

No. 683,196.

Patented Sept. 24, 1901.

E. C. BISBEE.
OIL CAKE PRESS.

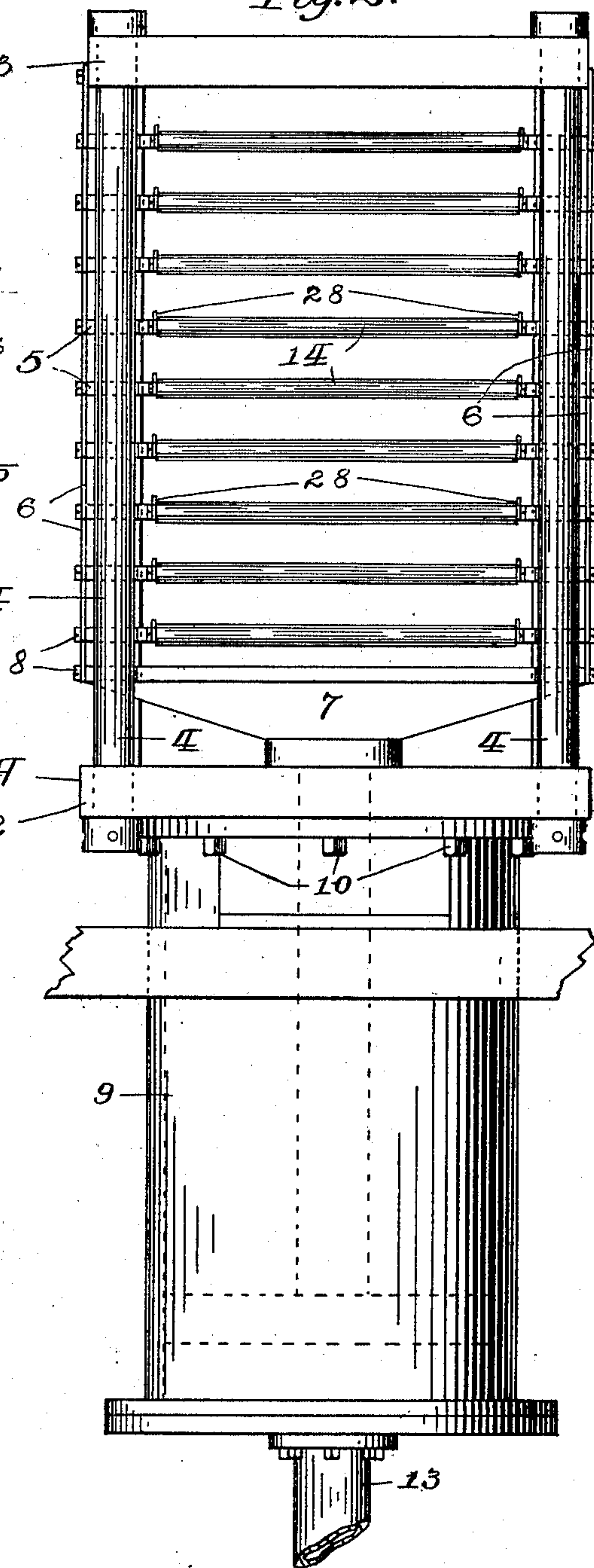
