Sept. 5, 1933. M. F. BERG 1,925,365

PAPER BALING PRESS

Filed May 10, 1932

Fig. 1.

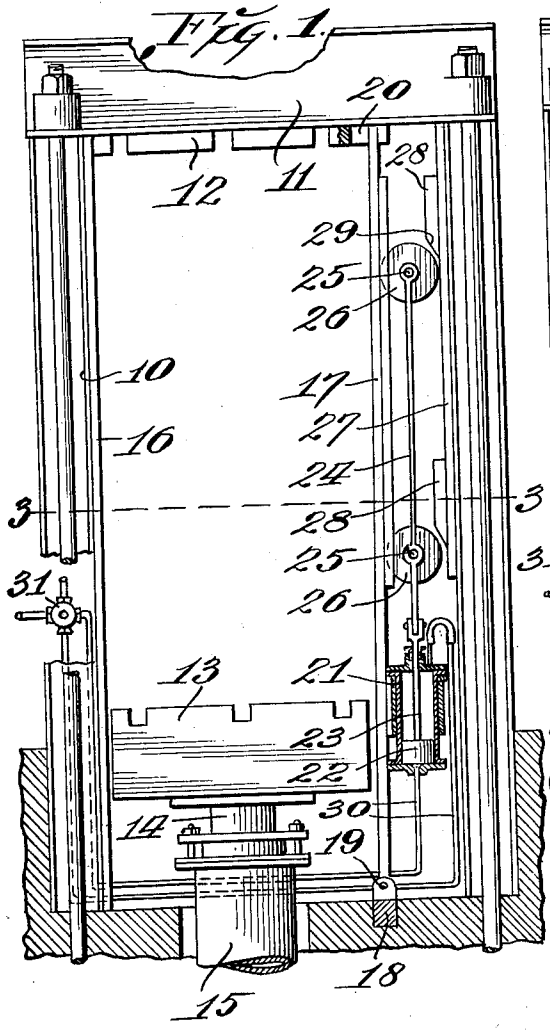


Fig. 2.

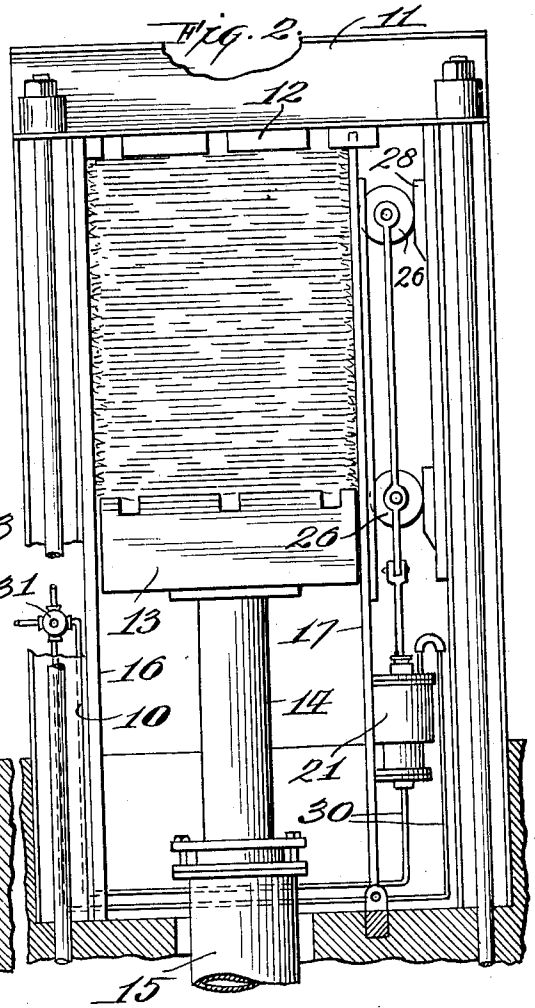
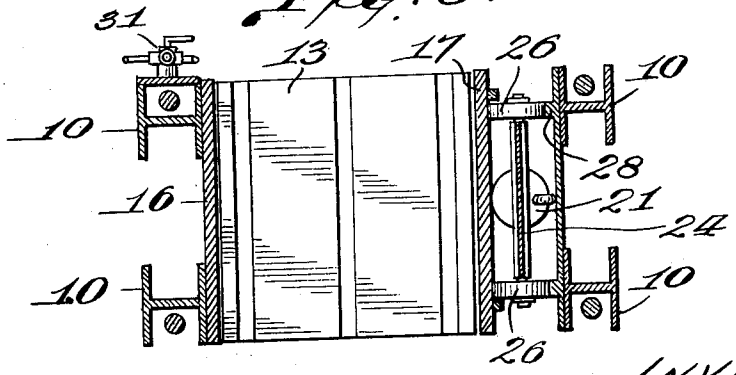


