

No. 681,984.

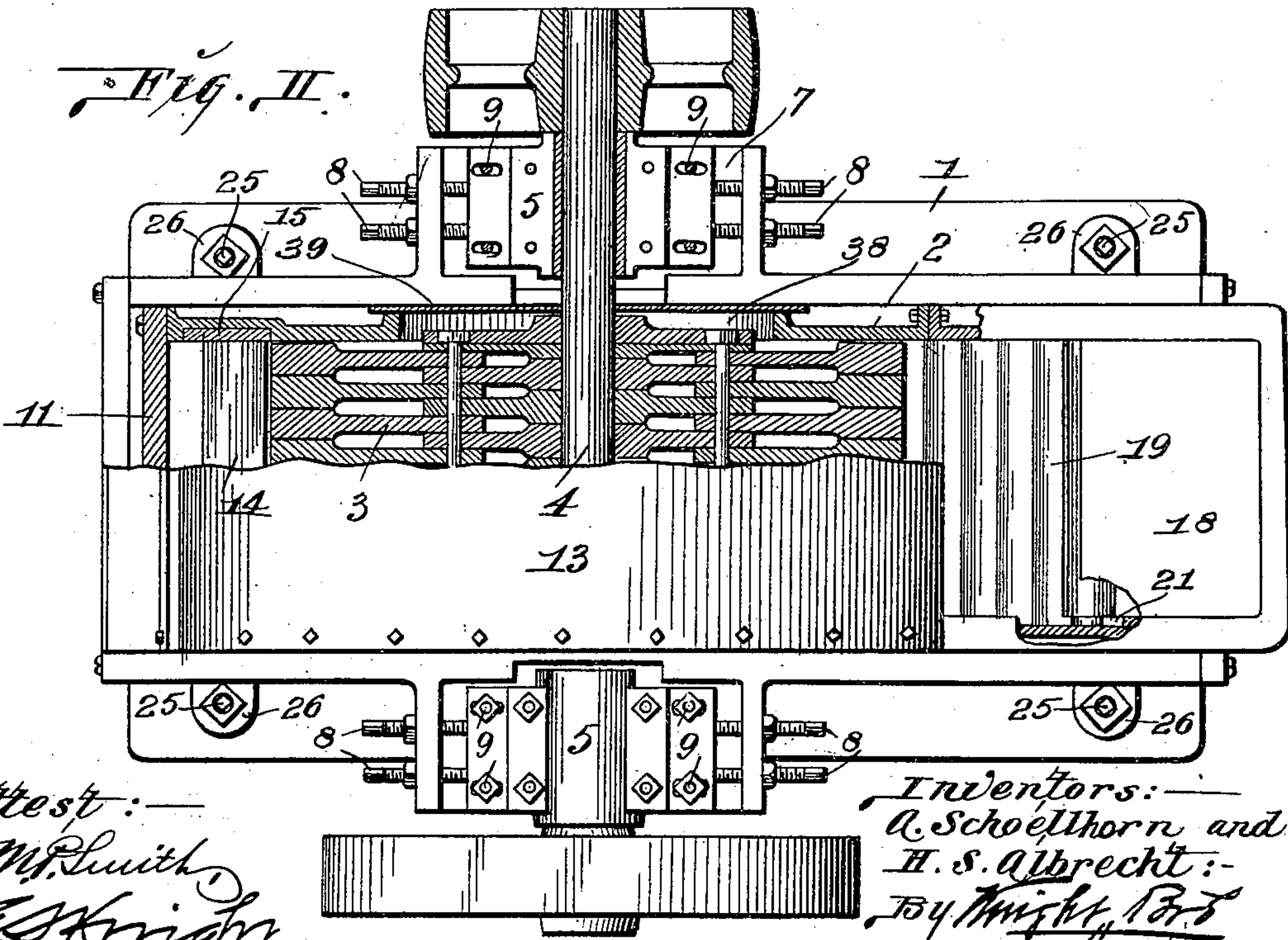
