

985,583.

B. GRANGER.
OIL CAKE PRESS.
APPLICATION FILED DEC. 30, 1908.

Patented Feb. 28, 1911.
2 SHEETS—SHEET 1.

Fig. 1.

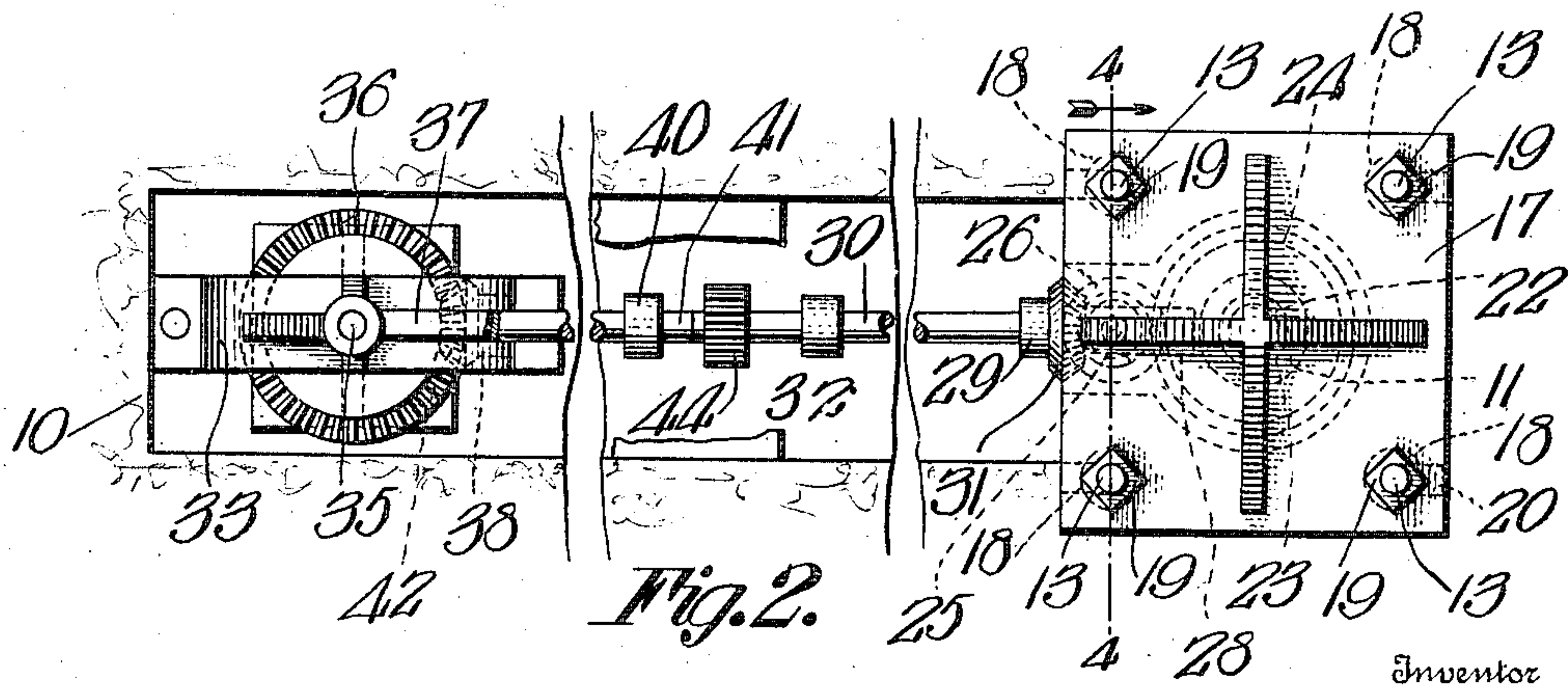
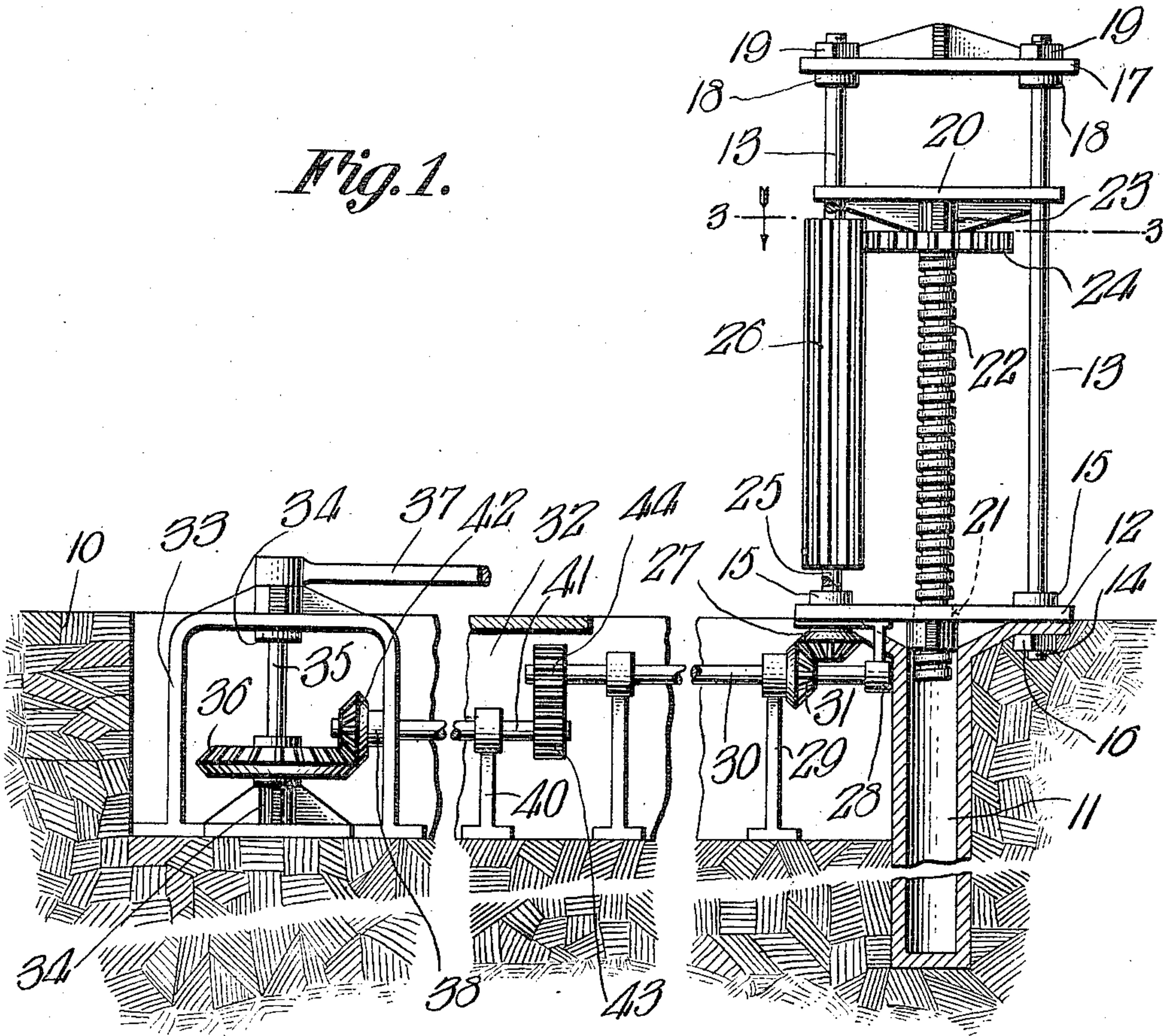


Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

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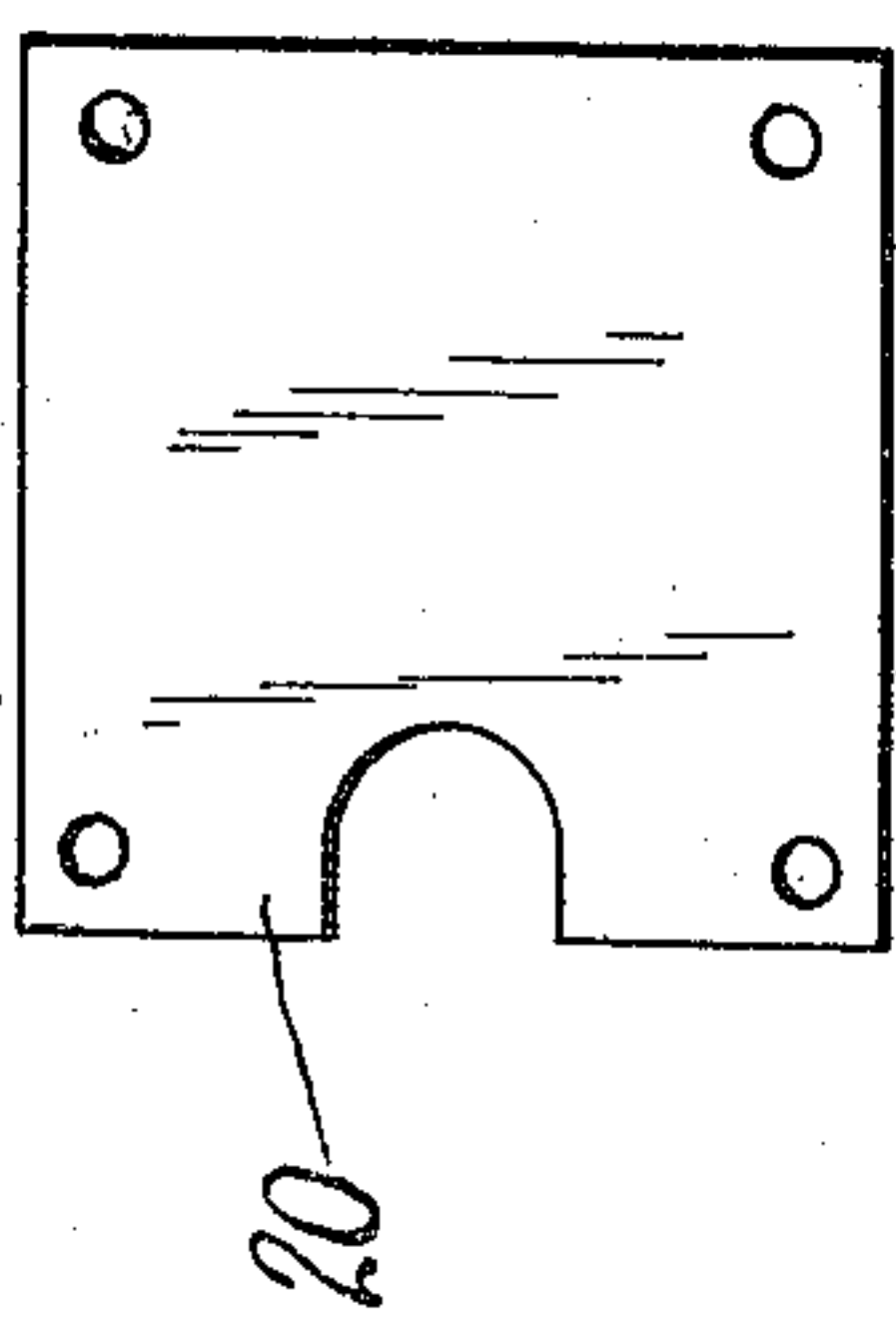
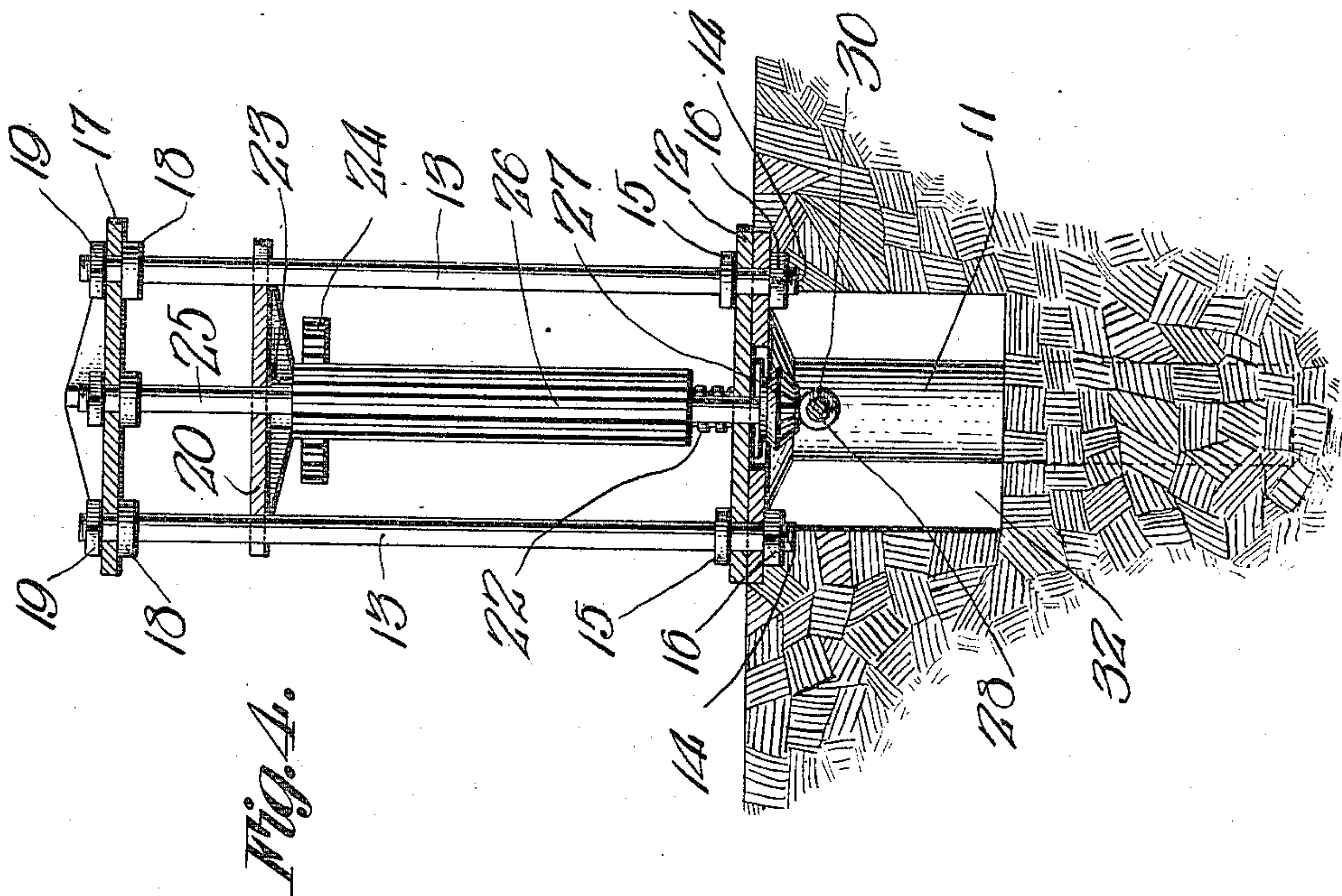