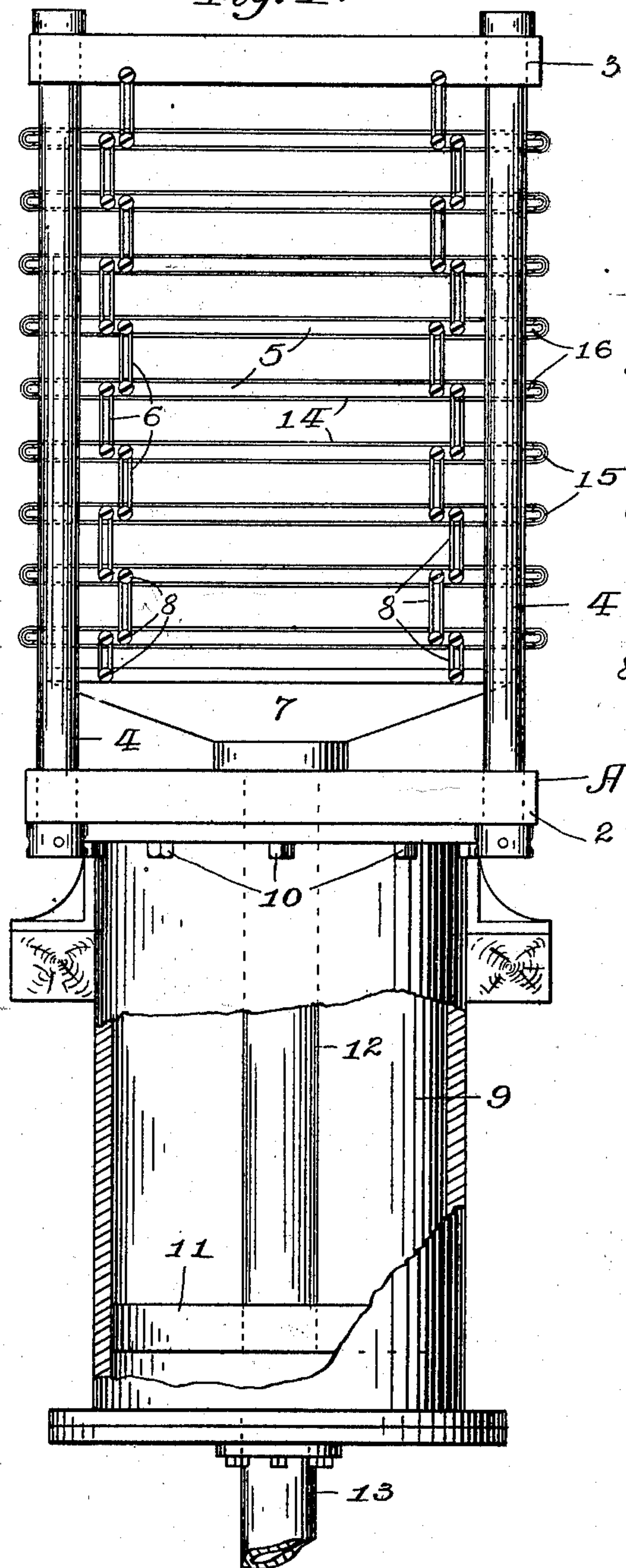
(Application filed Aug. 8, 1900.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

