May 3, 1932. H. V. RASMUSSEN 1,856,885

BALING PRESS FOR NEWSPAPERS AND THE LIKE

Filed March 6, 1931

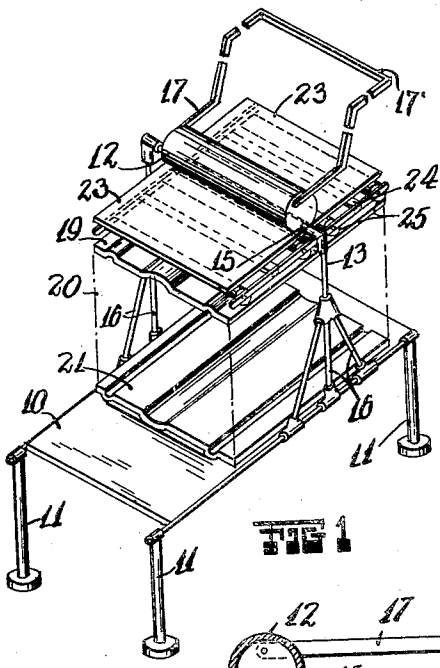

FIG 1

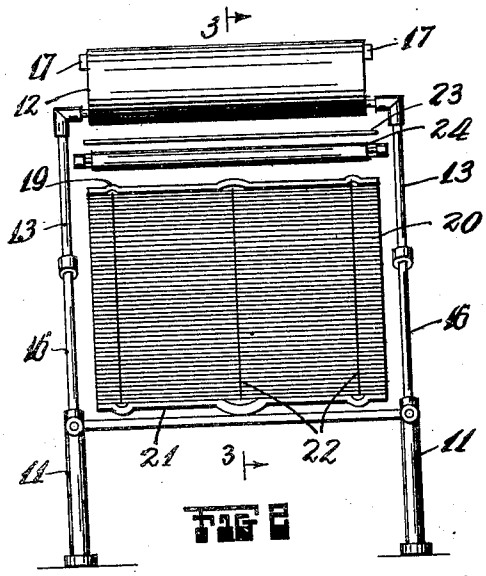

FIG 2

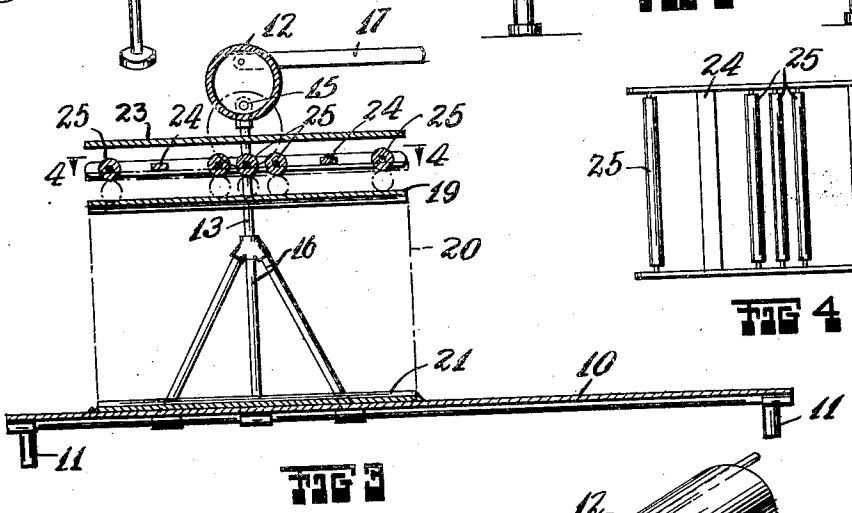

FIG 3

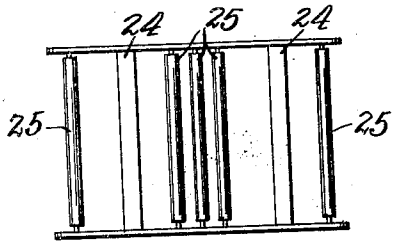

FIG 4

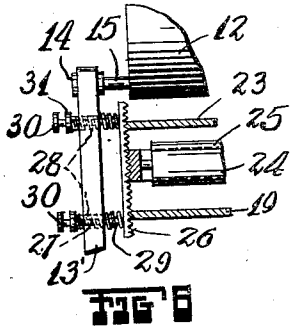

FIG 6

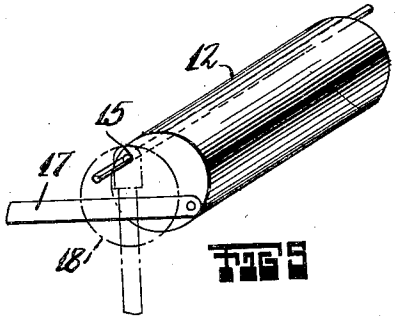

FIG 5

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UNITED STATES PATENT OFFICE

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BALING PRESS FOR NEWSPAPERS AND THE LIKE

Application filed March 6, 1931. Serial No. 520,599.