Fig. 3.

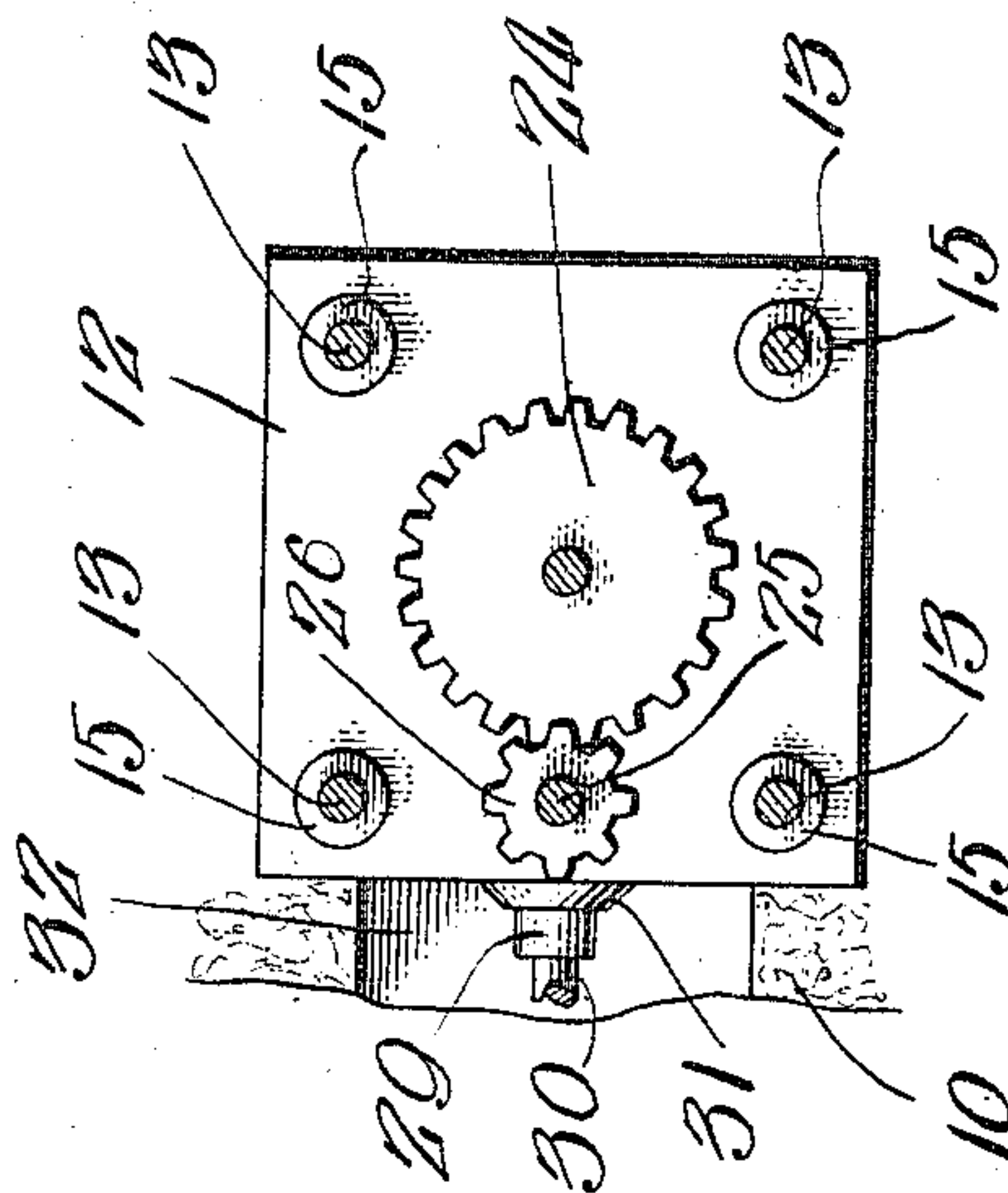


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

BRUNO GRANGER, OF ROCHESTER, NEW YORK.

OIL-CAKE PRESS.

985,583.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BRUNO GRANGER, a citizen of the United States, residing at Rochester, in the county of Monroe, State of New York, have invented certain new and useful Improvements in Oil-Cake Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to presses for compressing material such as oil cakes and the like together with a novel means of operating the same.

One object of the invention is to provide a novel form of press of the character described in which gearing shall be used for the purpose of actuating the press, this gearing being of a simple and efficient construction.

With the above and other objects in view, the invention consists, in general, of a screw press provided with a novel form of gearing to operate the same.

The invention further consists in certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings, and specifically set forth in the claim.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:—Figure 1 is a side elevation of a press and horse power for actuating the same as constructed in accordance with this invention. Fig. 2 is a top plan view thereof. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a section on the line 4—4 of Fig. 2. Fig. 5 is a detailed view of a certain platen used in connection with this invention.

