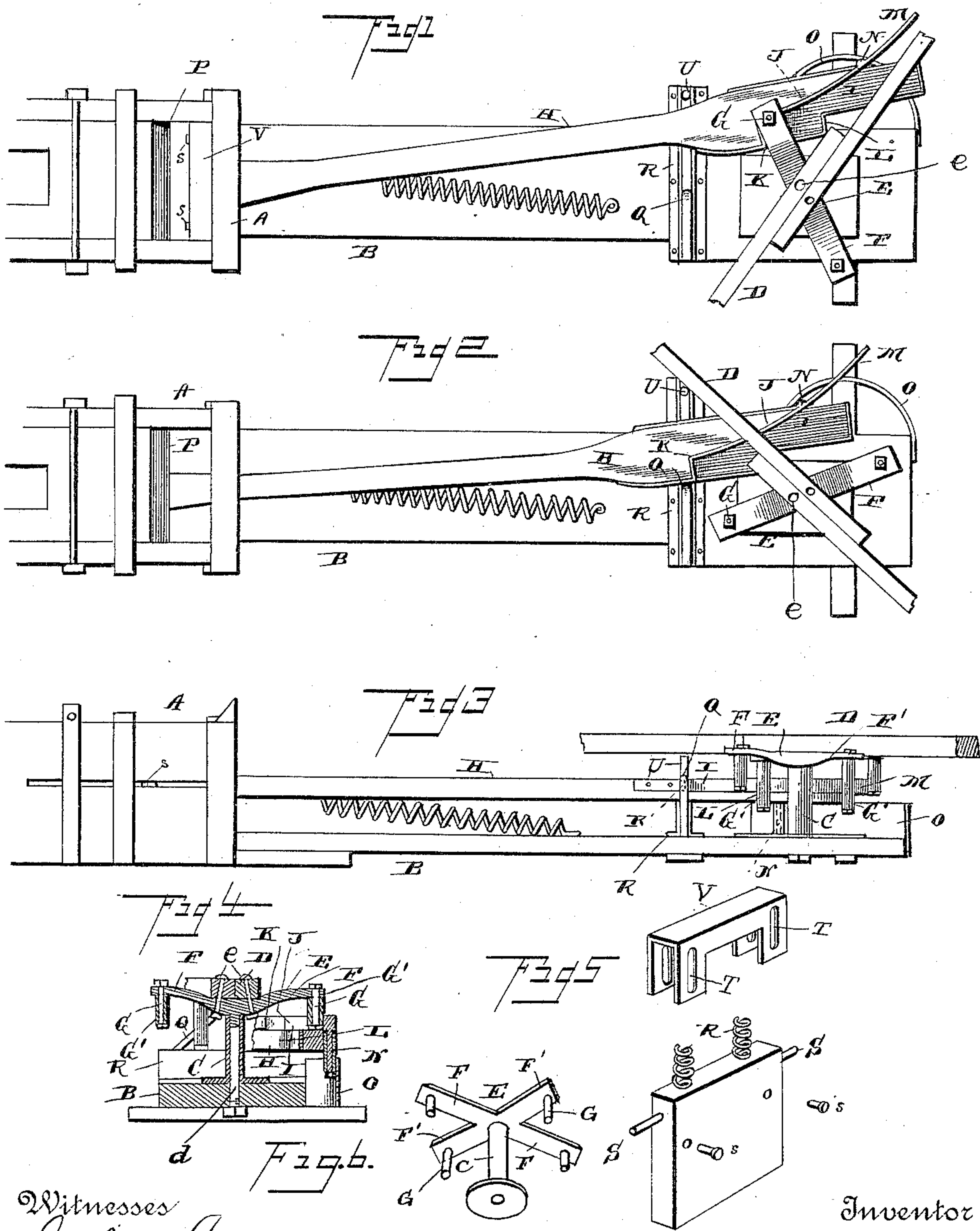


(No Model.)

J. E. SANDERS.
HAY PRESS.

No. 436,725.

Patented Sept. 16, 1890.



Witnesses

John Linnie
W. B. Bishop

Inventor

J. E. Sanders

By his Attorneys

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UNITED STATES PATENT OFFICE.

JAMES EWING SANDERS, OF DALTON, GEORGIA, ASSIGNOR TO THE GEORGIA HAY PRESS COMPANY, OF SAME PLACE.

HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 436,725, dated September 16, 1890.

Application filed October 30, 1889. Serial No. 328,711. (No model.)