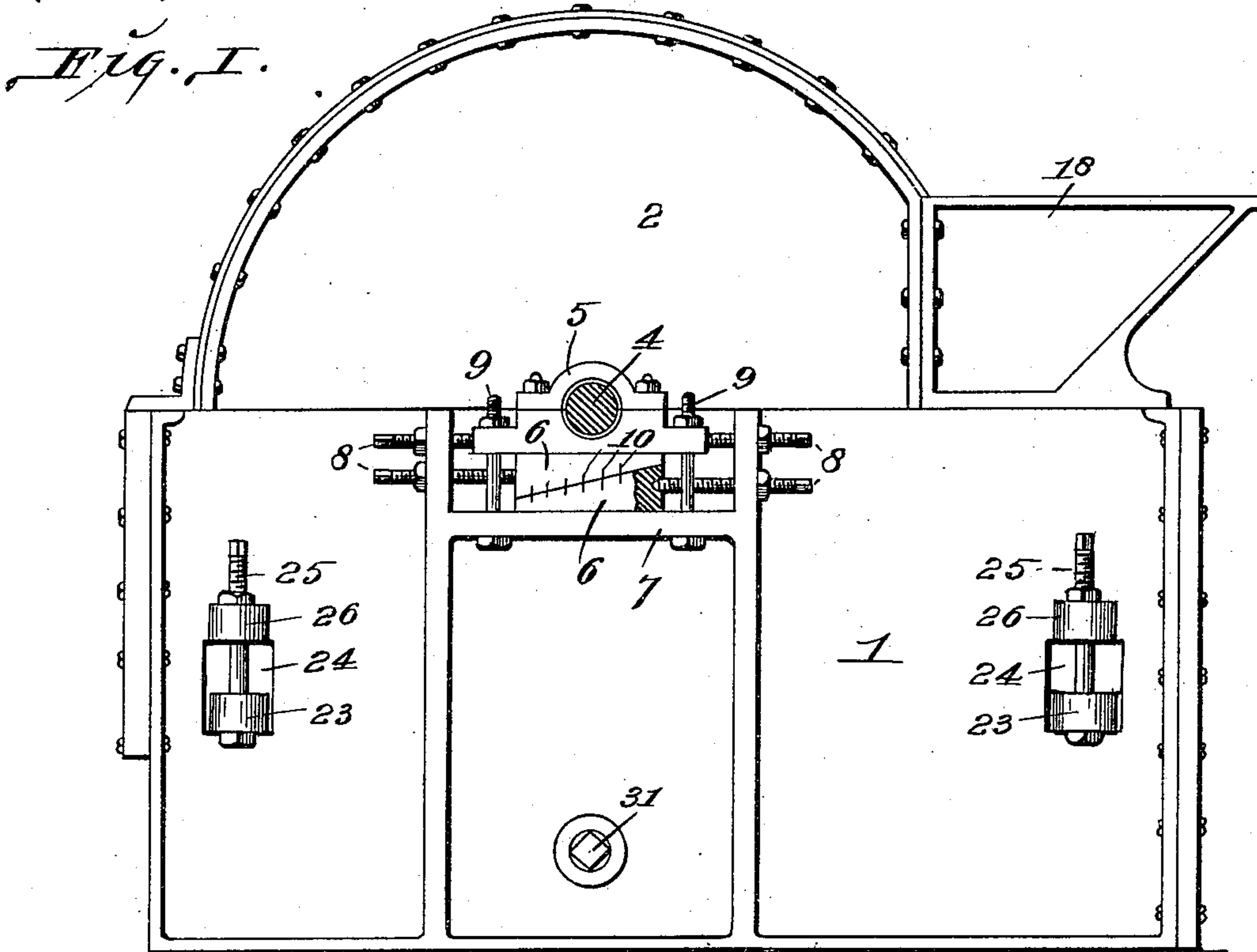
Patented Sept. 3, 1901.

