No. 668,129.

Patented Feb. 12, 1901.

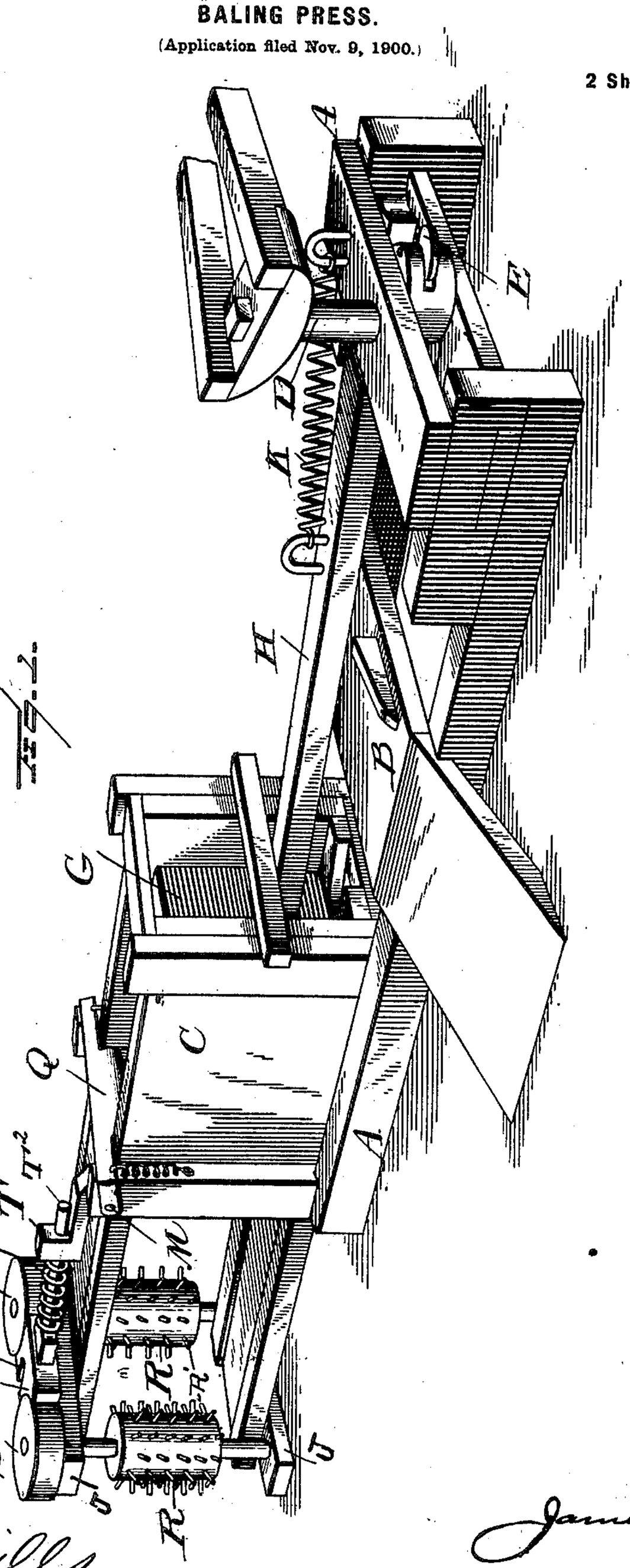
J. KERNS.

BALING PRESS.