Fig. 2.



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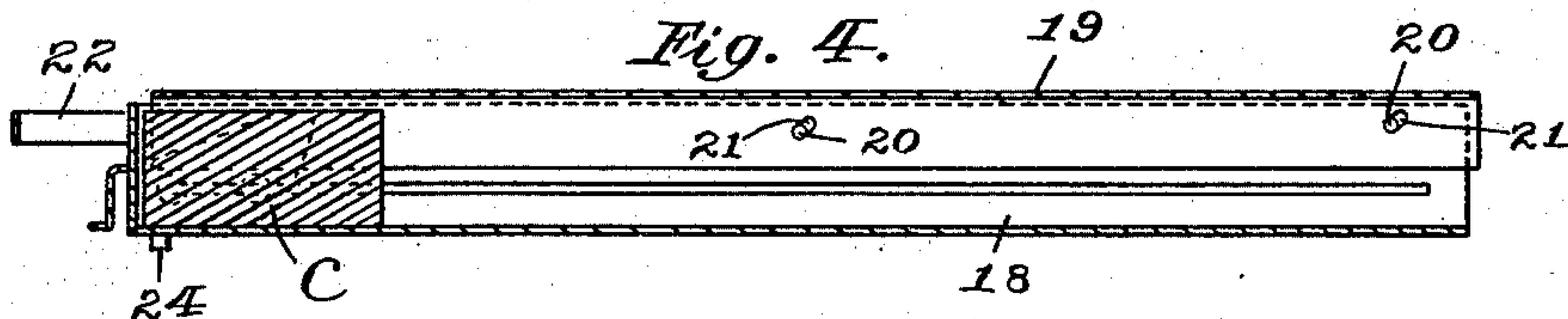
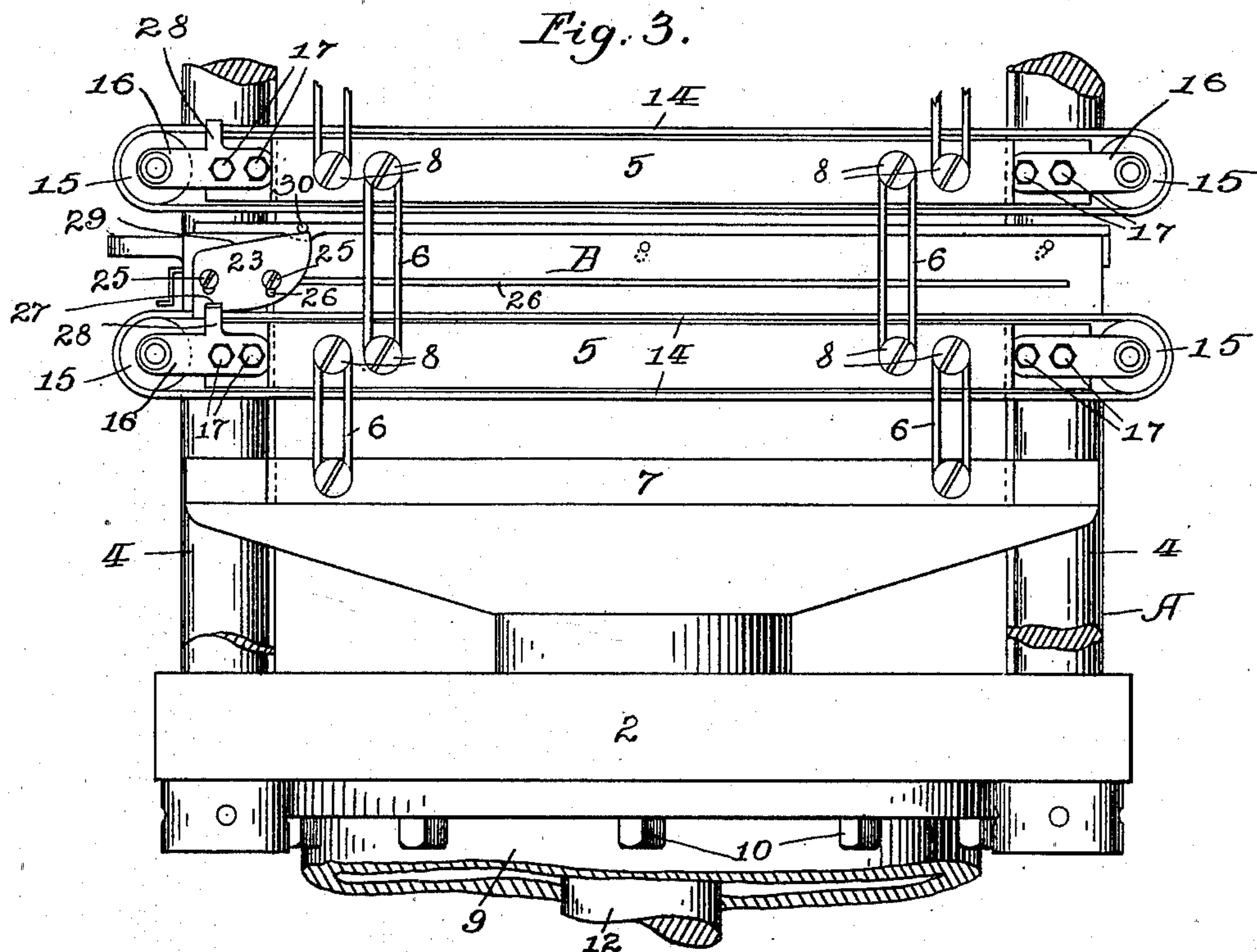
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3 Sheets—Sheet 2.



