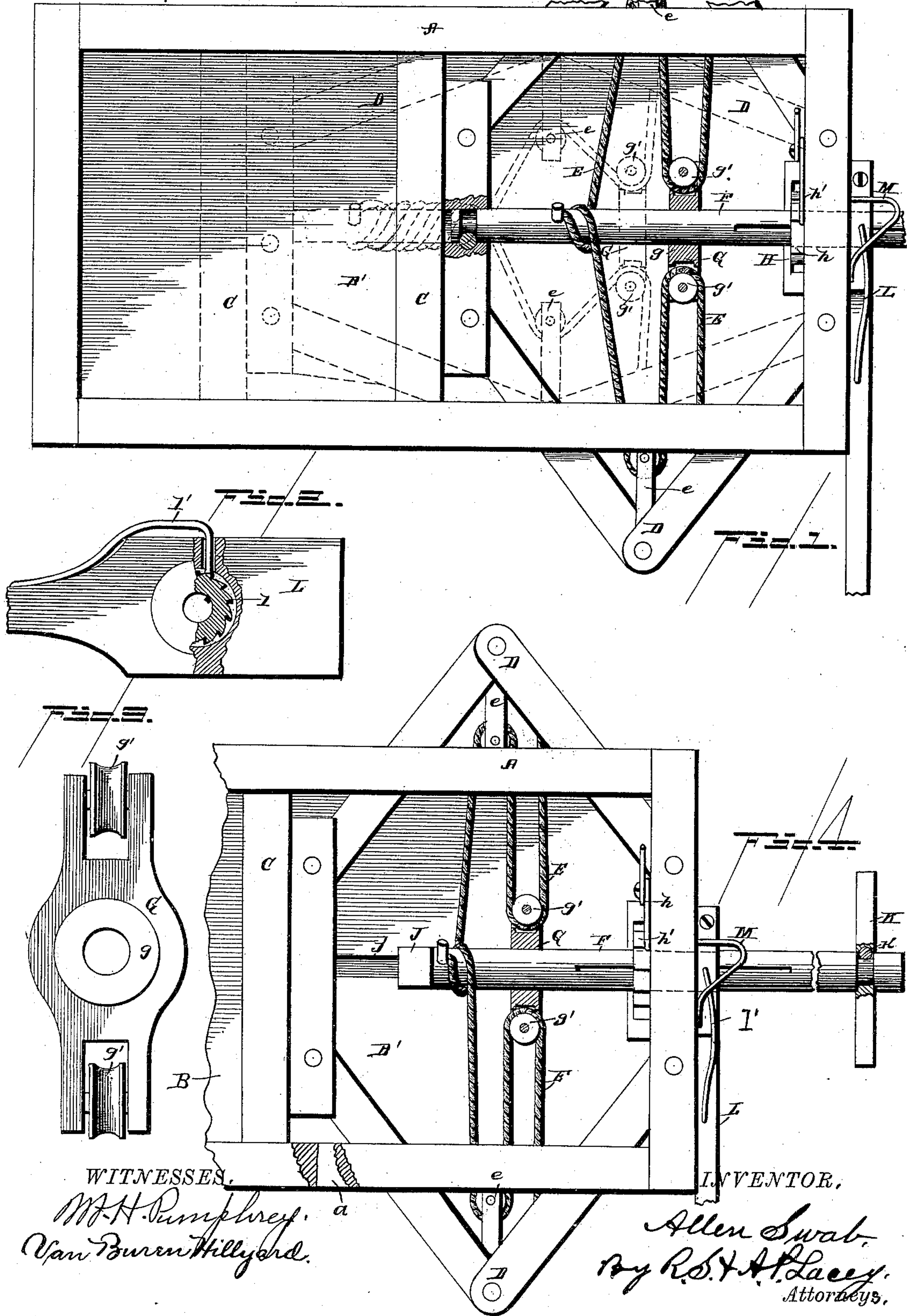


(No Model.)

A. SWAB.  
BALING PRESS.

No. 392,081.

Patented Oct. 30, 1888.





# UNITED STATES PATENT OFFICE.

ALLEN SWAB, OF ELIZABETHVILLE, PENNSYLVANIA.

## BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 392,081, dated October 30, 1888.

Application filed June 26, 1888. Serial No. 278,239. (No model.)

*To all whom it may concern:*

Be it known that I, ALLEN SWAB, a citizen of the United States, residing at Elizabethville, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Baling-Presses; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to presses, and is designed, chiefly, for baling hay and cotton, and has for its object the provision of simple, compact, and efficient means for operating the follower. The follower has a toggle-joint connection with the frame or the sides of the bale-box, and the rod or shaft that passes through and obtains a bearing in the frame is free to move longitudinally in its bearings to adapt itself to the direction of the strain of the rope or cable which is wound thereon when advancing the follower and have the strain in a direct line from the operating lever or levers and the said shaft or rod.