A. SCHOELLHORN & H. S. ALBRECHT.
PULVERIZER.

(Application filed Feb. 11, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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Fig. III.

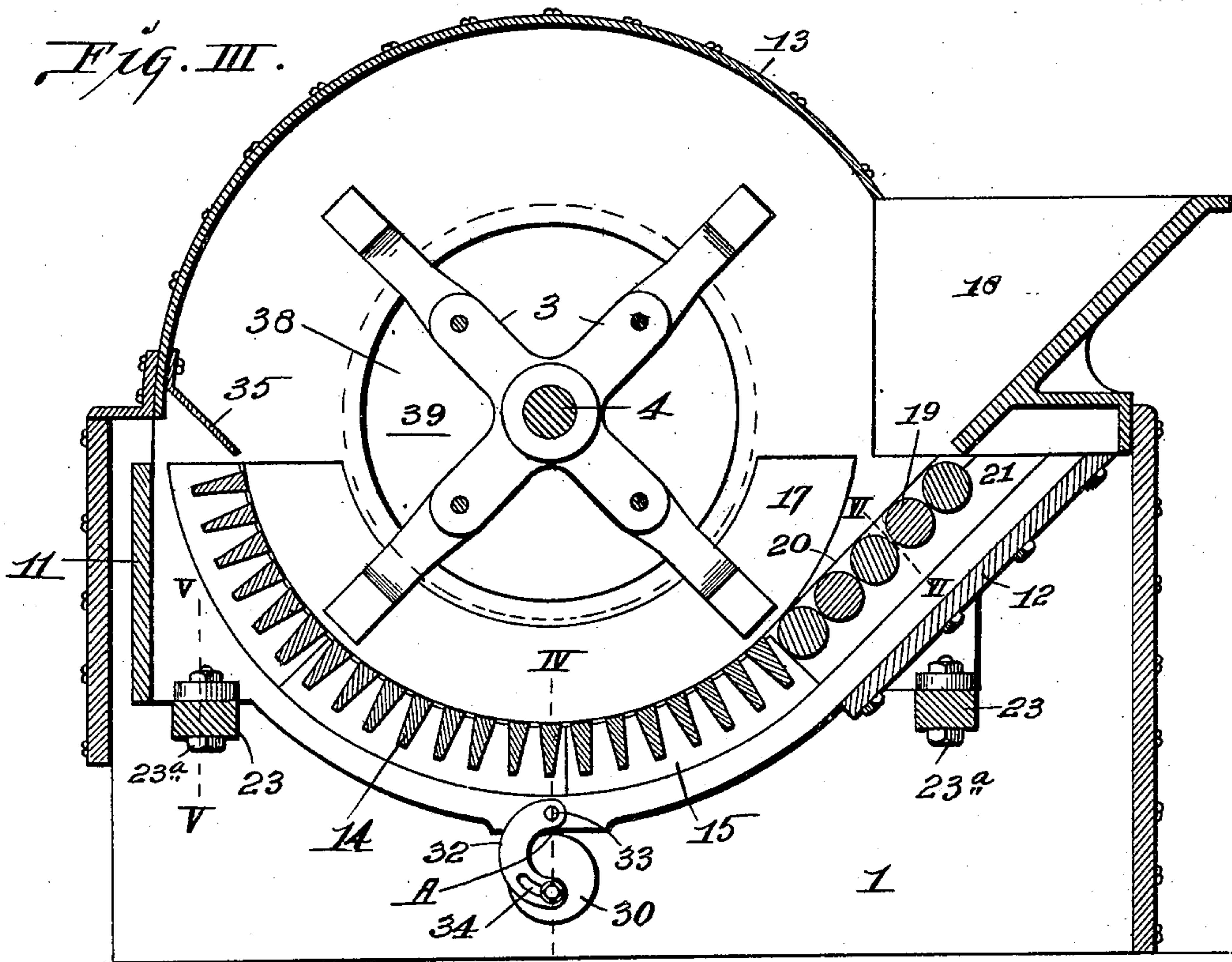


Fig. IV.