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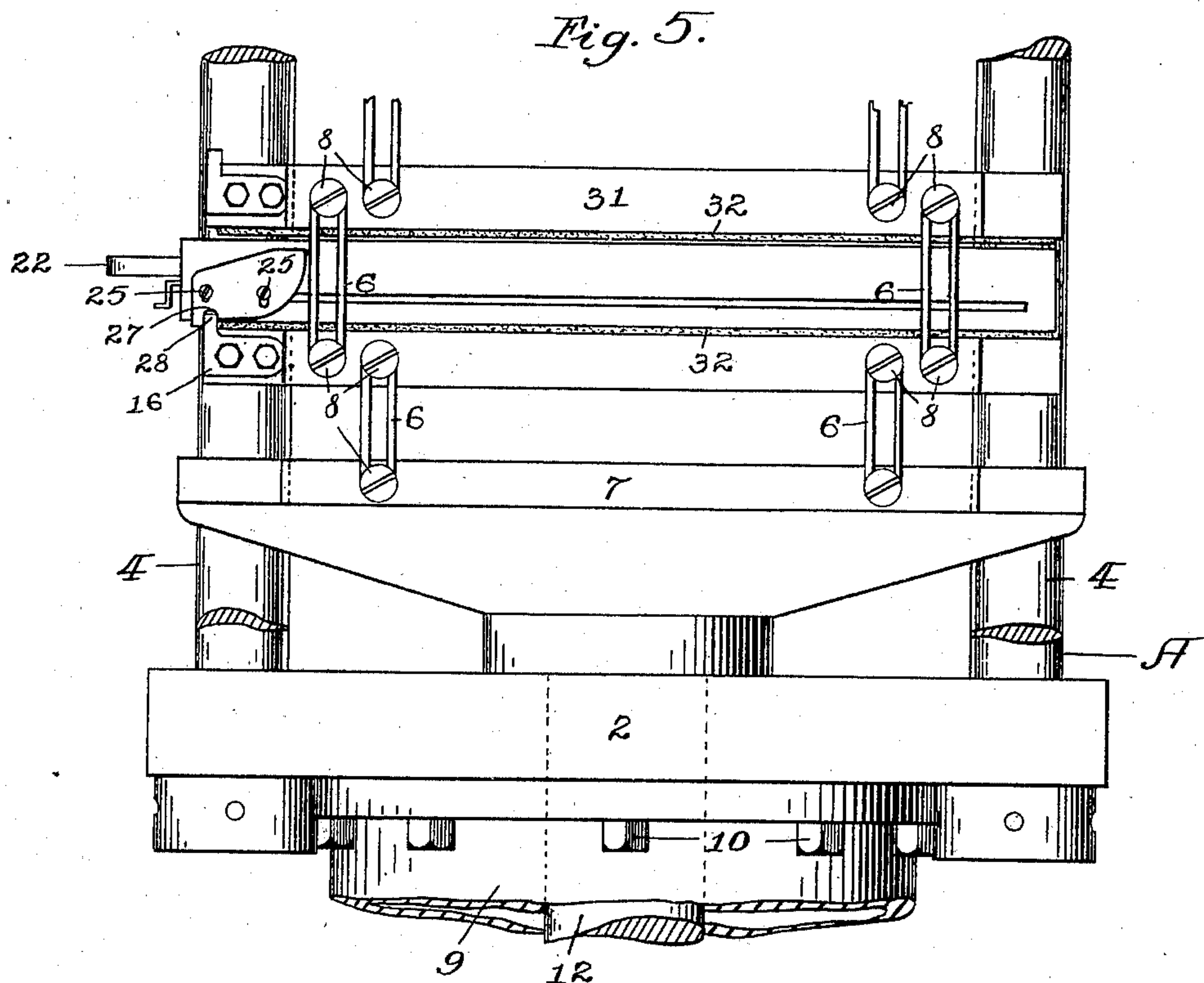
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

EDGAR C. BISBEE, OF MINNEAPOLIS, MINNESOTA.

OIL-CAKE PRESS.

SPECIFICATION forming part of Letters Patent No. 683,196, dated September 24, 1901.

Application filed August 8, 1900. Serial No. 26,227. (No model.)

To all whom it may concern:

Be it known that I, EDGAR C. BISBEE, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Oil-Cake Presses, of which the following is a specification.

My invention relates to improvements in oil-cake presses, the object being to provide means for extracting oil from flax or other oleaginous seed.

The machine herein described may be used with the oil-cake-forming apparatus described in my Patent No. 660,718, dated October 30, 1900, for oil-cake-forming apparatus.

My invention is designed to press the meal into cakes and to extract the oil therefrom in an efficient manner not requiring the meal to be wrapped in cloths when placed in the press. I accomplish the ejection from the molding-pan and stripping of the cakes automatically. These operations are now performed by hand.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of my improved oil-meal press, showing part of the cylinder in section. Fig. 2 is a front elevation of Fig. 1. Fig. 3 is a detail side elevation of a portion of the press, showing the molding-pan in position between the plates in readiness to be withdrawn and to have the meal contained therein ejected. Fig. 4 is a vertical longitudinal section of the molding-pan used with my improved press, and Fig. 5 is a detail vertical section of an alternate construction of press.