The improvement further consists in the peculiar construction and combination of the parts, which hereinafter will be more fully described and claimed, and shown in the annexed drawings, in which—

Figure 1 is a plan view, parts being broken away, of a press embodying my invention, showing the operation of the follower-actuating devices; Fig. 2, a plan view, parts being broken away, of the front end of the ratchet hand-lever; Fig. 3, a plan view of the pulley-block, showing the rod or shaft in position; and Fig. 4, a plan view, parts being broken away, of a modification.

The bale-box is composed of the sides A, the top B, and the bottom B'. The follower C is connected with the end B of the bale-box by the toggle-levers D, as shown. The levers when distended pass through slots *a* in the sides A and are prevented from vertical movement when the power is applied to bring the joints together. The cable E passes through the rod or shaft F, thence over pulleys in the pulley-blocks *e*, which are connected to the

toggle-levers at their articulating-points, over pulleys in the pulley-block G, and back to the toggle-levers. The shaft F passes through the disk H, which is journaled in the end of the box or frame, and is adapted to work through the disk but turn with it, being held thereto preferably by a feather-and-spline connection. The disk H is provided with a ratchet, *h*, which is engaged by the pawl *h'* to hold the shaft or rod against retrograde movement when the follower is advanced. The pulley-block G is provided with a disk, *g*, in its center, through which the shaft F passes, and with pulleys *g'* at its ends, over which the cable or rope E passes.

The follower is operated by rotating the shaft F, which winds up the cable and brings the toggle-levers together in the well-known manner. The shaft F moves to accommodate itself to the direction of the strain which is in a direct line, or practically so, from the articulating-points of the said toggle-levers to the said shaft. The inner end of the shaft may be connected with the follower and move therewith, or it may be journaled in a cross-bar, J, which has its ends fitted in a groove, *j*, in the side of the bale-box, as shown in Fig. 4. The outer end of the shaft will be provided with the handle K, which is held thereto by the pin *k*, passing through the handle and fitting in a groove on the said shaft. When the bale is formed and bound, the follower is drawn back by pulling on the handle K. The shaft is rotated by the hand-lever L, which has a ratchet-disk, *l*, in its head or outer end, through which the shaft passes. In the backward movement of the lever the pawl *l'* rides the ratchet-teeth of the disk *l*, and in its forward movement the pawl engages with the said ratchet-teeth and effects a rotation of the shaft. The cam M, secured to the end of the frame, effects an outward movement of the lever on the shaft and prevents the said lever from binding against the end of the bale-box.

I employ, preferably, only one cam M; but I can have two or more when desired.

The operation of the cam M will be understood when it is remembered that the lever L normally bears against the end of the frame, and that when the lever is moved forward the shaft F, on which it is mounted, moves in caus-



ing the lever to bear with greater pressure on the end of the frame. The cam effects an outward movement of the lever and prevents it crowding against the end of the frame.

5 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a press, the combination of the follower, the toggle-levers, the rotatory and end-  
10 wise-movable shaft, the pulleys supported at the joints of the toggle-levers, the block G, loosely mounted on the said shaft and having pulleys at each end, and the cables connected at their inner ends to the said shaft and at  
15 their outer ends to the toggle-levers, and passing over the pulleys at the joints of the said levers and over the pulleys on the said block G, substantially as described.

2. The combination of the bale-box, the fol-  
20 lower, the toggle-levers between the follower and the end of the bale-box, the rotatory and endwise-movable shaft, the cables connecting the levers with the said shaft, the disk H, having ratchet-teeth, the pawl adapted to engage  
25 with the ratchet-teeth, the shaft F, working loosely through the said disk and keyed to revolve therewith, and the lever for rotating the

disk, substantially as and for the purpose described.

3. In a press, the combination of the bale- 30  
box, the follower, the rotatory and endwise-movable shaft for operating the follower, the lever mounted on the said shaft and adapted to operate it, and the cam M, arranged to move the said lever on the shaft, substantially 35  
as described, for the purpose specified.

4. The combination of the bale-box, the fol-  
lower, the rotatory and endwise-movable shaft, the toggle-levers, the pulley-blocks e, arranged at the joints of the levers, the block G, hav- 40  
ing pulleys g' at each end and having a central disk which is mounted on the said shaft, and the cable secured to the said shaft and having its ends passed around the pulleys g' and the pulleys in the blocks e, and having its 45  
ends secured to the said toggle-levers, substantially described.

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

ALLEN SWAB.

Witnesses:

WILLIAM LEHMAN,  
JOHN G. SWAB.