

M. F. SLOVER & J. R. HARTER.

BALING PRESS.

APPLICATION FILED APR. 10, 1912.

1,041,521.

Patented Oct. 15, 1912.

Fig. 1.

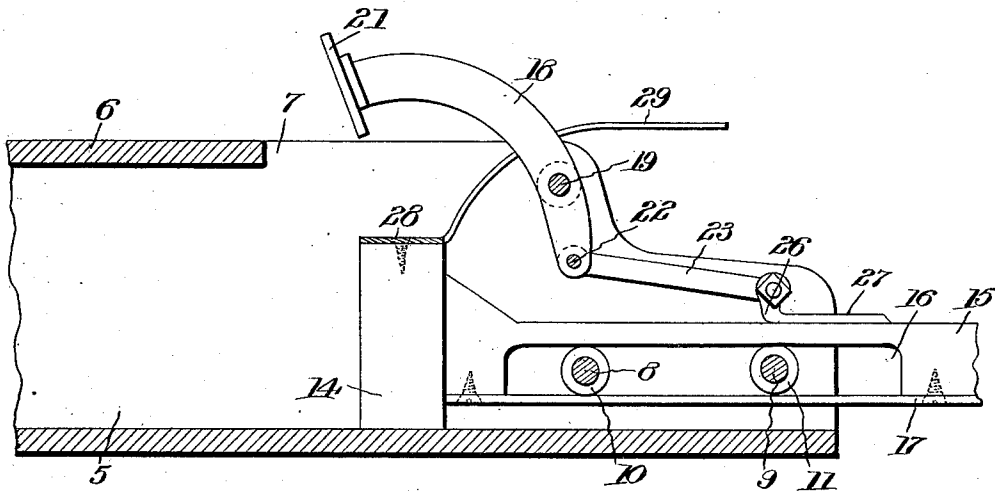


Fig. 2.

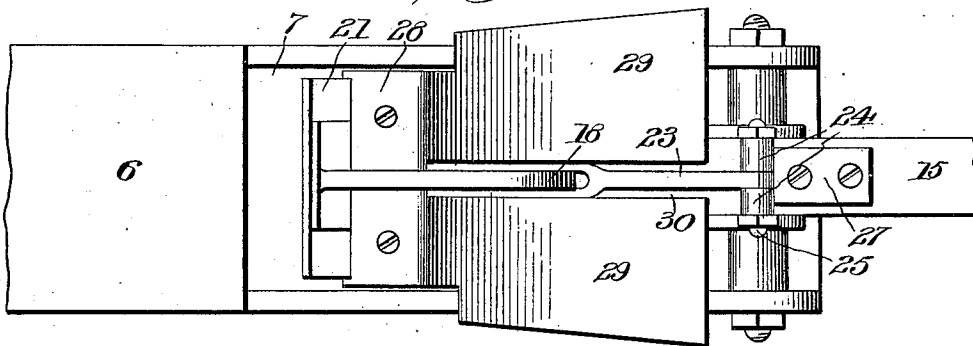
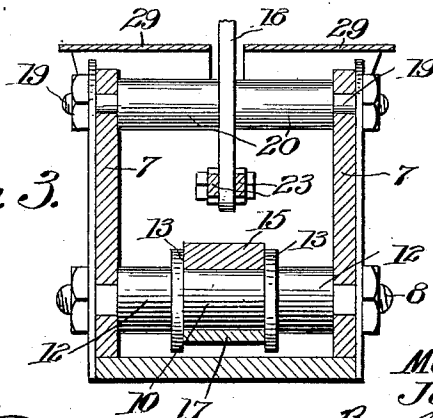


Fig. 3.



WITNESSES

*C. M. Walker*  
*G. F. Baker*

INVENTORS.

*Marion F. Slover*  
*James R. Harter*

By *G. C. Anderson* Attorney

# UNITED STATES PATENT OFFICE.

MARION F. SLOVER AND JAMES R. HARTER, OF CANYON, TEXAS.

## BALING-PRESS.

1,041,521.

Specification of Letters Patent.

Patented Oct. 15, 1912.

Application filed April 10, 1912. Serial No. 689,850.

*To all whom it may concern:*

Be it known that we, MARION F. SLOVER and JAMES R. HARTER, citizens of the United States, residing at Canyon, in the county of Randall and State of Texas, have invented certain new and useful Improvements in Baling-Presses, of which the following is a specification.

This invention relates to baling presses.

One object of the invention is to provide a baling press embodying a chamber provided with a reciprocating plunger to which is connected a packing device which is actuated by the plunger device to pack the material in the pressing chamber prior to action of the plunger device on the material to feed the same into the pressing chamber.

Another object resides in the provision of a baling press embodying a pressing chamber with which is associated a reciprocating plunger mounted upon suitable bearings to reduce friction to a minimum in combination with a packing device connected to and actuated by the plunger device for packing the material so that the plunger device may efficiently feed the material into the pressing chamber.

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

In the drawings:—Figure 1 is a longitudinal sectional view of the outer end of a baling press chamber illustrating a side elevation of our invention. Fig. 2 is a top plan view of the invention. Fig. 3 is a transverse sectional view thereof.

Referring now more particularly to the accompanying drawings the reference character 5 indicates a portion and preferably the outer end of a baling press or chamber whose top portion 6 preferably terminates short of the outer end of the press or chamber in order to provide an opening 7 for a purpose presently explained.

