

March 22, 1932.

A. MYER

1,850,134

BALING PRESS

Filed May 31, 1930

3 Sheets-Sheet 1

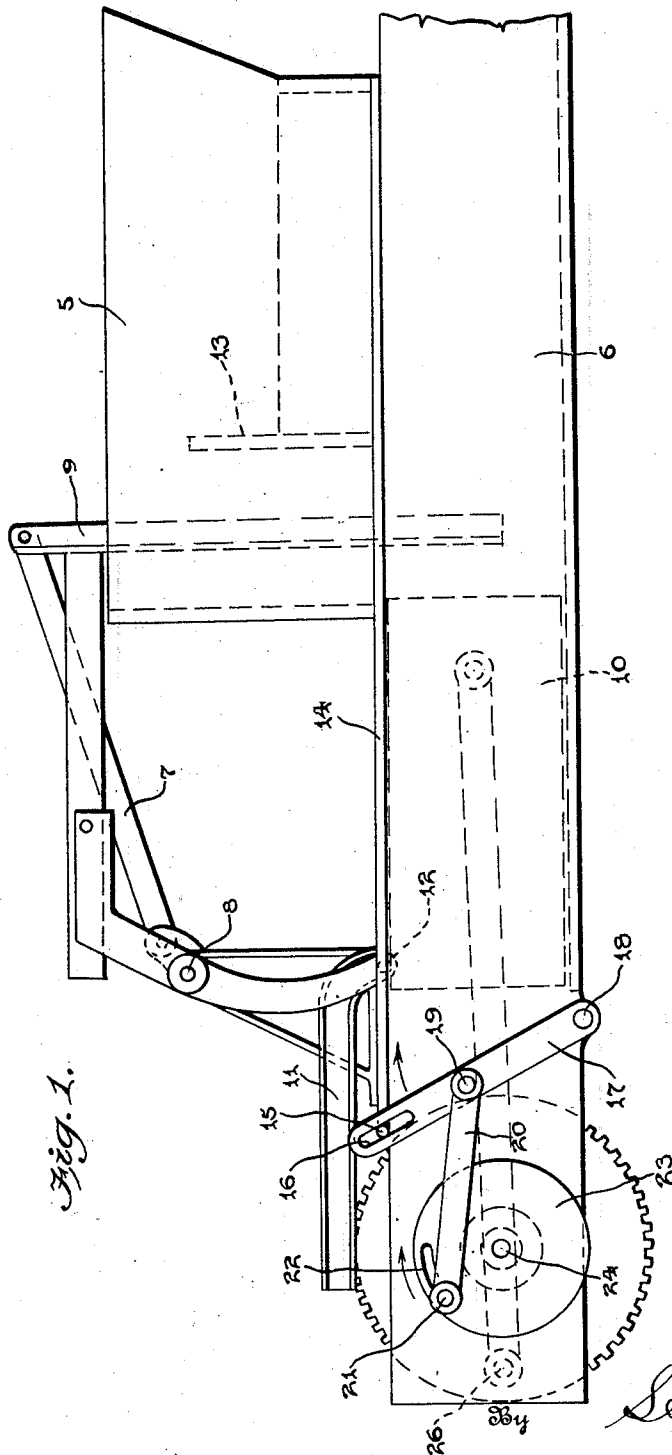


Fig. 1.

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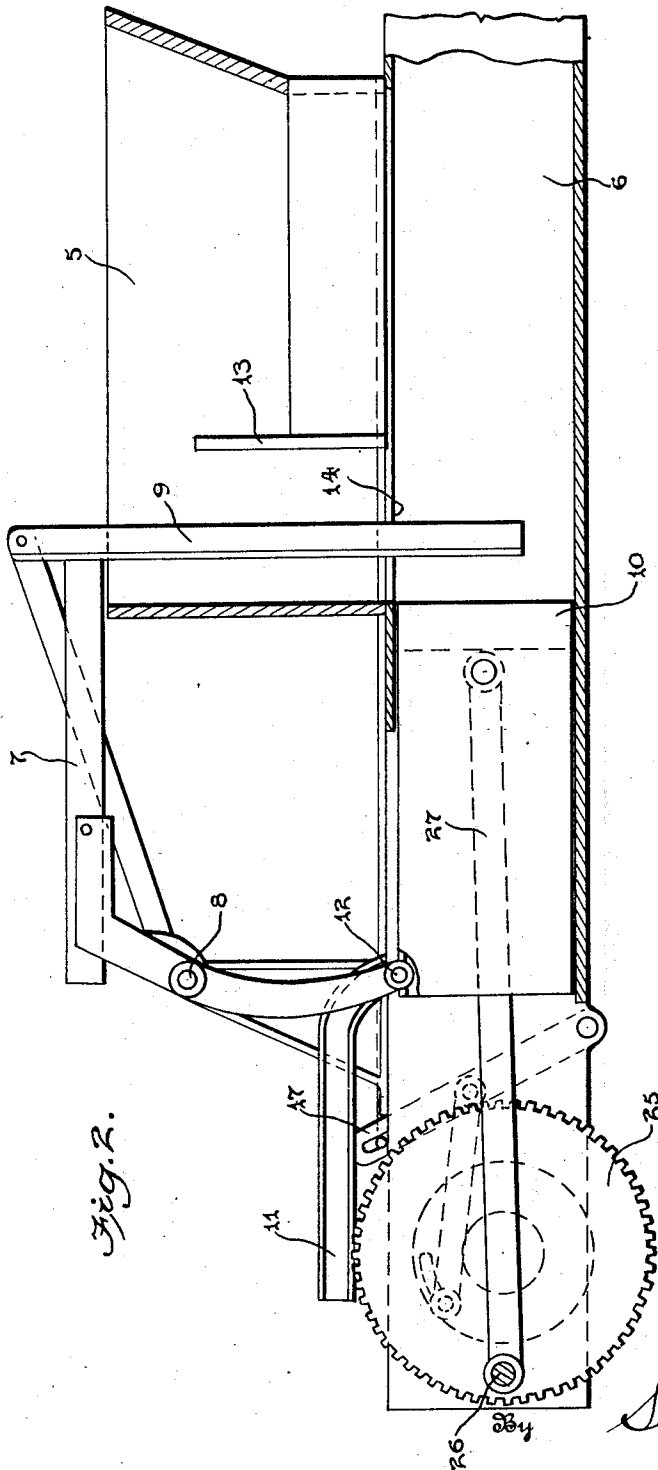


