

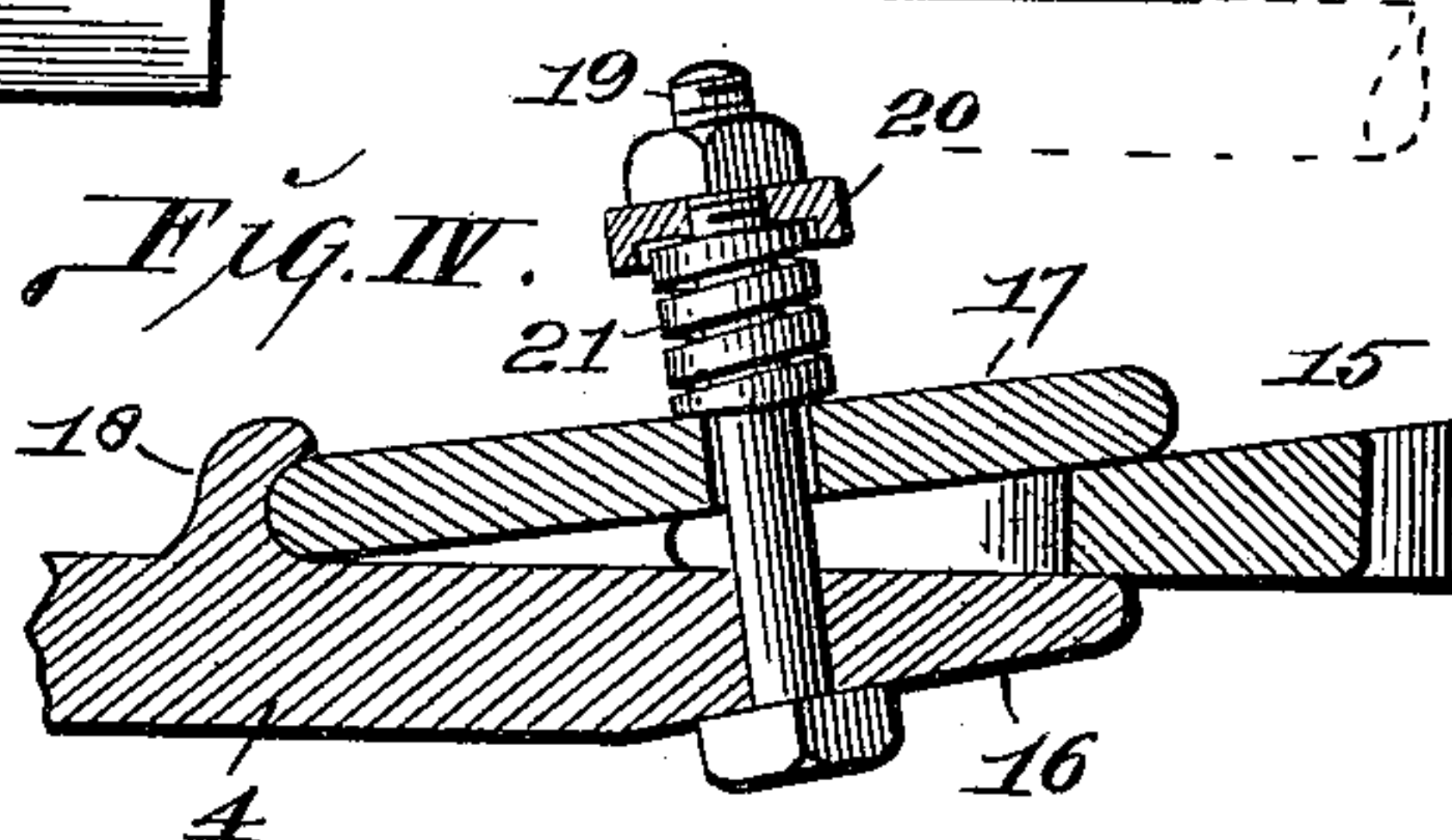