This invention relates to new and useful improvements in a baling press for newspapers and the like.

The invention has for an object the provision of a baling press which is characterized by a press roller eccentrically mounted and connected with a lever for its rotations to cause it to move down and press.

A still further object of this invention is to arrange the press roller so that upon moving downwards it passes the bottom dead center and in this manner maintains the pressure as long as desired.

A still further object of this invention is to provide a frame for supporting the press roller arranged upon a table adapted to hold newspapers and the like.

It is a still further object of this invention to provide means for preventing the circular motion of the press roller from moving a pile of newspapers out of superimposed positions.

More particularly, the means referred to in the previous paragraph is to be in the form of a friction plate immediately below the press roller and acting against a carriage having rollers and resting upon the top of the newspaper pile.

As a still further object of this invention it is proposed to place a grooved plate on the bottom of the newspaper pile and another one at the top immediately below the carriage referred to in the previous paragraph, whereby wires may be passed through the grooves to tie the bale after it is pressed.

The invention has for a still further object the provision of resilient means to support the plate, the carriage and the grooved plate, and to allow downward or upward movements of these parts whenever desired.

And as a still further object of this invention it is proposed to construct a device of the class mentioned which is of simple durable construction, dependable in use and efficient in action, and which can be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:—

Fig. 1 is a perspective view of a device constructed according to this invention.

Fig. 2 is an end elevational view of Fig. 1, but illustrating a pile of newspapers in place immediately before being pressed, and showing the friction plate and carriage spaced from each other and from the top grooved plate as though just being placed in position.

Fig. 3 is a perspective view of the pile per se, shown in Fig. 2.

Fig. 4 is a perspective detailed view of the carriage used in Fig. 2.

Fig. 5 is a schematic perspective view of the press roller showing the dead position and the position downwards past this position.

Fig. 6 is a fragmentary enlarged detailed view of the top portion of a press constructed according to modified form.

The baling press for newspapers and the like comprises a table 10 composed of a horizontal top plate supported by a plurality of legs 11. A press roller 12 is eccentrically supported above the table 10. A pair of spaced vertical arms 13 project from the top of the table 10 and have bearings 14 receiving a shaft 15 which eccentrically connects with the press roller 12. Braces 16 between the vertical arms 13 and the table top 10 serve to reinforce the vertical arms.

A lever 17 is provided for turning the roller 12 downwards to a position rearwards of the dead center. The lever 17 is of substantially U form in plan view and has the free ends of its arms connected upon the sides of the press roller 12 at points remote from the eccentric mounting of the press roller. The lever 17 is also bent out from the horizontal plane when viewed from the side, so that the front portion, indicated by the reference numeral 17′, may rest upon the table top 10 when the lever is in its lowered position. In this latter position the press roller 12 is in the position past its bottom dead center. This may be clearly seen in Fig. 5, wherein the dot and dash lines 18 indicate the

press roller 12 in the dead center position, while the full lines show the roller past this position rearwards. Consequently, the pressure produced by the press roller 12 will be maintained since it merely acts to further rotate the lever 17 anticlockwise as viewed in Fig. 1 and this is not possible in view of the fact that the front end engages against the table top.

A means is also provided for allowing tying of the pressed paper. This means is in the form of a top grooved plate 19 for resting upon the top of a newspaper or the like pile 20, and a bottom grooved plate 21 for being disposed on the bottom of the pile and resting upon the top of the table 10. Wire 22 may be passed around the stack of newspapers 20 through the grooves within the plates 19 and 21. Then the ends of the wire may be bound together in any conventional manner. For example, one method would be in twisting the ends with some appropriate tool.

Since as the lever 17 is moved from its raised to its lowered position to turn the press roller 12 into its operative position, with the result that as the press roller 12 turns it would have a tendency to move the top of the pile of papers out from the superimposed position, a means is provided for preventing such action. This means is in the form of a friction plate 23 for being positioned immediately below the press roller 12 and immediately above a carriage 24 positioned upon the top grooved plate 19. The carriage 24 consists of a frame, which is shown in detail in Fig. 4, supporting a plurality of rollers 25 which are of greater diameter than the height of the frame as clearly shown in Fig. 6 so as to be capable of riding upon the top plate 19.