The numeral 10 indicates the foundation for the device and in one part of the foundation immediately below the press is held a cylinder 11 whereon is mounted the press base plate 12. The press base plate 12 is held upon the flange of the cylinder 11 by means of tie rods 13 which are provided with threaded lower ends 14. These threaded lower ends pass through suitable holes in the corners of the base plate 12 and the flange of the cylinder 11 and the rods are further provided with collars 15 to limit the movement of said rods through said holes. Nuts 16 serve to hold the cylinder and base plate together. Upon the upper ends of

these rods 13 is mounted a top platen 17, said platen being secured between collars 18 and nuts 19 on said rods. Between the base plate 12 and platen 17 is a bottom movable platen 20 provided with suitable perforations or guide slots to engage the rods 13 and permit the movement of said lower platen thereover. The base plate 12 is provided with a central threaded aperture 21 and through this aperture passes a screw 22 which terminates in a journal 23 held within a recess in the platen 20. Between the journal 23 and the body of the screw 22 there is fixedly mounted on said screw a gear 24.

Between two of the rods 13 is mounted a vertical shaft 25 whereon is keyed a gear drum 26, said gear drum being sufficiently long to accommodate the full movement of the platen 20. The gear drum 26 meshes with the gear 24. The lower end of the shaft 25 extends through the base plate 12 and upon that lower end is keyed a beveled gear 27.

Mounted on the under side of the base plate 12 is a bearing 28 and bolted down to the foundation 10 is a similar bearing 29. A shaft 30 is held to rotate in these bearings, and on this shaft is keyed a pinion 31 which meshes with the beveled gear 27.

At 32 is indicated a pit wherein the bearing 29 is mounted and in that pit is positioned a frame 33 provided with centrally disposed vertically arranged bearings 34. In the bearings 34 is held to rotate a shaft 35 whereon is mounted a beveled gear 36. Upon the upper end of the shaft 35 is mounted a horse sweep 37. In the frame 33 is further provided a bearing 38 and adjacent the bearing 29 is a bearing 40. A shaft 41 is held in the bearings 38 and 40 and upon the end of this shaft is mounted a beveled gear 42 which meshes with the beveled gear 36 previously described. Upon the shaft 41 there is also provided a gear 43 and upon the shaft 30 there is a gear 44 which meshes with the gear 43.

It will now be apparent that as the sweep 37 is revolved by means of draft animals, the gear 36 will be rotated and this will transmit its motion to the various gears 42, 43 and 44 and the shafts 41 and 30 to the beveled gear 31. This will rotate the shaft 25 and consequently the gear drum 26. This in turn rotates the gear 24 and causes the screw 22 to rotate in the threaded open-

ing 21. The rotation of the screw 22 will raise or lower the platen 20 according to the direction of that rotation and this will operate to carry the gear 24 with it along the drum 26.

5 The press thus described is simple in its nature, efficient in its operation, and of low cost of manufacture.

10 It is obvious that minor changes may be made in the form and proportions of the device without departing from the material principles thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described but it is
15 wished to include all such as properly come within the scope of the appended claim.

Having thus described the invention, what is claimed as new, is:—

20 In a press of the kind described, a base plate of rectangular form provided with bolt receiving openings adjacent its corners and a vertically disposed bearing between two of said openings, a fixed platen corresponding in form to the base plate and pro-

vided with bolt receiving openings alined 25 with the openings of the base plate and a bearing alined with the first mentioned bearing, bolts passing through said openings and holding the base plate and platen in spaced relation, a shaft mounted in said bearings, 30 a barrel gear fixed to said shaft, a movable platen mounted to slide on said bolts and provided with an opening to permit the passage of said gear, a bearing located centrally of the under side of said movable 35 platen, a nut carried by said base plate, a screw passing through said nut and having its upper end journaled in the bearing on said platen, a gear fixed to said screw and meshing with the barrel gear, and means to 40 rotate said shaft.

In testimony whereof, I affix my signature, in presence of two witnesses.

BRUNO GRANGER.

Witnesses:

CALSGERS O. GUILLEME,
JOHN FURCO.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