Fig. 3.



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UNITED STATES PATENT OFFICE

1,925,365

PAPER BALING PRESS

Morris F. Berg, Los Angeles, Calif.

Application May 10, 1932. Serial No. 610,327

1 Claim. (Cl. 100—19)

My invention relates generally to baling presses and more particularly to the type of flat newspaper baling press that is disclosed in U. S. Letters Patent No. 1,856,531, issued to me May 3rd, 1932.

The principal objects of my present invention are, to generally improve upon and simplify the construction of the press disclosed in my aforesaid patent as well as other forms of power presses that are utilized for baling flat paper such as newspapers and further, to provide simple and efficient means for decreasing and likewise increasing the width of the baling chamber so as to facilitate baling operations and produce bales of uniform width and with relatively straight side faces.

A further object of my invention is, to provide on one side of a flat newspaper baling press, a hinged plate that functions as a side wall for the baling chamber and to provide simple and efficient means for swinging said plate inwardly so as to decrease the width of the baling chamber while the traveling head of the press is moving toward the fixed head for the purpose of compressing the paper that occupies the baling chamber.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangements of parts that will be hereinafter more fully described and claimed and illustrated in the accompanying drawing in which:

Fig. 1 is an elevational view of a newspaper baling press with parts thereof in section and showing the press provided with a swinging side plate as contemplated by my invention.

Fig. 2 is an elevational view of a press provided with a swinging side plate in accordance with my invention and with said plate positioned so as to narrow the baling chamber.

Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 1.

Referring by numerals to the accompanying drawing which illustrates a practical embodiment of my invention, 10, 10 designate upright posts or beams that form the main portion of the frame of the press and suitably secured to the upper ends of said posts, are horizontally disposed beams 11 that support the fixed head 12 of the press.

Arranged for vertical movement between the lower portions of the posts or uprights 10, is a pressure head 13 that opposes head 12 and said pressure head being carried by a piston 14 that reciprocates within a cylinder 15. Piston 14 and pressure head 13 may be operated in any suitable manner, for instance, by compressing air, steam or water.

Secured to the posts or uprights 10 on one side of the press, is a vertically disposed plate 16 that constitutes the fixed side wall of the press and arranged on the opposite side of the press structure is a plate 17 that is connected to a rigidly fixed member 18 at its lower end by a hinge 19 having a horizontally disposed axis.

This swinging plate 17 extends the entire height of the press and its upper end is arranged to swing freely in a notch or recess 20 that is formed in the corresponding side of fixed head 12.

Mounted on the outer face of swinging plate 17 and on the lower portion thereof, is a cylinder 21, within which is arranged for operation a piston 22 and piston rod 23 that is connected to this piston extends through a suitable gland or stuffing box in the upper end of the cylinder.

Suitably connected to the upper end of the piston rod 23 is the lower end of a vertically disposed frame 24 and journaled in the upper and lower portions of said frame are horizontally disposed axles 25, each of which carries a pair of small wheels or rollers 26. These rollers bear directly upon the outer face of the swinging plate 17.