To all whom it may concern:

Be it known that I, JAMES EWING SANDERS, a citizen of the United States, residing at Dalton, in the county of Whitfield and State of Georgia, have invented a new and useful Hay-Press, of which the following is a specification.

My invention relates to improvements in hay-presses; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view of my improved press. Fig. 2 is a similar view showing the parts in a different position. Fig. 3 is a side view. Fig. 4 is a transverse section. Fig. 5 is a detail view of the plunger, and Fig. 6 is an under side perspective view of the X-shaped casting detached.

I construct the frame A of the press in the usual or any preferred manner, and at the outer end of the extension B thereof I erect a tubular king-bolt C, to which I pivot the sweep or operating-lever D in the following manner: To the under side of the sweep or operating-lever I secure the X-shaped casting E by bolts e, said casting having the arms F', which lie beneath the sweep D, and the radial arms F, all said arms being provided at their ends with the depending pins G, as clearly shown. These pins are of unequal length, the purpose of which will presently appear, and form journals for the rollers G', as clearly shown, the said rollers being of the same length as their respective journals or pins. Depending from the casting is a central preferably integral bolt d, which passes through the tubular king-bolt C, and thus forms a pivot for the casting, as shown in Fig. 4.

The pitman H is connected to the plunger in the ordinary manner, and is provided at its outer end with the horizontal recess I, the vertical wall of which is shaped to form the inclined portion J and the shoulder K. The lower portion of the pitman is provided with a shoulder L. The faces of the several shoulders are re-enforced by metallic strips, and the metallic strip secured to the upper portion of the pitman is extended beyond the same, so as to present the extended inclined surface M. A pin N is secured to the extended end of the pitman, and projects downward to en-

gage a curved rail or guide O, secured to the end of the frame, as shown. This guide directs the pitman toward the king-bolt, and the lateral movement of the pitman is also limited by the stop U and the shoulder Q on the upper side of a cleat or support R. The pin N is provided with a roller similar to the roller G' to reduce the friction and wear on the guide O.

In the roof of the baling-chamber at the rear edge of the feed-opening I provide the transverse roller P, which is adapted to press the upper portion of the hay into a smooth surface.

On the upper edge of the plunger I mount a cap V, which is normally projected upward by the springs R, arranged under the cap and on the upper edge of the plunger. The cap is held on the plunger S by means of the bolts or pins s, inserted into the plunger and through vertical slots T in the flanges of the cap. This cap yields downwardly to the loose surplus hay which may be between it and the roller P and which tends to choke the machine, and I thereby insure a smooth, even, and uninterrupted action of the plunger.

In practice the hay is fed into the baling-chamber in the usual manner and the sweep then continuously rotated. As the sweep is rotated the casting E will be carried around so as to bring the shorter roller on one of the pins G of the arm F into engagement with the inclined surface J, and finally with the shoulder K of the pitman, and thereby set the pitman in motion. As the sweep continues its movement the roller on the longer pin in the arm F' will be drawn into engagement with the shoulder L, relieving the pressure on the shorter arm, and the pitman consequently forced farther inward. The sweep will be caused to move laterally by the roller on the pin N engaging the guide or rail O, and this lateral motion will be arrested by the shoulder Q. The roller on the longer pin will then slip or roll from the pitman, and the rebound of the plunger will return the pitman to its former position and set the press for a repetition of the former operation.

It will be seen from the foregoing that I have provided a very simple hay-press, in

which a powerful pressure will be applied to the pitman by the expenditure of a slight force, and in which the sweep will be continuously rotated, and thus avoid any stopping of the horses.

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

1. The sweep D, having the X-shaped casting E, provided with pins in the ends of its arms, those in the forward arms in the direction of rotation being shorter than the others, in combination with the pitman H, having the shoulders K and L, engaging the shorter and longer pins, respectively, the pin N in said pitman engaging the curved rail O, and the stops U and Q, limiting the lateral movement of the pitman, as and for the purpose set forth.

2. The pitman H, having the recess I, shaped to form the inclined portion J and shoulder K, and strip secured to the pitman adjacent to the shoulder and re-enforcing the same, and extended outward so as to present the extended inclined surface M, the shoulder L on the pitman beyond the shoulder K, the curved rail O, the pin N on the pitman to engage the curved rail, and the sweep having the casting E, provided with radial arms F and F', having the series of depending pins of unequal length, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES EWING SANDERS.

Witnesses:

WILLIAM H. KIRK,
W. S. SANDERS.