In order to hold the friction plate 23, the carriage 24 and the top plate 19 temporarily while the pile of papers 20 are stacked into place, a means is provided upon the inner sides of the vertical arms 13′ which is shown in detail in Fig. 6. This means comprises holding racks 26 slightly spaced from the inner sides of the vertical arms 13 and resiliently mounted for being urged against the edges of the parts 23, 24 and 19. Consequently, the edges of these parts should be formed with grooves for coacting with the teeth of the racks.

Stems 27 project from the racks 26 through bushings 28 supported within the vertical arms 13. Expansion springs 29 are arranged coaxially upon the stems 27 and act between the vertical arms 13 and the racks 26 for normally urging them into their operative positions. Heads 30 are formed upon the outer ends of the stems 27. The springs 29 serve to urge the racks 26 against the parts which are to be supported with sufficient pressure so as to accomplish the results desired. It should be noticed that when the press roller 12 is moved to its downward position, it acts against the supported parts which may be moved downwards by merely placing past the teeth of racks.

A means is also provided for adjusting the resilient urge of the springs 29. This means makes use of adjustably supporting the bushings 28. The bushings 28 are formed with peripheral teeth engaged within tap apertures in the arms 13. Heads 31 are formed upon the bushings so that they may be manually turned for changing their positions. The inner ends of the bushings act against one of the ends of the spring 29 so that upon changed positions serve to compress the springs to different degrees.

The operation of the device may be traced by assuming the lever 17 raised. First the plate 21 should be placed upon the table 10 and then the papers to be packed into a bale stacked upon the latter mentioned plate. When a sufficient quantity has been thus stacked, the top plate 19 is placed on the top of the pile, then the carriage 24 upon this plate, and finally the friction plate 23 upon the carriage. Then as the lever 17 is moved into its downward position as shown in Fig. 1, the press roller 12 will turn and press the papers. Preferably, before pressure is applied, wires should be passed through the grooves of the plates 19 and 21 so that these wires may be subsequently joined to tie the papers into a bale.

While I have shown and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:—

1. A baling press for newspapers and the like, comprising a table, a press roller eccentrically supported above said table, and a lever for turning the roller downwards to a position rearwards past dead center, comprising a member substantially of U form and having its free end bent out of a plane of its inner end so as to be capable of resting against the top of the table and holding the press roller past the dead center position.

2. A baling press for newspapers and the like, comprising a table, a press roller eccentrically supported above said table, a lever for turning the roller downwards to a position rearwards past dead center, a friction plate for location beneath said press roller, a carriage with rollers for location beneath said friction plate, a grooved plate for location below said carriage and upon the top of a newspaper or the like pile resting on said table, and another grooved plate interposed

between the bottom of the pile and the top of the table.

3. A baling press for newspapers and the like, comprising a table, a press roller eccentrically supported above said table, a lever for turning the roller downwards to a position rearwards past dead center, a friction plate for location beneath said press roller, a carriage with rollers for location beneath said friction plate, a grooved plate for location below said carriage and upon the top of a newspaper or the like pile resting on said table, another grooved plate interposed between the bottom of the pile and the top of the table, and means for resiliently supporting said friction plate, carriage and top grooved plate for the purpose stated.

4. A baling press for newspapers and the like, comprising a table, a press roller eccentrically supported above said table, a lever for turning the roller downwards to a position rearwards past dead center, a friction plate for location beneath said press roller, a carriage with rollers for location beneath said friction plate, a grooved plate for location below said carriage and upon the top of a newspaper or the like pile resting on said table, another grooved plate interposed between the bottom of the pile and the top of the table, and means for resiliently supporting said friction plate, carriage and top grooved plate for the purpose stated, comprising racks resiliently mounted and urged against the sides of said supported parts.

5. A baling press for newspapers and the like, comprising a table, a press roller eccentrically supported above said table, a lever for turning the roller downwards to a position rearwards past dead center, a friction plate for location beneath said press roller, a carriage with rollers for location beneath said friction plate, a grooved plate for location below said carriage and upon the top of a newspaper or the like pile resting on said table, another grooved plate interposed between the bottom of the pile and the top of the table, and means for resiliently supporting said friction plate, carriage and top grooved plate for the purpose stated, comprising racks resiliently mounted and urged against the sides of said supported parts, and means for changing the resilient urge of said racks.

In testimony whereof I have affixed my signature.

HOLDEN VALENTINE RASMUSSEN.