(Application filed Nov. 9, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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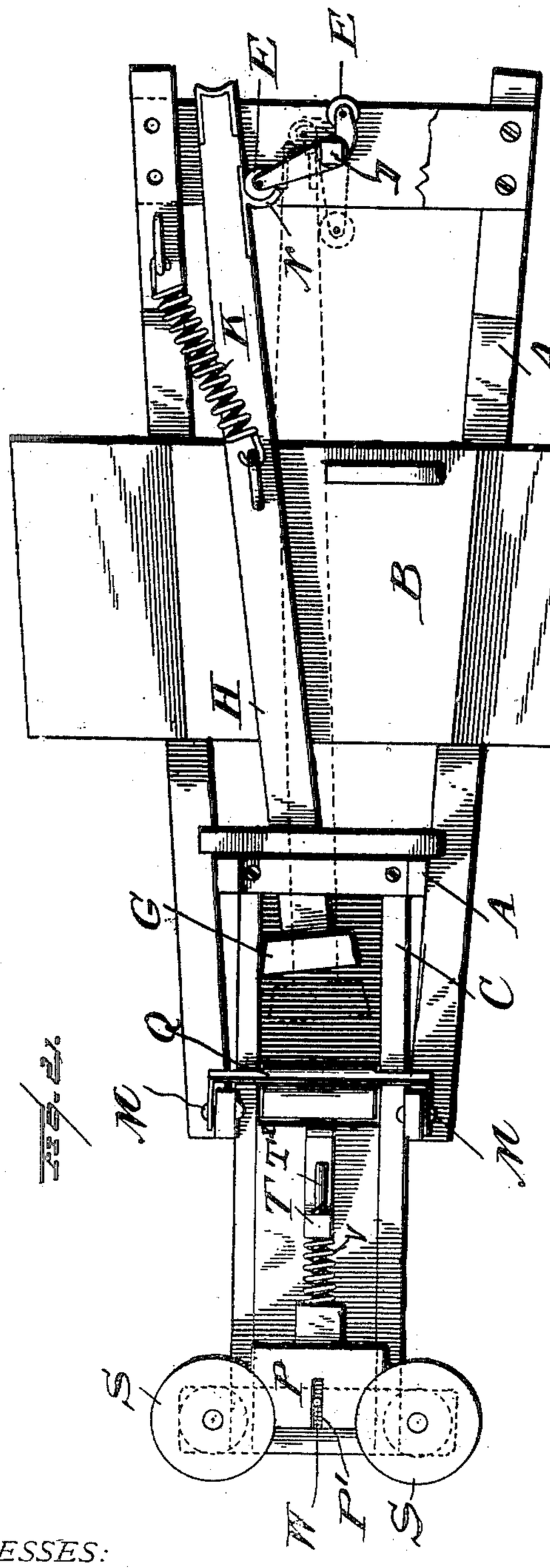

FIG. 2.

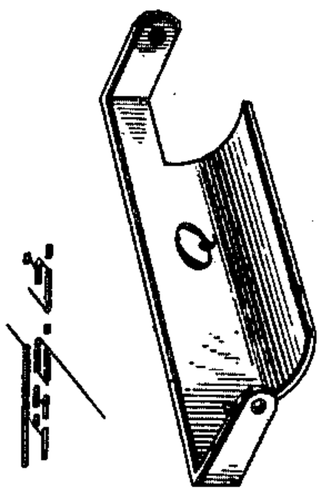

FIG. 3.

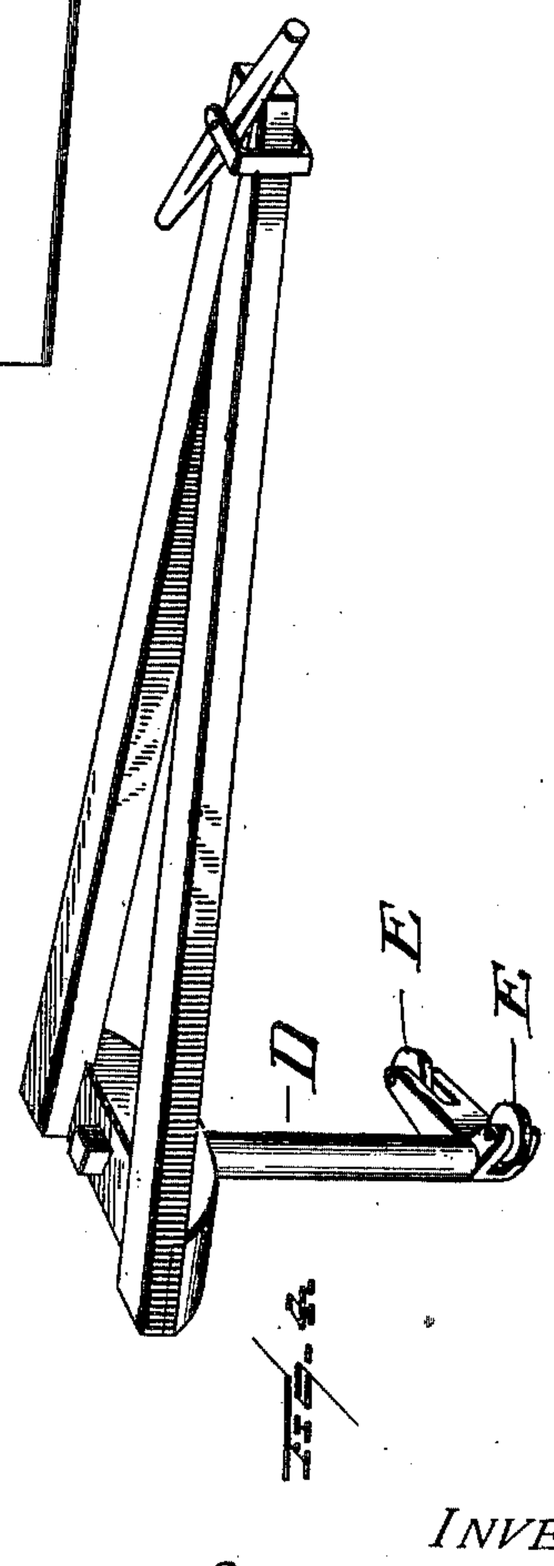

FIG. 4.