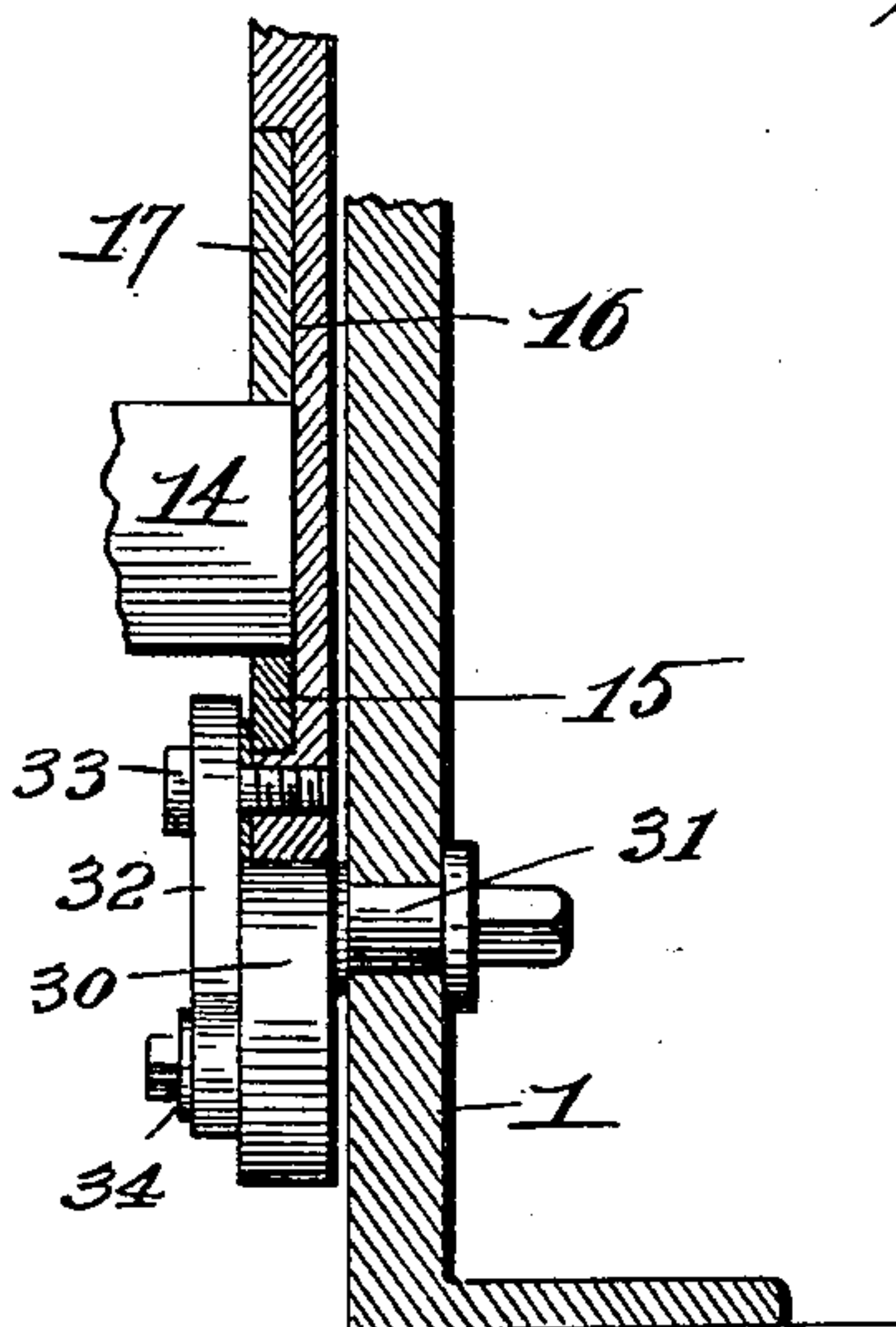


Fig. VI.

