

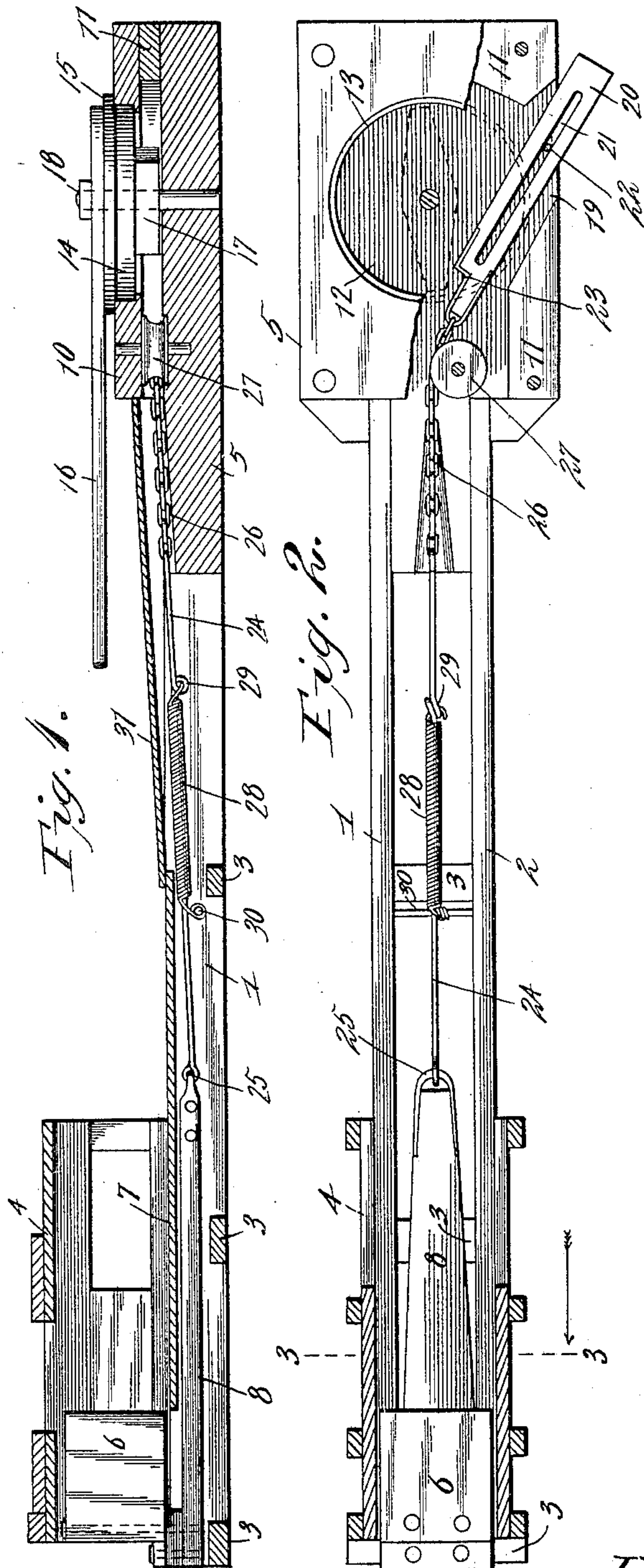
No. 674,039.

Patented May 14, 1901.

J. W. RAKESTRAW.
BALING PRESS.

(Application filed Sept. 24, 1900.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

JASON W. RAKESTRAW, OF RICHHILL, MISSOURI.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 674,039, dated May 14, 1901.

Application filed September 24, 1900. Serial No. 30,988. (No model.)

To all whom it may concern:

Be it known that I, JASON W. RAKESTRAW, a citizen of the United States, residing at Richhill, in the county of Bates and State of Missouri, have invented a new and useful Baling-Press, of which the following is a specification.

This invention relates to baling-presses, and has for its object to provide an improved rebounding-plunger press in which the power is exerted with a pull instead of a push, so as to obviate any side motion of the plunger and connecting parts, and thereby promote the operation of the press. It is furthermore designed to provide improved means for operating the plunger through the medium of an ordinary horse-power sweep having improved operative connections with the plunger, so as to facilitate the operation of the device and increase the output thereof.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a vertical central longitudinal sectional view of a baling-press constructed in accordance with the present invention. Fig. 2 is a top plan view thereof, parts being removed to show the operating connection between the sweep and the plunger. Fig. 3 is a transverse sectional view taken through the press-box and on the line 3-3 of Fig. 2. Fig. 4 is a detail inverted plan view of the operating-sweep.

Corresponding parts are designated by like characters of reference in all of the figures of the drawings.

Referring to the drawings, 1 and 2 designate opposite parallel beams or sills, which are connected by a plurality of cross-bars 3, so as to form a substantial base-frame for the device. At the rear end of this base-frame there is provided an ordinary press-box 4, while the opposite end of the frame is pro-

vided with a laterally-enlarged platform 5 for the support of the operating-sweep.