Rods 8 and 9 are mounted transversely through the sides of the chamber 5 near the outer end thereof slightly above the bottom of the chamber. Roller bearings 10 and

11 are mounted on the rods 8 and 9, respectively, intermediate the ends of the latter and held in such position on said rods preferably by means of spacing collars 12 mounted on the rods. These bearings 10 and 11 may each be flanged at each end as indicated by the reference character 13 and these flanges 13 may, if desired, be in the form of disks mounted on the rods 8 and 9 and disposed between the bearings 10 and 11 and the spacing collars 12.

The purpose of the roller bearings is to provide for an efficient mounting of the plunger device in a way to reduce friction to a minimum and to insure an easy and free reciprocation of the plunger device. In the present instance, the plunger device consists of a head 14 and a plunger bar consisting preferably of a part 15 provided with a notch 16 with the notched part 16 closed by another part 17 preferably detachably secured to the part 15. The notched part 16 is adapted to fit over the aforesaid bearings 10 and 11 and when the part 17 is secured to the part 15 of the plunger bar there is provided a plunger bar having a notch 16 forming a slot at its inner end with the ends of the slot limiting the reciprocating movement of the plunger device in opposite directions because of the ends of the slot or notch 16 engaging the bearings 10 and 11 during reciprocation of the plunger device.

Mounted directly on the plunger device and operable under the influence thereof is a packing device which, in this instance, consists preferably of a curved arm 18 mounted to swing adjacent its outer end on a shaft 19 mounted between the sides of the pressing chamber 5 adjacent the outer end of the latter. This curved arm 18 is preferably mounted between spacing collars 20 on the aforesaid shaft 19 and at its inner end is provided with a packing head 21 with its outer end pivotally connected at 22 to a link 23 secured at its outer end between spacing collars 24 on a short shaft 25 mounted in the upright part 26 of a bracket 27 secured in any suitable manner to the upper side of the plunger bar 15—17. Thus, by virtue of the plunger device having a straight-line movement and the packing device having its curved arm 18 swingingly mounted on the shaft 19 and connected directly to the upper face of the plunger bar, the packing device has the same power as the plunger bar as the latter reciprocates. The result is that

the packing device has a positive and powerful action under the influence of the plunger device. As the plunger device moves outwardly of the chamber 5 the packing device is positively and powerfully forced downward through the opening 7 and into the chamber 5 to pack the material to provide for an efficient feeding of the material into the chamber 5 on the inward stroke of the plunger device, the packing device swinging outwardly through the opening 7 from the chamber 5 on the inward stroke of the plunger device.

To shield the plunger and particularly the bearings thereof from becoming clogged with the material as it is fed into the chamber 5 through the opening 7, we preferably provide a shield whose inner end 28 is secured in any suitable manner to the upper side of the plunger head 14 with its outer portion 29 curved upwardly and outwardly and provided with a slot 30 to permit of operation of the swinging arm 18 of the packing device.

It is obvious that the plunger device may be reciprocated in any well known manner and that it is immaterial what means are employed for reciprocating the plunger device.

What is claimed is:

1. In a device of the character described, a chamber whose outer end is provided with an opening at its top, a reciprocating plunger device mounted in the chamber and including a head and a bar, with the bar provided with a slot, roller bearings mounted in the chamber and extending through the slot of said bar to support and balance the head and bar and to prevent upward or downward tilting movement of the plunger device and thereby maintain an even straight-line reciprocating movement of the plunger device to reduce friction between the plunger device and the chamber, with said bearings arranged so as to restrict reciprocating movement of the plunger device, and a packing device connected to the plunger device swingingly mounted in the chamber and operable through the opening in said chamber upon reciprocation of the plunger device.

2. A device of the character described comprising a chamber provided with an opening in its top, a reciprocating plunger device mounted in the chamber, a packing device including an arm and a head swingingly mounted in said chamber, a connection between the swinging arm and the plunger device to actuate the packing device to throw the head of the latter into and out of

the chamber through the opening in the latter to pack material in the chamber prior to the pressing action on the material by the plunger device, and a shield secured to the head of the plunger device and provided with a slot in which the curved arm of the packing device operates.

3. In a device of the character described, a chamber provided with an opening, a plunger device mounted in the chamber and comprising a head and a bar with the bar provided with a slot, bearings mounted in the chamber and engaging the bar of the plunger device within said slot and which limit the reciprocating movements of the plunger device, a packing device consisting of a curved arm provided with a head at its inner end for passage into and out of said chamber, and a connection between said arm and the bar of the plunger device to operate the arm to pack the material in the chamber prior to the pressing of the material by the head of the plunger device, and a shield carried by the head of the plunger device and provided with a slot in which latter the arm of the packing device operates.

4. A device of the character described comprising a chamber provided with an opening in its top, a pair of shafts mounted transversely through the chamber at the outer end thereof, a roller bearing mounted on each shaft, a reciprocating plunger device mounted in the chamber and including a head and a bar, the latter being formed of two parts with one part provided with a notch whose outer side is closed by the other part of the bar to form a slot in the latter, the slot embracing said roller bearings and engageable at its ends with the bearings to limit the reciprocating movement of the plunger device, a packing device including a curved arm and a head swingingly mounted in said chamber, a connection between the swinging arm and the plunger device to actuate the packing device to throw the head of the latter into and out of the chamber through the opening of the latter to pack the material in the chamber prior to pressing action on the material by the plunger device, and a shield secured to the head of the plunger device and provided with a slot in which the curved arm of the packing device operates.

In testimony whereof we affix our signatures in presence of two witnesses.

MARION F. SLOVER.  
JAMES R. HARTER.

Witnesses:

L. C. LAIR,  
B. FRANK BUTE.