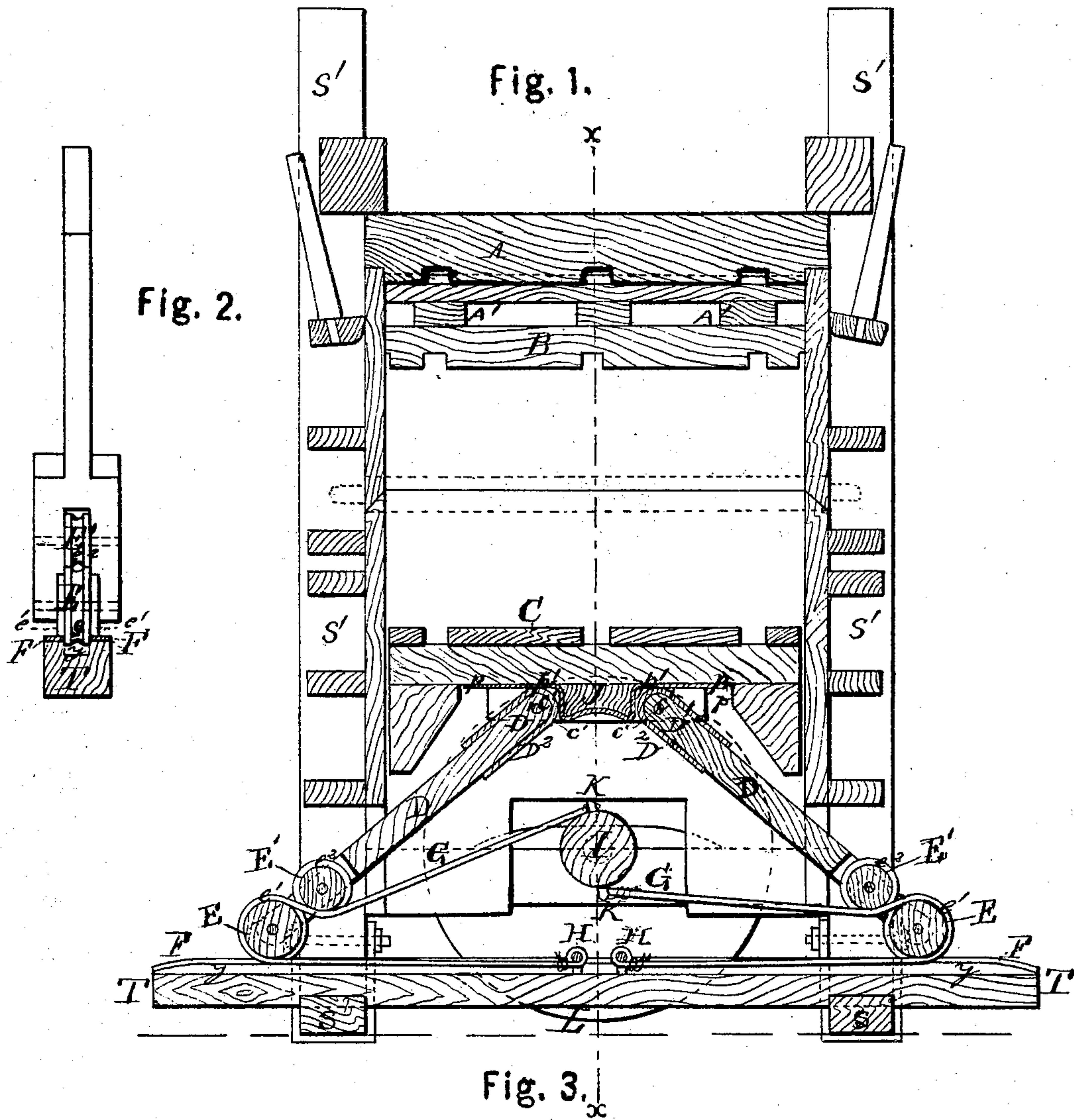


P. A. SHEARER.

Hay and Cotton-Presses.