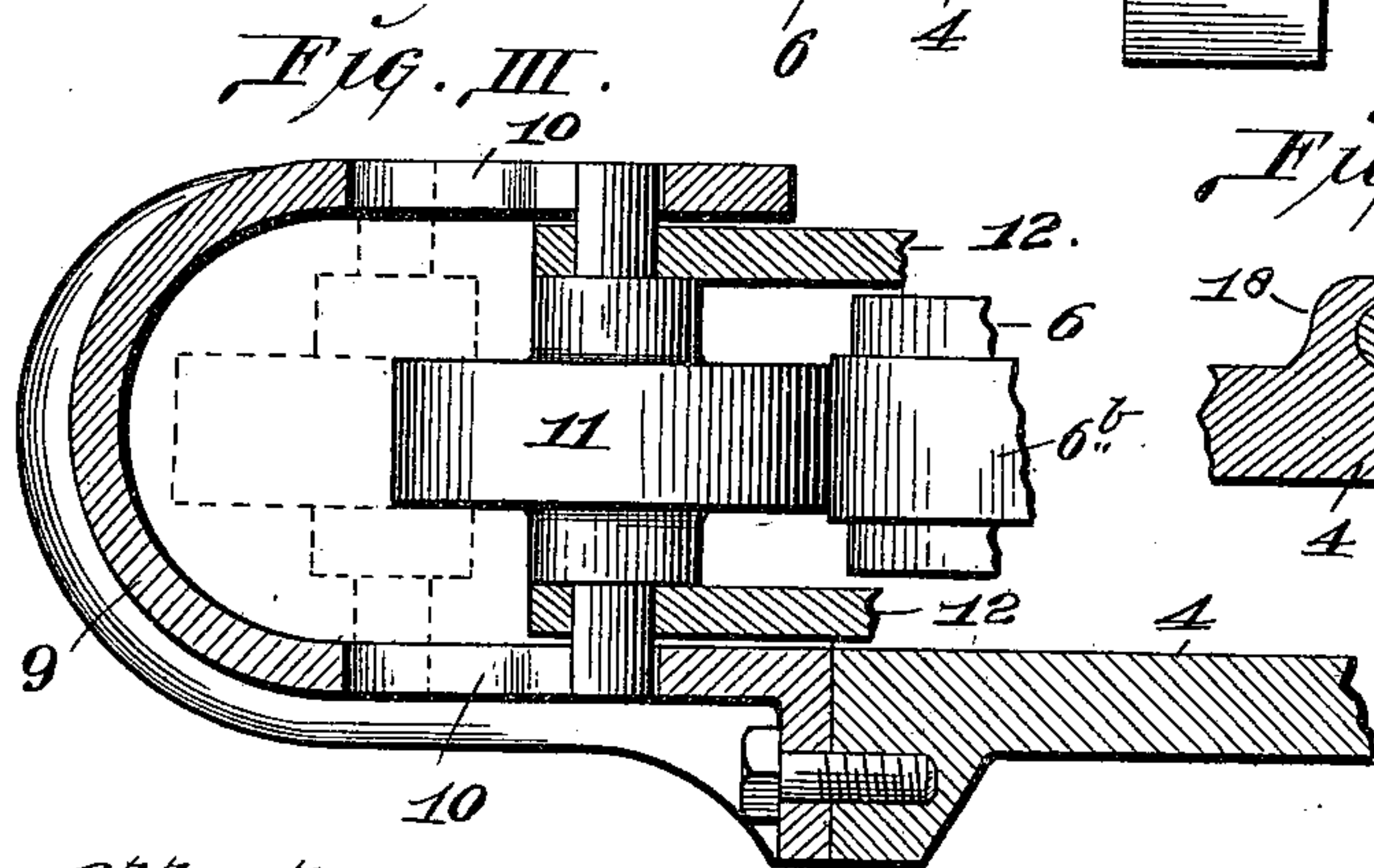
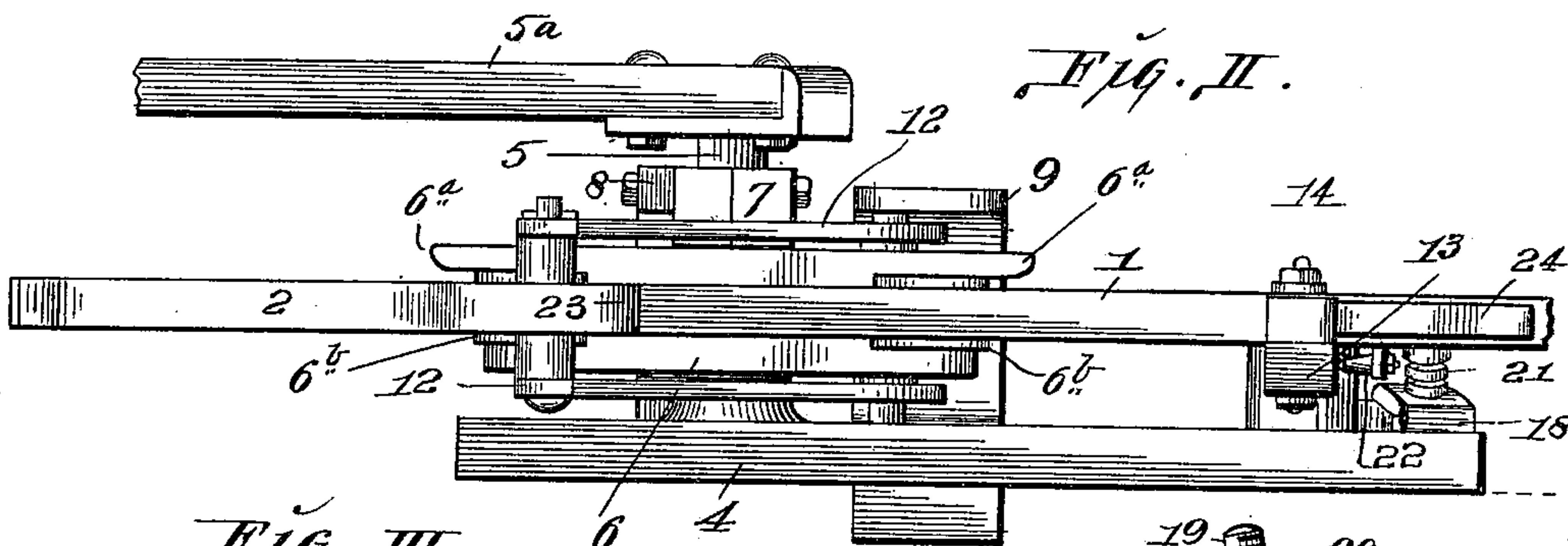