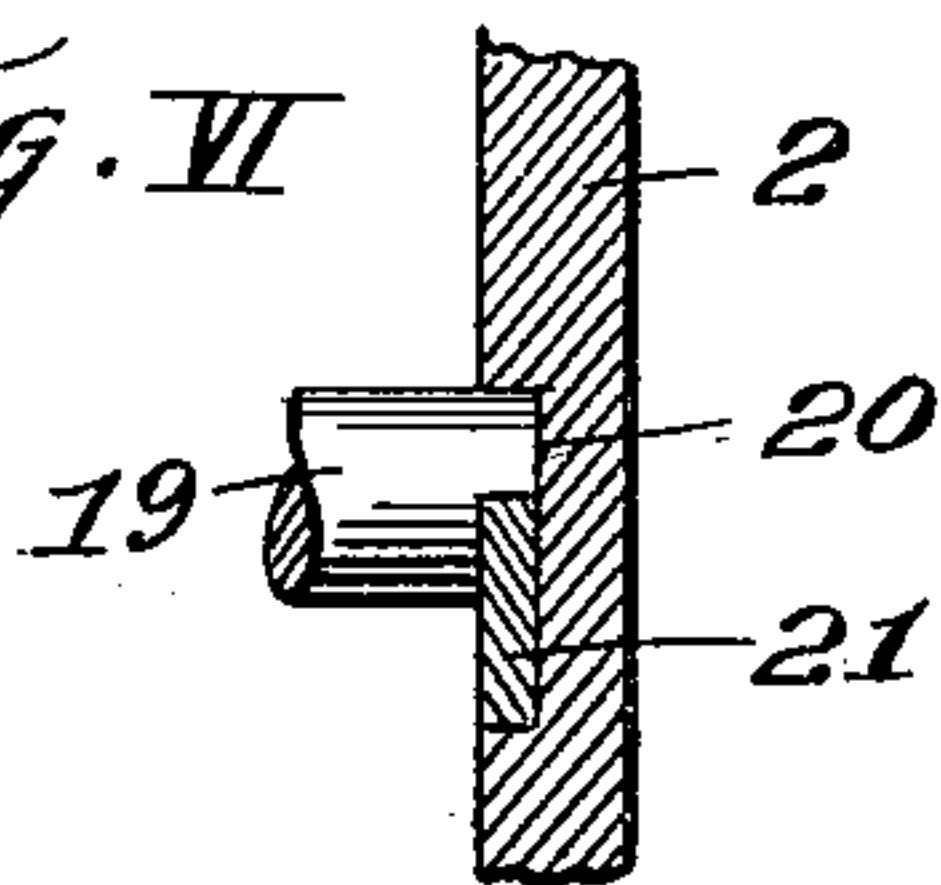
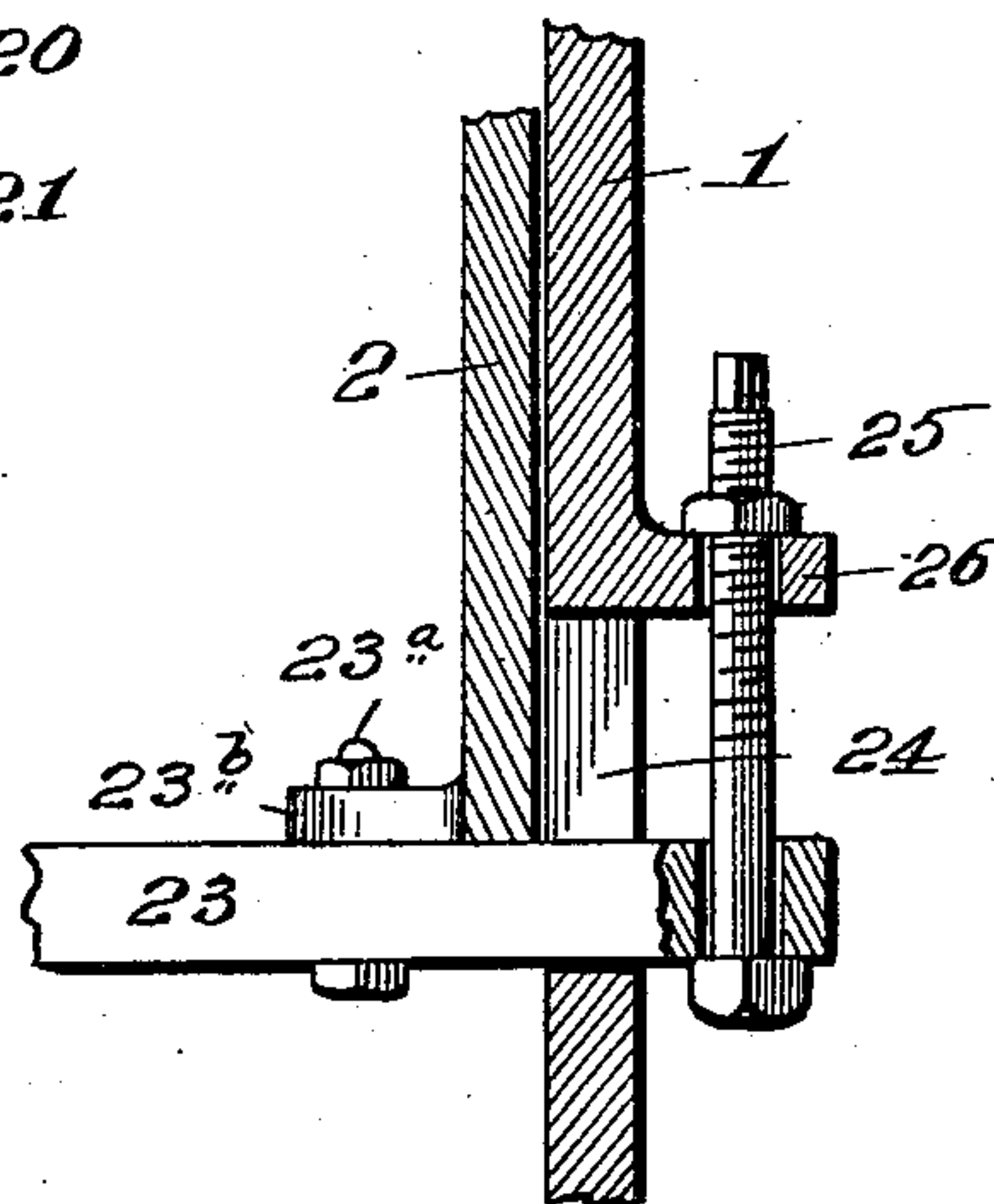


