No. 885,891. PATENTED APR. 28, 1908.

A. TROMBLEE.

FEEDING DEVICE FOR SULFUR BURNERS.

APPLICATION FILED JULY 3, 1907.

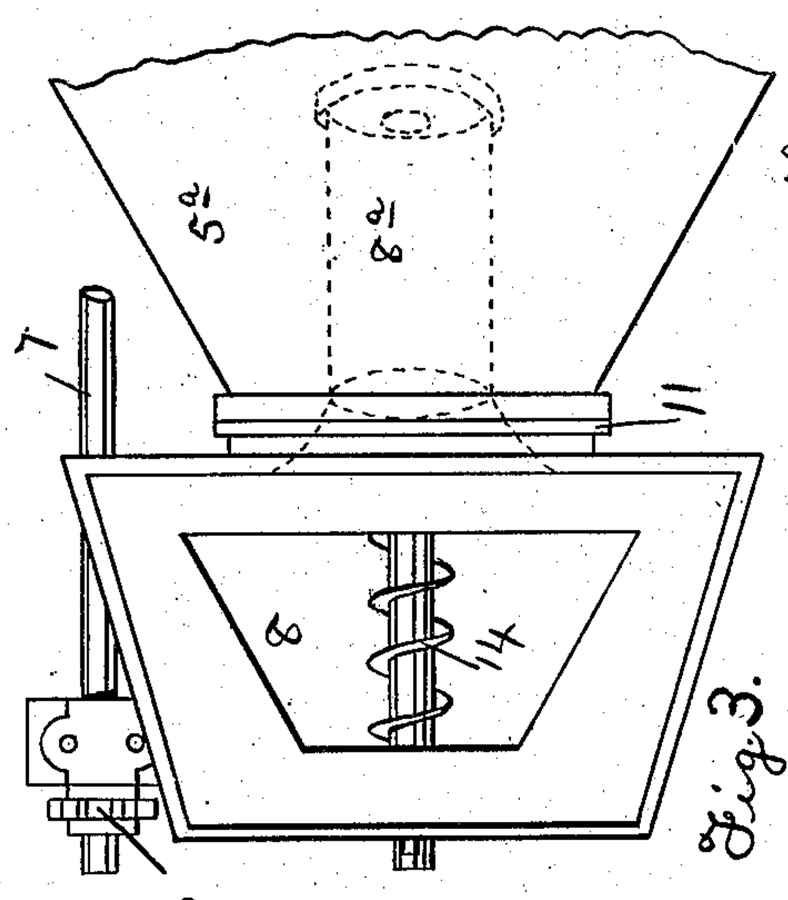

Fig. 3.