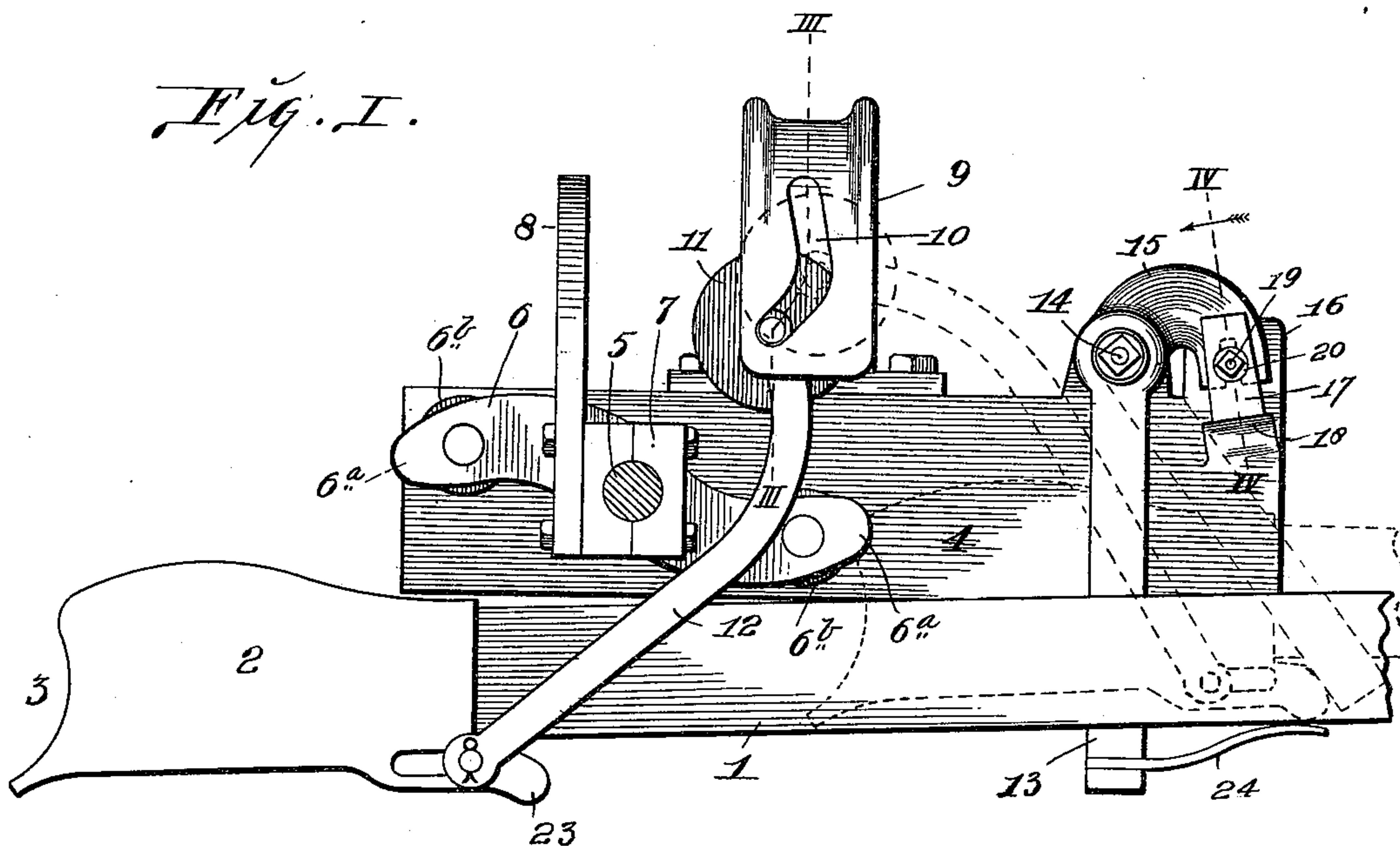
No. 675,197.