Fig. V.



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UNITED STATES PATENT OFFICE.

AUGUST SCHOELLHORN AND HERMAN S. ALBRECHT, OF ST. LOUIS,
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PULVERIZER.

SPECIFICATION forming part of Letters Patent No. 681,984, dated September 3, 1901.

Application filed February 11, 1901. Serial No. 46,779. (No model.)

To all whom it may concern:

Be it known that we, AUGUST SCHOELLHORN and HERMAN S. ALBRECHT, citizens of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Pulverizers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to certain improvements in machines for pulverizing various materials, such as clay, shale, asphaltum, &c.

The principal feature of our present invention relates to the manner in which the screen of the pulverizer can be effectually and quickly adjusted toward the beater as the arms of the latter become worn away, so that a substantially uniform distance may be maintained between the ends of the beater-arms and the screen at all times.

This invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a side view of our improved machine. Fig. II is a top or plan view, part in horizontal section. Fig. III is a vertical section of the machine. Fig. IV is an enlarged detail vertical sectional view taken on line IV-IV, Fig. III. Fig. V is an enlarged detail vertical section taken on line V-V, Fig. III. Fig. VI is an enlarged detail vertical section taken on line VI-VI, Fig. III.

Referring to the drawings, 1 represents the lower part of the housing or casing, and 2 the upper part.

3 represents the beater, the shaft 4 of which is journaled in boxes 5, supported by the lower part of the housing. The boxes rest upon wedges 6, supported by ledges 7 on the outside of the part 1 of the housing. These wedges can be adjusted by set-screws 8 to raise and lower the beater, and when adjusted the boxes are tightened and held in position by bolts 9. The beater can thus be moved to and from the cage of the machine to maintain the proper distance between the arms of the beater and the screen or cage. There is a pair of wedges 6 on each side of the machine, and we prefer to mark them off, as shown at 10, Fig. I, so that when the wedges

on one side of the machine are adjusted those on the other side may be adjusted to the same extent by following the information indicated by the marks.