Secured in any suitable manner to the posts or uprights 10, adjacent to the swinging plate 17, is a vertically disposed plate 27 and formed integral therewith or fixed thereto are short vertically disposed blocks 28 that are in direct vertical alignment with the wheels or rollers 26. The lower ends of these blocks 28 are inclined as shown by 29 and under normal conditions or while the frame 24 and wheels 26 are at the lower end of their travel, said wheels 26 occupy positions just below the inclined lower ends of the blocks 28 as illustrated in Fig. 1.

Suitable fluid pressure conducting pipes or tubes 30 lead to the upper and lower ends of cylinder 21 and these pipes are connected to a conventional form of manually operable valve 31, which when manipulated admits fluid pressure to one or the other of said pipes 30 and connects the opposite pipe to a suitable exhaust or outlet.

Suitable fluid pressure, for instance, compressed air, steam or water under pressure, may be connected to the supply pipe that leads to valve 31.

In the operation of my improved baling press, a stack of flat newspapers or the like is placed on head 13 while the latter is at its lower limit

of travel and after the safety gates or doors of the press and which are not shown, have been closed, the operator of the press manipulates valve 31 so as to admit fluid pressure into the lower end of cylinder 21. This fluid pressure moves piston 22 upwardly in cylinder 21 and correspondingly moves frame 24 and wheels 26 upwardly.

Due to the weight of the cylinder 21, frame 24 and wheels 26 which parts are offset with respect to the hinge 19 that connects the lower end of the plate 17 is the latter normally swung to its limit of movement away from the compression chamber of the press and as the frame and wheels are moved upward as just described, said wheels will ride upwardly on the inclined lower ends of blocks 29 and thence onto said blocks and in so doing the plate 17 will be swung inwardly toward the travelling head 13 and the body of papers positioned thereupon so as to narrow the compression chamber and straighten up the corresponding side of the body of papers that are resting upon head 13.

When the carriage 24 and wheels 26 have reached their upward limit of movement, they are retained in such position by permitting the fluid pressure to remain in cylinder 21 below the piston 22 therein and fluid pressure is now admitted to the lower end of cylinder 15 so as to raise piston 14 and head 13, thereby compressing the bundle of papers between the traveling head 13 and fixed head 12.

During the application of pressure to the bundle, the swinging side plate 17 is held positively against outward swinging movement by wheels 26 which rest upon the blocks 28 and the latter are firmly supported by the adjacent posts or uprights 10.

After the binding wires or bands are applied to the compressed bale, valve 31 is manipulated so as to admit fluid pressure into the upper end of cylinder 21 and the fluid pressure below piston 23 is permitted to exhaust so that said piston moves downwardly in the cylinder and imparts corresponding movement to carriage 24 and wheels 26.

As soon as the wheels 26 pass off the blocks 28, the plate 17 will, by gravity, swing outward away from the compressed bundle and the latter may now be removed from the press, after which head 13 is lowered so as to be in proper position for a succeeding operation.

Thus it will be seen that I have provided a swinging side wall for baling presses that is relatively simple in construction, inexpensive of manufacture and installation and which is very effective in performing the functions for which it is intended.

I claim as my invention:

The combination with a flat newspaper baling press having a baling chamber, of a pair of plates arranged at the sides of said chamber, one of which plates is rigidly fixed, the other plate being hinged to the frame of the press at a point below the baling chamber, a guiding support on the upper portion of the frame of the press for the upper end of said hinged plate, a vertically disposed plate secured to the upper portion of the frame of the press opposite the upper portion of said hinged plate, blocks on the face of said vertically disposed plate adjacent to its upper and lower ends, the lower ends of which blocks are inclined, a frame arranged for vertical movement between the block carrying plate and said hinged plate, rollers carried by said frame, which rollers are adapted to travel upon said blocks and upon the adjacent face of said hinged plate and fluid pressure means for raising and lowering said roller carrying frame.

MORRIS F. BERG.