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UNITED STATES PATENT OFFICE.

JAMES KERNS, OF DEFIANCE, OHIO, ASSIGNOR TO THE BEERY MANUFACTURING COMPANY, OF UPPER SANDUSKY, OHIO.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 668,129, dated February 12, 1901.

Application filed November 9, 1900. Serial No. 35,967. (No model.)

To all whom it may concern:

Be it known that I, JAMES KERNS, a citizen of the United States, residing at Defiance, in the county of Defiance and State of Ohio, 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 new and useful improvements in hay-presses, and especially to improved means for actuating the rebounding plunger and of applying the greatest amount of leverage at the latter end of the throw of the plunger, where needed.

Another feature of the invention resides in the provision of a folding and bale-retaining member, which is located in the path of the plunger, and of the provision of means for applying tension to the bales by passing the bales between vertically-disposed rollers as the bale is being formed, thus insuring an evenness to its weight while being pressed.

To these ends and to such others as the invention may pertain the same consists, further, in the novel construction, combination, and adaptation of parts, as will be hereinafter more fully described, and then specifically defined in the appended claims.

My invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings—

Figure 1 is a perspective view of my hay-press. Fig. 2 is a top plan view with parts removed to better illustrate the invention. Fig. 3 is a detail view of the folder and bale-retainer. Fig. 4 is a perspective view of the sweep and driving-post with its driving-arms.

Reference now being had to the details of the drawings by letter, A designates the frame or bed of the press, having a platform B and a press-box C. The rotary post D is suitably journaled in cross-pieces of the frame and has secured to rotate therewith an obtuse-angled plunger-driving member, and at each end of said member is journaled an antifriction-roller E. This member thus mounted constitutes two driving-arms of different lengths, the longer of which is designed to drive the plunger during the first steps of the pressing of the bale, while when it is desired a greater leverage be utilized in finishing the bale or during the latter part of the throw of the plunger the short arm comes into play.

The plunger G has a plunger-beam H secured thereto, and a spring K is utilized to return the plunger to its starting position after being driven forward. Near the free end of said plunger-beam is a curved lug or projection N, against which the antifriction-roller carried by the longer arm of said member strikes to drive the plunger forward, and after said long arm drives the plunger as far as it can the antifriction-roller at the end of the short arm of said member will contact with the end of the plunger-beam, driving the latter still farther, and this arm being shorter than the other arm will increase the leverage where most needed in applying a large amount of power to the plunger as it is driven and against the bale. After the short arm has driven the bale to its forward limit the spring will return the plunger to its starting position.

Mounted on pins M on the walls of the press-box is what I term a "folding and bale-retaining device" Q, which has its contracted ends bent at right angles, by which it is journaled on said pins, and the middle portion of said device is curved, as shown, and extends from wall to wall across the press. The lower free swinging end of said folding and retaining device is located adjacent to the upper edge of the plunger and is adapted to fold in the ends of the hay of the bale as the plunger is driven forward, and to serve as a bale-retaining means when the plunger is withdrawn.

In the cross-pieces J at the forward end of the press-box are mounted the tension-rollers R, the spindles of which pass through said cross-pieces and have frictional wheels S secured to their upper ends. Mounted on the top of the press is a lug T, to which is secured by means of a pin the rear end of the shank portion of the plate P, the free end of which plate is concaved out at its ends and is designed to be held frictionally against said

friction-wheels, whereby the latter are prevented from rotating backward. The front edge of said plate is recessed, as at P′, and a pin W, secured to the top of the press, rests in said recess. By this roller mechanism the bale of hay or other material is given an even resistance as it passes between the rollers and causes the bale to pack even. The stem of the plate (illustrated by letter T^2) has a sliding movement through an aperture in said lug T, and a spring V is employed to throw said plate frictionally against the rollers S, while said plate is guided by the pin W. In Fig. 1 it will be observed that the rollers have pins R′ about their circumferences, whereby the bale is engaged as it passes between said rollers. As the bale is fed forward by the successive strokes of the plunger said bale is prevented from a backward movement by reason of the block or plate T engaging the friction-wheels and holding same from a reverse movement.

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

In combination with the press-box, vertical rollers mounted one on each side of the press, friction-rollers mounted at the upper ends of the spindles carrying said rollers, a block having concaved ends engaging said friction-rollers, a lug T on which said block is mounted, and a guide-pin secured to the top of the press and located in a recess in said block, as set forth.

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

JAMES KERNS.

Witnesses:
R. W. WORTMAN,
WM. BOYER.