The part 2 of the housing consists of sides fitting within the part 1 and connected together by a back plate 11 and a front plate 12. The upper parts of the sides are connected by a cover 13 and the lower parts carry the screen or cage 14, consisting of bars fitted into notched plates 15, located in grooves 16, formed in the inner faces of the sides of the upper part of the housing, the bars being held in the plates 15 by the wearing-plates 17, that also fit in the grooves 16. The hopper 18 is bolted to and carried by the upper part of the housing, and beneath the hopper are rollers 19, likewise carried by the upper part of the housing, these rollers fitting in grooves 20, formed in the upper part of the housing, in which are also located plates 21, grooved out to receive the rollers. The upper part of the housing rests upon and is supported by bars 23, the ends of which fit in slots 24, formed in the sides of the lower part of the housing, as shown in Figs. I and V.

25 represents bolts that pass through the outer ends of the bars 23 and through perforated ears 26 on the outside of the part 1 of the housing. It will thus be seen that the upper part of the housing, carrying with it the screen 14, can be raised and lowered through means of the bolt 25, so that as the ends of the arms of the beater become worn away the screen can be moved upwardly to compensate for the wear, and thus the proper distance be maintained between the ends of the arms of the beater and the cage, and this is accomplished in a very simple and effective way by mechanism that is not liable to get out of order and which can be manipulated by any inexperienced person with the use of an ordinary wrench. In large machines especially it may be desirable to provide a support for the inner part of the housing in addition to the bolts 25, and for this purpose we provide eccentrics 30, (see Figs. III and IV,) carried by studs 31, fitted in the lower part of the housing, and the outer ends of which are made non-circular to receive a wrench. These eccentrics bear against the sides of

the inner part of the housing, as shown at A, Fig. III, and when the cage is to be adjusted by raising or lowering the upper part of the housing the eccentrics are turned; and when
5 moved the eccentrics are held to their adjustment by links 32, pivoted at 33 to the upper part of the housing, and the lower ends of which have a slot-and-bolt connection 34 with
10 34 the links will be locked to the eccentrics and the latter held from movement after an adjustment has been made.

35 represents a shield secured to the upper part of the housing, on the inside thereof and
15 at the back of the machine, which acts to prevent the material being thrown by the beater over the rear of the screen.

We have shown the upper portion of the housing connected to the bars 23 by means
20 of bolts 23^a passing through the bars and through ears 23^b, formed on the upper portion of the housing. The sides of the upper portion of the housing are formed with openings 38, these openings being closed by disks 39,
25 supported by the shaft 4, as seen in Fig. II, which in all positions maintain the closure of the end openings.

We claim as our invention—

1. In a beater, the combination of a hous-
30 ing consisting of a lower portion and an upper portion fitting within the lower portion, a screen carried by the upper portion of the housing, a beater carried by the lower portion of the housing, eccentrics journaled in
35 the lower portion of the housing and which

bear against the bottom of the upper portion of the housing, and links pivoted to the upper portion of the housing, and having a slot-and-bolt connection with said eccentric, substantially as set forth. 40

2. The combination of a housing consisting of a lower portion, an upper portion fitting within and adjustable up and down in the lower portion, and having enlarged openings in its end walls, said upper portion carrying
45 a screen; and a beater having its shaft extended through the openings in the upper housing and mounted in bearings susceptible of vertical adjustment; whereby space for the adjustment of the beater-shaft is obtained by
50 the adjustment of the housing.

3. The combination of a housing consisting of a lower portion, an upper portion fitting within and adjustable up and down in the lower portion, and having enlarged openings
55 in its end walls, said upper portion carrying a screen; and a beater having its shaft extended through the openings in the upper housing and mounted in bearings susceptible of vertical adjustment; whereby space for the
60 adjustment of the beater-shaft is obtained by the adjustment of the housing, the shields or disks 39 mounted on the beater-shaft and in all positions maintaining the closure of the end openings.

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HERMAN S. ALBRECHT.

In presence of—

E. S. KNIGHT,
N. V. ALEXANDER.