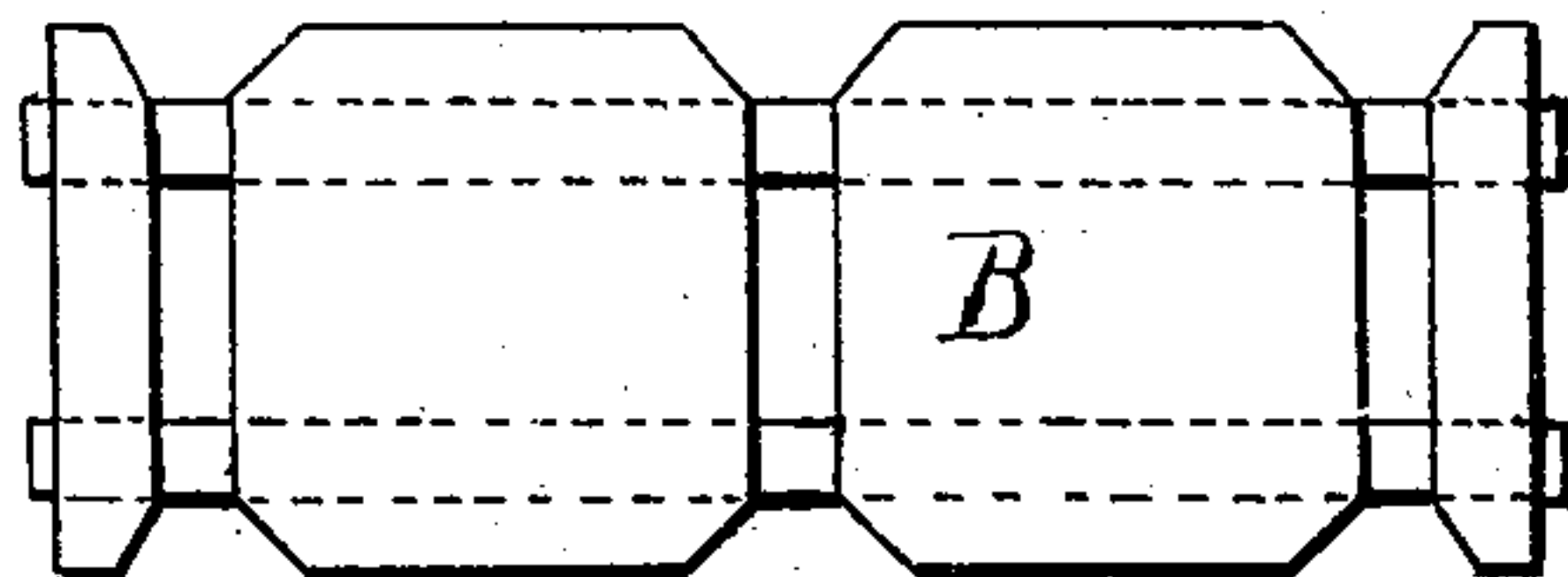
No. 135,291.

Patented Jan. 28, 1873.



WITNESSES.

W. A. Dangerfield  
J. A. Lowndes



INVENTOR.

Peter A. Shearer  
by R. A. P. Lacey  
attys



# UNITED STATES PATENT OFFICE.

PETER A. SHEARER, OF MORRISTOWN, TENNESSEE.

## IMPROVEMENT IN HAY AND COTTON PRESSES.

Specification forming part of Letters Patent No. 135,291, dated January 28, 1873.

*To all whom it may concern:*

Be it known that I, PETER A. SHEARER, of Morristown, in the county of Hamblen and State of Tennessee, have invented certain new and useful Improvements in Hay and Cotton Presses; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements on that class of presses employed in baling hay, cotton, and other similar substances, in which the platen is operated by means of levers arranged on the toggle principle; and consists in a modification of the construction of the arms or levers for operating the platen; and in the mode of connecting the ends of such levers thereto; and, also, in mode of attaching the rope actuating such levers to the levers and the driving-shaft; and in the employment of a false block for the purpose of reducing the size of the bales. But that my invention may be fully understood, I will proceed to describe the same by aid of the accompanying drawing.

### *Description of the Drawing.*

Figure 1 represents a section of a press of the ordinary construction with my improvement applied thereto. Figs. 2 and 3 represent detail views of the apparatus.