The plunger 6 is in the form of a block and works between the sides of the press-box 4, which are secured to the outer sides of the respective sills, so that the latter form supporting-flanges for the plunger. The bottom 7 of the press-box is secured to the sills with its forward end projecting a suitable distance in front of the box and its rear end terminating short of the rear end of the box, as best indicated in Fig. 2 of the drawings. The plunger travels over this bottom and is secured to a plunger-rod 8, that works beneath the bottom and between the sills by means of a spacing-block 9, (shown in Fig. 1,) so that the forward portion of the plunger is free from the rod and is spaced slightly above the bottom 7, so that the latter is received between the rod and the plunger, and the block 9 engages the rear end of the bottom as a stop, which limits the forward movement of the plunger.

The platform 5 is provided with a top or plate 10, which is spaced above the upper side of the platform by means of interposed spacing-sills 11, to which the top plate is removably connected, so as to form a shallow box for housing the operating mechanism of the press. In the center of the top plate there is provided a comparatively large circular opening 12, having a bottom inwardly-directed marginal flange 13 for the support of a disk or wheel 14, which is rotatably received within the opening in the top. This disk is provided with an upper and outer marginal flange 15, which overlaps the edge of the opening, and a radial sweep-arm 16 is fixedly secured diametrically across the top of the disk. A diamond-shaped cam 17 is fixedly secured diametrically across the lower side of the rotary head formed by the disk 14, and the latter is rotatably mounted upon a pivot-bolt 18, rising from the bottom of the platform and passing upwardly through a central opening in the head.

One of the spacing-sills 11 is provided with a slot or opening 19 for the reception of a cam-actuated slide 20, that has a longitudinal slot 21 for the reception of a suitable pivot-pin 22, extending downwardly through the

top 10 and the sill, whereby the slide has a longitudinally-slidable and also pivotal connection with the platform. The inner end of this slide is provided with a shoulder or seat 23 on that side of the slide which is next to the cam and arranged in the path of the opposite ends thereof, so as to be struck and operated thereby. The slide is arranged substantially tangential to the circular path of the outer ends of the actuating-cam, and the lateral shoulder 23 is arranged in the path of said ends of the cam, so as to be struck thereby, whereby the slide is driven longitudinally outward until the shoulder passes beyond the path of the cam.

The connection between the slide and the plunger-rod is had by means of a connecting-rod 24, which works between the sills 1 and 2 and has a loose or linked connection 25 with the adjacent end of the plunger-rod. The opposite forward end of this rod is connected to a chain or cable 26, that enters the box through an opening in the inner or rear edge thereof and is connected to the inner end of the slide. A grooved guide-pulley 27 is mounted in the opening through which the cable passes, so as to receive the cable and prevent it from binding upon the edges of the opening. The intermediate portion of the connecting-rod is embraced by a coiled spring 28, that has its forward end connected to an eye 29, formed on the rod, and its rear end connected to a cross-rod 30, extending between the sills 1 and 2. This spring is normally contracted, so that when the rod is drawn forward the spring is expanded, whereby the plunger is automatically returned to its original position after the operating mechanism has been tripped. The cable and the connecting-rod are covered and housed by means of a removable platform 31, so that the horses may pass between the opposite ends of the frame without interfering with the operation of the rod and the cable.

From the foregoing description it will be apparent that power, preferably horse-power, is applied to the outer end of the sweep, so as to swing the latter in a circle, thereby turning the circular head 14 and bringing the opposite ends of the diamond-shaped cam into alternate engagement with the inner end of

the slide 20, thereby forcing the latter outwardly through the slot in the box, and through the medium of the cable, the connecting-rod 24, and the plunger-rod 8 the plunger is drawn forwardly to compress the contents of the press-box. Just as soon as the end of the cam is disengaged from the slide the expanded spring contracts, thereby returning the slide and the plunger to their normal positions for another operation by the opposite end of the cam.

What is claimed is—

1. In a baling-press, the combination with a frame, of a press-box, a plunger, a plunger-rod, an operating-sweep, having an actuating-cam or trip-shoulder, a longitudinally-reciprocatory slide arranged substantially tangential to the circular path of the outer end of the cam, and having a lateral shoulder arranged in the path of the outer end of the cam, a guide arranged substantially in line with the longitudinal axis of the plunger-rod, and a flexible connection between the said rod and the slide and passing through the guide.

2. The combination with a frame, of a press-box at one end thereof, a plunger working therein, a box for the operating mechanism at the opposite end of the frame, the top of the box having a circular opening therein, the rear edge and one side edge having slots therein, a sweep having a circular head rotatably mounted in the circular opening, a cam carried by the under side of the head, an inclined slide working through the side slot and provided with a longitudinal slot, a guide and pivot-pin carried by the box and extending through the slot in the slide, the inner end of the slide being arranged in the path of the outward swing of the cam, a guide pulley or roller mounted in the rear slot of the box, a cable connected to the slide and passing around the roller or pulley, and a plunger-rod connected to the cable.

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

JASON W. RAKESTRAW.

Witnesses:

OSCAR W. MILLER,
HIRAM W. VALENTINE.