Patented May 28, 1901.

W. R. COLMAN.
BALING PRESS.

(Application filed Dec. 7, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

WILLIAM R. COLMAN, OF QUINCY, ILLINOIS.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 675,197, dated May 28, 1901.

Application filed December 7, 1900. Serial No. 38,986. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. COLMAN, a citizen of the United States, residing in Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Baling-Presses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to certain improvements belonging to the power end of a press for baling hay, straw, cotton, excelsior, and the like; and it consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a top or plan view of my improvement, part in section. Fig. II is a side elevation. Fig. III is an enlarged detail vertical section taken on line III III, Fig. I. Fig. IV is an enlarged vertical section taken on line IV IV, Fig. I.

1 represents part of the pitman of the press, which is connected to a plunger (not shown) in the usual manner. The end of the pitman is provided with a head 2, having a curved end 3.

4 represents a bed-plate, in which is journaled a shaft 5, that carries a power-head 6. The shaft is journaled in a box 7, divided horizontally to receive the power-head, the two parts of the box being connected together by a U-shaped frame or yoke 8.

5^a represents a sweep secured to the upper end of the shaft 5.

Secured to the bed-plate 4 is a U-shaped frame or yoke 9, in the upper and lower arms of which are formed slots 10, the slots being pitched forwardly and then outwardly, as shown in Fig. I. Fitting within the frame 9 is a roller 11, the journals of which extend into the slots 10.