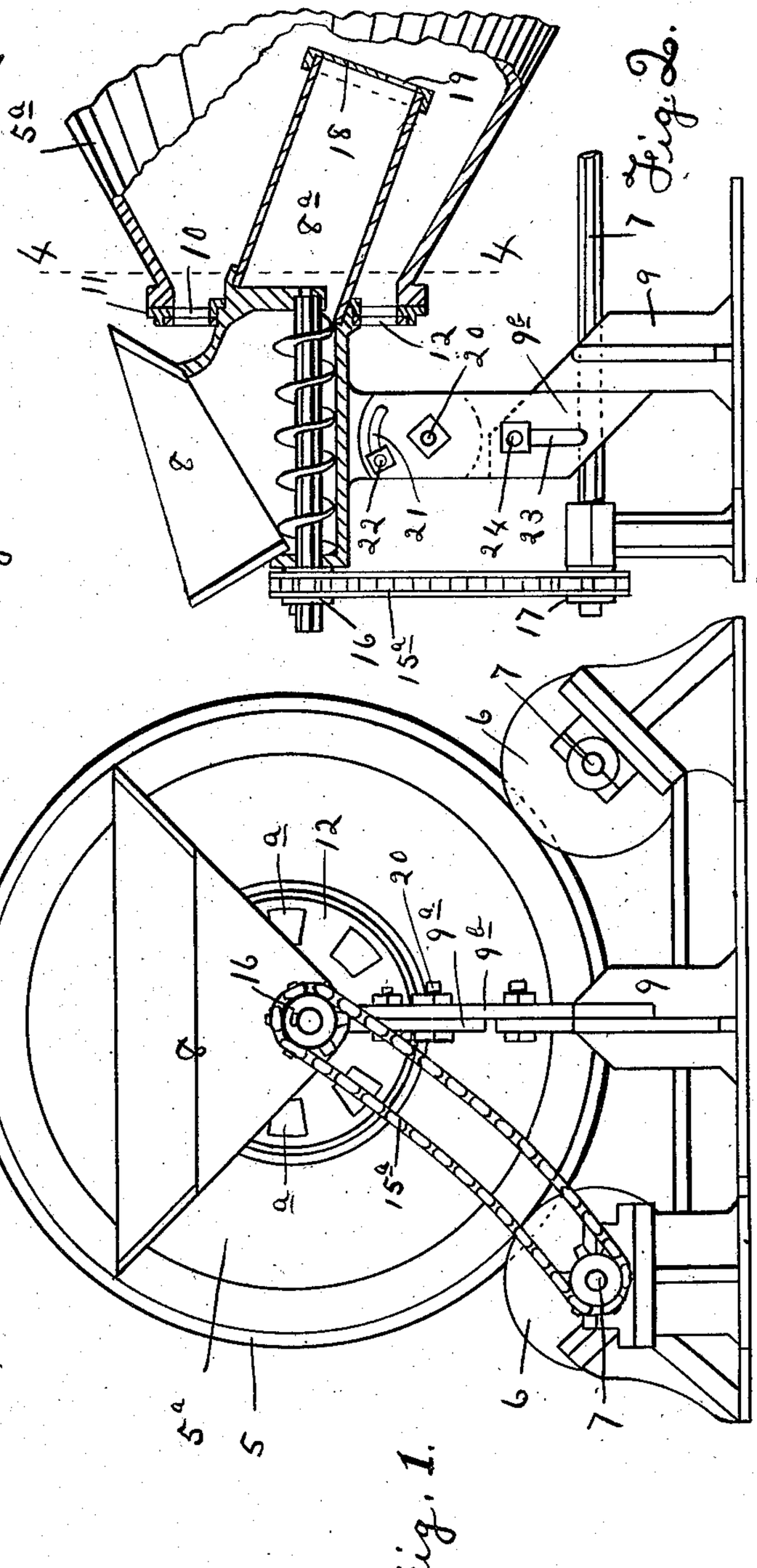

Fig. 2.