Fig. 2.

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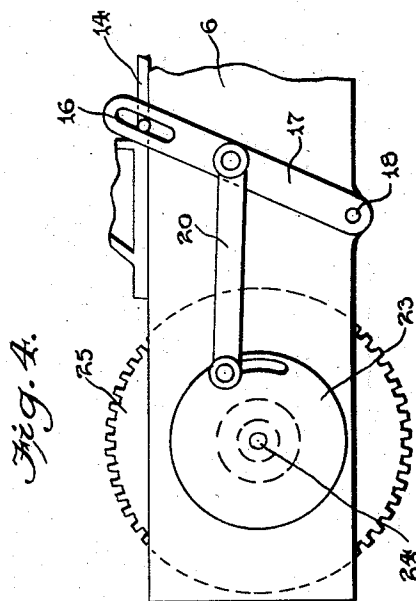
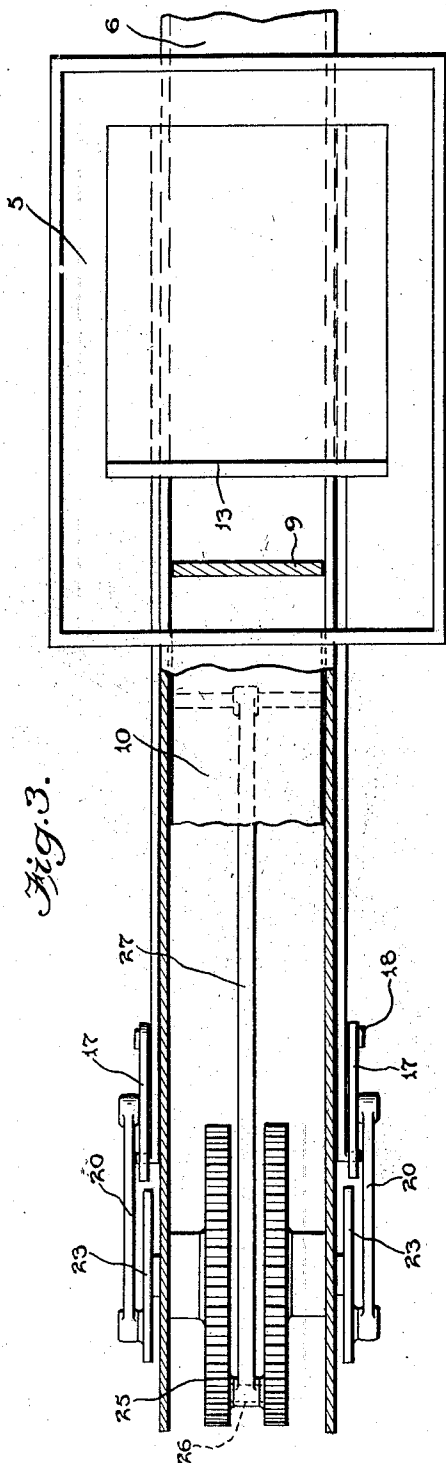
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UNITED STATES PATENT OFFICE

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BALING PRESS

Application filed May 31, 1930. Serial No. 458,498.

This invention relates to improvements in baling presses, and more especially to novel means for driving the condenser plunger of such presses.

Heretofore, such plungers have been so combined with the driving mechanism of the main plunger of the press that the condenser plunger is driven irregularly and with a jerky motion which causes knocking, and the main object of the present invention is to provide driving mechanism which will cause the condenser plunger to continuously travel in a steady manner and without the usual noise.