In the drawings let A represent the frame of my improved machine, which consists of the base 2 and head 3, which are strapped together and supported by standards 4. Between the base and head are suspended the press-plates 5 by links 6, when the working parts of the press are in normal position. These links are fastened to the base 3, the ram-head 7, and the press-plates 5 by screws 8. To the lower side of the base is fastened the cylinder 9 by bolts 10. The piston 11 in the cylinder carries the ram-head by rod 12. The cylinder is connected to the source of pressure (not shown) by pipe 13. For convenience in stripping from the cakes each press-plate may be provided with cloths 14,

which are endless in form, to pass around rollers 15. These rollers are journaled on the arms 16, which are fixed to the plates by bolts 17. It is thus seen the roller-cloths stretch around each of the plates over the rollers and are free to revolve. The molding-pans are adapted to be passed over the cloths and plates to the position as shown by B in Fig. 3. Each pan consists of a frame for forming the meal into cakes, which is composed of lower and upper trays 18 and 19. The lower tray is fastened to the upper tray by pins 20, which are free to travel in the inclined slots 21 in the sides of the upper tray, so that the trays will expand when the molding-pan is filled and placed in the press. The closed end of the pan is provided with the handle 22, and the ejector C is connected so as to slide freely from end to end in the pan by means of the pivoted cams 23 and 24. The screws 25, fastening the cams to the ejector, pass freely through slots 26, and the notches 27 in the cams are adapted to engage the lugs 28, which extend vertically from the journal-arms 16 on each side of the roller-cloths, so as to guide the pans when being placed on the trays. When a pan is thus positioned, the handle is grasped by the hand and the pan drawn from the press. The movement throws the edge 29 of the cams into engagement with pins 30, which are fastened to and cause the upper section of the pan to rise, thus loosening the meal contained therein. The ejector C remains stationary relative to the plates, but slides in the pan and causes the cake to be deposited upon the roller-cloth, whereupon the pan is lifted from the plate and again ready for refilling. After the cakes have been deposited on the cloths the press is operated by the ram as is ordinarily done and the oil extracted from the meal. The ram is then released and the cakes removed from the press. As the press-plates are lowered the cloth on the lower side of each plate disengages from the top side of the cake, and as the cakes are removed from the press the cloth on the top side rolls around the plate and strips from the cake.

It is obvious that the device is operative without cloths or with cloths without rollers.

In case a pan is constructed open on top the distance between the plates of the press

in the use of such a pan should be slightly in excess of the thickness of the pan, so that the top of the meal cake will bear against the lower face of the plate 31, as shown in Fig. 5.

5 This plate is adapted to form a backing for the meal when the ejector is in operation and the pan withdrawn from between the plates. Mats 32, of hair or other suitable material, should in this construction then be used to
10 protect the plates from becoming foul and sticky through the oxidation of the oil. Such mats may also be used in connection with my closed pan.

Having described my invention, what I
15 claim as new, and desire to protect by Letters Patent, is—

1. An oil-cake press, consisting of press-plates adapted to receive a molding-pan thereon provided with an ejector, mechanism for
20 operating said plates, and means carried by said plates for engaging the ejector of the molding-pan.

2. A machine of the class described, consisting in combination with press - plates
25 adapted to receive a molding-pan thereon provided with an ejector, of mechanism for operating said plates, and stops for the ejector of the molding-pan.

3. An oil-cake press, consisting of plates
30 adapted to receive a molding-pan thereon, provided with an ejector, drive mechanism

for operating said plates, lugs for engaging the ejector of the molding-pan, and cloths carried by rollers on said plates.

4. An oil-cake press, consisting of press-plates between which the meal is adapted to
35 be placed, and cloths passing around each of said plates; whereby as the cake is withdrawn the cloths are stripped, for the purposes specified.
40

5. In a machine of the class described, a frame carrying press-plates, having cloths which render around each of said plates, for stripping the cakes, in combination with suitable drive mechanism for said plates.
45

6. An oil-cake press, consisting of press-plates, adapted to receive a molding-pan thereon, provided with an ejector, and having cloths passing around the same, and lugs carried by the plates for guiding the pan and
50 engaging the ejector; said plates being protected by cloths passing around the same, whereby as the cakes are removed from the press said cloths are adapted to strip.

In testimony whereof I have signed my
55 name to this specification in the presence of two subscribing witnesses.

EDGAR C. BISBEE.

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