12 represents links connecting the roller to the head 2 of the pitman, the links preferably fitting over the journals of the roller, as shown in Fig. III. As the power-head turns, the rollers 6^b on the ends thereof come against the roller 11 and by moving the roller causes the pitman to be drawn forward, so that the roller on the power-head behind the one that is engaging the roller 11 will contact with the outer end of the pitman and cause the pit-

man to be forced forwardly. As the roller 11 is moved by the power-head its journals travel in the slots 10, the movement of the journals in the slots being first forwardly, then outwardly, and then inwardly again as the plunger reaches the limit of its forward movement, the position of the journals in the slots when the pitman is in its forward position being that indicated by dotted lines, Fig. I. As the plunger recedes the first movement of the journals of the roller 11 in the slots is outwardly, then inwardly to the bends in the slots, and then rearwardly to the position shown in full lines, Fig. I. By this arrangement I am enabled to use a short power-head, which results in great pressure being exerted on the pitman and plunger in their forward movement, as the point of contact between the power-head and the pitman is quite near to the shaft 5.

The power-head has projections 6^a, that overhang the rollers 6^b and which lap over the pitman-head to keep the latter from rising as the final pressure is being exerted.

13 represents a carrier-arm which supports the outer end of the pitman. As shown, this carrier-arm consists of an upper and lower plate between which the pitman fits. The carrier-arm is pivoted to the bed-plate 4 by means of a bolt 14, so that as the pitman travels back and forth the carrier-arm moves from the position shown in full lines, Fig. I, to the position shown in dotted lines and back again.

15 represents an extension of the carrier-arm, which is tapered, as shown in Fig. IV, and is adapted to enter a jaw formed by an extension 16 on the bed-plate and a plate 17, the inner end of which rests against a shoulder 18 on the bed-plate. The plate 17 is connected to the extension 16 by means of a bolt 19, and between the plate and a washer 20 on the bolt is a coil-spring 21.

The pitman is provided with lugs or shoulders 22, and just before the pitman reaches the limit of its rearward movement these shoulders come against the carrier-arm and by moving the extension 15 of the carrier-arm cause it to enter the jaw, and the spring 21 thus acts as a cushion to retard the backward movement of the plunger. If the carrier-arm is not moved forward by its fric-

tional contact with the pitman as the latter advances, it will be moved by a projection 23 on the head of the pitman coming against the back of the carrier-arm.

5 The outer end of the carrier-arm is provided with a spring 24, that bears against the back of the pitman to hold the latter in a direction toward the power-head.

In the operation of the press one end of the
10 power-head comes against the roller 11 and moves the roller in the frame 9, thus drawing the pitman forwardly and inwardly, so that the other end of the power-head will engage the end of the pitman to give the final pres-
15 sure to the traverser. As the pitman advances the projection 23 on the head of the pitman engages the arm 13 and forces the outer end of the arm forwardly. As the pitman recedes the roller 11 is moved back to
20 the position shown in Fig. I, and just before the pitman reaches the limit of its rearward movement the shoulder 22, coming against the carrier-arm and moving the free end thereof, causes the tapered end 15 to be moved
25 into the spring-jaw, whereby the jaw acts to retard the backward movement of the pitman and the carrier-arm.

I claim as my invention—

1. In a baling-press, the combination of a
30 pitman, a bed-plate, a slotted frame secured to the bed-plate, a roller within the frame and

the journals of which fit in said slots, links connecting the roller to said pitman, and a power-head adapted to engage said roller, substantially as set forth.

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2. In a baling-press, the combination of a pitman, a bed-plate, a frame secured to the bed-plate, and having forwardly and outwardly inclined slots, a roller located in the frame and the journals of which fit in said
40 slots, links connecting the roller to said pitman, and a power-head adapted to engage said roller, substantially as set forth.

3. In a baling-press, the combination of a pitman, a bed-plate, a U-shaped frame se-
45 cured to the bed-plate and having forwardly and outwardly inclined slots, a roller having journals fitting in said slots, links connecting said roller to said pitman, and a power-head adapted to engage said roller; substan-
50 tially as described.

4. In a baling-press, the combination of a pitman, a bed-plate having an extension 16, a carrier-arm supporting the pitman and hav-
55 ing an extension 15, and a plate 17 spring-connected to said extension on the bed-plate, substantially as set forth.

WILLIAM R. COLMAN.

In presence of—

ALBERT B. WEISENBURGER,
C. FRANK GARVIN.