With the foregoing object outlined and with other objects in view which will appear as the description proceeds, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

In the drawings,

Fig. 1 is a side elevation of a baling press equipped with my improvements.

Fig. 2 is a longitudinal vertical sectional view of the same.

Fig. 3 is a top plan view.

Fig. 4 is a view similar to Fig. 1, but showing only a portion of the mechanism, and with the condenser plunger connecting rod and lever in a different position.

Referring to the drawings, 5 designates the hopper and 6 the baling chamber of a press to which I have applied my improvements. Such baling presses have a goose neck 7 which is pivotally mounted at 8 and has a leg 9 which acts to force the material to be baled from the condenser into the baling chamber.

10 indicates the conventional main plunger of the press, which is provided with guides 11 that operate pins or rollers 12 at one end of the goose neck. When the main plunger moves forwardly, the guides 11 act to raise the leg 9 out of the condenser.

The condenser plunger is shown at 13, and in accordance with my invention, long links 14 have their forward ends secured to the plunger 13, and their other ends provided with pins 15 which slide in slots 16 of levers

17 that are pivotally mounted at 18 on the frame of the machine.

The medial portion of each of these levers is pivotally connected at 19 to a driving link 20, the opposite end of such link being pivotally and adjustably connected at 21 to an arc-shaped slotted portion 22 of a driving disk 23.

The driving disks are fixed to a horizontal rotatable shaft 24 that is provided at its medial portion with gears 25 that are driven by any suitable means. Between these gears, I pivotally connect at 26, the inner end of the main plunger connecting rod 27.

From Figs. 1 and 2, it may be seen that when the main plunger 10 is at one end of its stroke, the pivotal connection 26 is in the same horizontal plane as the shaft 24, while the pins 21 are above this plane. In other words, the pins 21 have an angle of advance relatively to the pivotal point 26, and consequently, with the shaft 24 rotating in a clock-wise direction, the lever 17 will cause the condenser plunger 13 to move in advance of the main plunger.

As the gears 25 are continuously rotated when the machine is in operation, it will be understood that the condenser plunger 13 will be moved steadily forward and backward, and without any knocking or jerking, and as the condenser plunger moves in advance of the main plunger 10, the action of the machine is speeded up and a greater amount of material can be baled in a given period of time than with the machines heretofore constructed.

In operation, the gears 25 drive the shaft 24, and the disks 23 cause the links 20 to oscillate the levers 17. Consequently, the links 14 move the plunger 13 in the hopper, and at the same time, the connecting rod 27 causes the main plunger to advance. As the latter moves forwardly, the guides 11 rock the goose neck 7 to lift the leg 9 out of the hopper, and when the two plungers are at the opposite end of the stroke from that illustrated in Fig. 1, the hay or the like is deposited in the hopper by the operator. Now, as the plungers start their reverse stroke, the condenser plunger 13 will condense or pack

the material in the hopper, and the goose neck 9 will descend, so that the leg 9 will force the condensed material into the baling chamber.

6 It will be understood from the foregoing that my mechanism causes the condenser plunger to run regularly without knock, and that the plunger 13 puts the material under the goose neck earlier than the mechanisms
10 heretofore known.

From the foregoing it is believed that the construction, operation and advantages of the invention may be readily understood, and I am aware that changes may be made in the
15 details disclosed, without departing from the spirit of the invention, as expressed in the claims.

What I claim and desire to secure by Letters Patent is:

20 1. A baling press comprising a hopper, a condenser plunger reciprocating in said hopper, a baling chamber beneath the hopper, and means for continuously reciprocating the condenser plunger, said last mentioned means including a rotatable disk, a
25 pin adjustably mounted on said disk, and a pitman pivotally connected to said pin.

2. A baling press comprising a baling chamber, a hopper arranged above the same, a condenser plunger in the hopper, a driving shaft, a crank actuated by the driving shaft, a rocking lever pivotally mounted on said chamber, a pitman having one of its ends pivotally connected to the said crank
35 and its other end pivotally connected to said lever, said lever being provided with a slot, and a link having one of its ends extending through the slot, and its other end connected to said plunger.

40 3. A baling press comprising a baling chamber, a hopper arranged above the same, a main plunger in the baling chamber, a condenser plunger in the hopper, a driving shaft, a crank actuated by the driving shaft, a pitman having one of its ends connected to said crank and its other end connected to the main plunger, a second crank driven by said shaft, a rocking lever pivotally mounted on said chamber, a pitman having one of its
45 ends pivotally connected to the last mentioned crank and its other end pivotally connected to said lever, said lever being provided with a slot, and a link having one of its ends extending through the slot, and its
50 other end connected to said plunger, the second crank being advanced relatively to the first crank, whereby the condenser plunger is more rapidly moved at the beginning of its strokes than the main plunger.

60 In testimony whereof, I have signed this specification.

AARON MYER.