The apparatus is constructed with four corner-posts, *S'*, the lower ends of which are mortised into a sill, *S*. The ends of the posts *S'* are more securely retained in position by means of iron plates passing under the sill *S* and extending up the sides of the posts, to which they are secured by screw-bolts. *T* is a beam, resting on and secured to the center of the sill *S*, on the upper side of which two iron-strapped ways or tracks, *F*, are formed, having a groove, *y*, between the same. The beam *F* extends beyond the sides of the press a sufficient distance to admit of the working of the levers *D* while operating the platen *C*. *B* represents a false head-block in position in the press under the permanent head-block *A*, the object of which is to reduce the size of the bale

under operation. The platen *C* has a projection, *J*, formed on its under side, around which a plate, *p p*, is bent, so as to form two semicircular sockets for the reception of the ends of the levers *D*. The object of this plate *p p* is to protect the platen *C* from injury by the action of the ends of the levers *D*. The arms or levers *D D* are attached to the platen *C* by pivots *C'*, and work in the semicircular sockets *p'*. The upper ends *D<sup>1</sup>* of the levers *D* are protected by strong iron straps *D<sup>2</sup>*, to prevent the levers from being crushed while exerting pressure on the under side of the platen *C*. *E* is a combined pulley and roller; and *E'* is a friction-pulley, revolving in bearings in the lower ends of the levers *D*. The combined pulley and roller *E* is arranged to travel in the track or way *F*. *I* is the main or driving shaft, receiving motion, by means of the wheel *L*, from a steam-engine or other suitable power. *K K* are staples or loops formed on or affixed to the shaft *I*, for the purpose of receiving one end of the ropes *G*, which are wound upon the main shaft to draw the ends of the levers *D* together when it is desired to exert pressure on the bale contained in the press. The ropes *G* pass round the combined pulleys and rollers *E*, and, between such pulleys and the friction-pulleys *E'*, back along the groove *y* in the beam *T* to the staples *H*, to which their opposite ends are attached.

The beam *T* and the double track *F*, and also one of the levers *D* with its rollers *E* and *E'*, are shown separately at Fig. 2.

The roller *E* is, by preference, formed of cast-iron; and the central portion *e* is grooved, and is formed with two flanges, *e<sup>1</sup> e<sup>1</sup>*, and bearing-surfaces *e<sup>3</sup> e<sup>3</sup>*, which run on the rails *F*, to give steadiness to the levers *D* in their motion. The pulley *E'* is formed with a groove, *e<sup>2</sup>*, corresponding with the groove *e<sup>1</sup>* of the roller *E*, to allow the rope *G* to pass between them and hold the same correctly in position.

The false head-block *B*, shown separately at Fig. 3, may be either formed of one solid piece of wood, or of battens with heavy boards attached, having faces and leaving spaces corresponding with the faces and spaces in the platen *C*. The false head-block *B* may be blocked down to any desired extent by extra filling-pieces *A'*, as represented in Fig. 1, and



by this means the size of the bale can be regulated as required.

The ropes G G are attached to the staples K K at opposite sides of the shaft I; and when such shaft is caused to revolve the ropes G G will be wound upon such shaft, and the levers D will be caused to approach each other, and in so doing will exert pressure on the platen C uniformly against the whole under surface of the material in the box; and, as a consequence, rectangular bales will be formed.

Having thus described my invention, I would have it understood that what I claim, and desire to secure by Letters Patent, is—

1. The combination of the plate *p p*, levers D D, combined rollers E E, pulleys E' E', groove *y*, double track F, ropes G G, shaft I, and the false head-block B, all arranged and operating substantially as shown and described.

2. The false head-block B, arranged and operating substantially as described.

3. The roller-pulleys E, in combination with the guide-pulleys E', arranged and operating as and for the purposes described.

4. The combination of the iron plates *p p* with the levers D D, substantially as described.

5. The combination of iron plates *p p*, levers D D, roller-pulleys E E, guide-pulleys E' E', double track F, and groove *y*, substantially as shown and described.

6. The ropes G G attached to staples K on the shaft I, and passing over pulleys E E and between guide-pulleys E' E' in grooves *y* toward and secured to staples H, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 31st day of August, 1872.

PETER A. SHEARER.

Witnesses:

A. H. ARNOT,  
D. W. C. DAVIS.