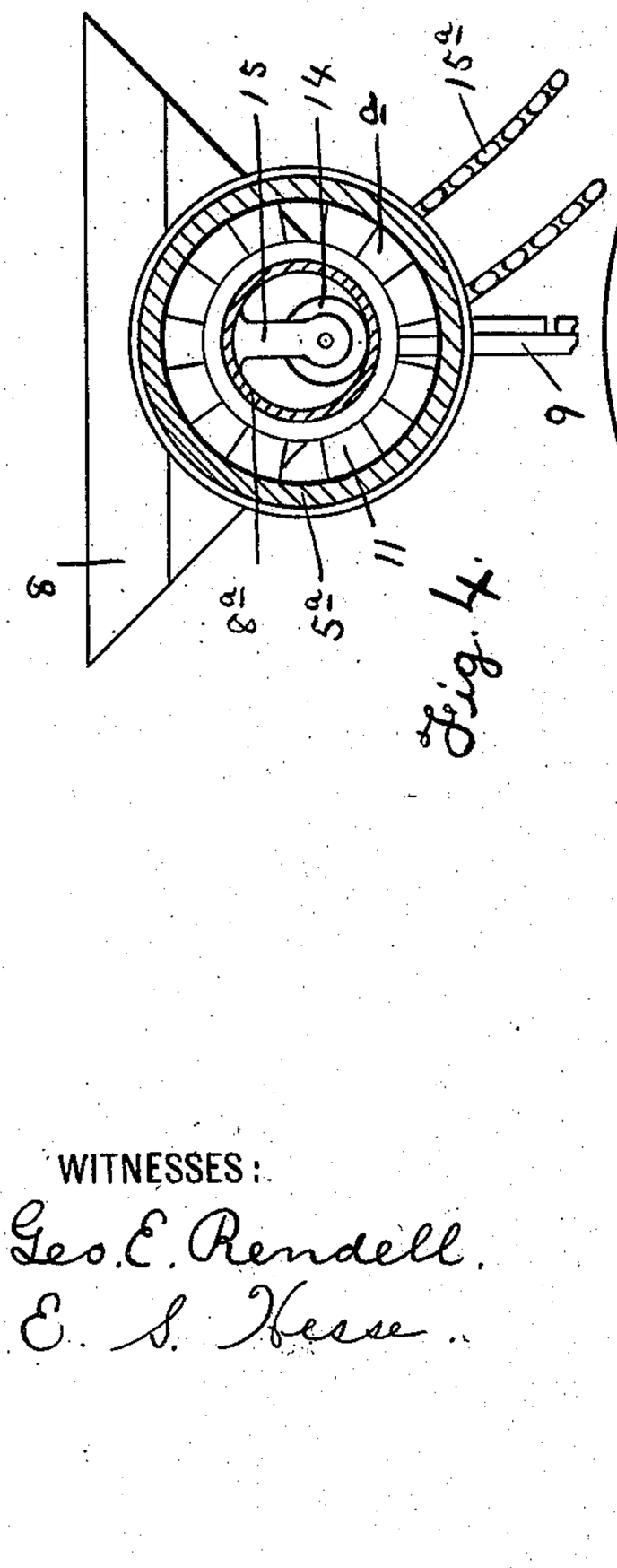

Fig. 4.

Fig. 1.

WITNESSES:

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FEEDING DEVICE FOR SULFUR-BURNERS.

No. 885,891. Specification of Letters Patent. Patented April 28, 1908.

Application filed July 3, 1907. Serial No. 381,990.

To all whom it may concern:

Be it known that I, ANDREW TROMBLEE, of Glens Falls, in the county of Warren and State of New York, have invented certain new and useful Improvements in Feeding Devices for Sulfur-Burners; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The object of my present invention is to provide a feeding device for sulfur burners and more particularly rotary sulfur burners, which is simple, efficient in operation, easily and conveniently applied and easily temporarily displaced when required.

Figure 1 shows an end view of a rotary sulfur burner with my present improvement applied. Fig. 2 is a side view of the feeding apparatus in connection with a small section of the burner. Fig. 3 is a plan view of the same parts shown in Fig. 2. Fig. 4 is a section taken on line 4, 4 of Fig. 2 with the parts to the left of the section line shown in elevation.

Referring to the reference letters and figures in a more particular description, 5 is the rotary burner body which is of an elongated cylindrical form in the main and provided with a conical end 5^a. This burner is mounted for rotation on rollers 6, 6 provided on shafts 7, 7 in the usual manner.

The feeding device consists of a hopper 8 supported on a stand 9 preferably from the floor, and having a tubular extension providing a melting reservoir 8^a extending into the opening 10 of the rotatable burner. The hopper is provided with a circular head or flange 11 adapted to close the opening in the end of the burner which flange at suitable intervals is provided with inlet draft openings and on the outer face of the flange 11 is provided a rotatable ring 12 having similar openings and serving as a gate for regulating the draft openings. In the bottom of the hopper 8, which is of a general V-shape in its lower portion, is arranged a screw or spiral conveyer 14. This conveyer at its inner end is supported in a bracket 15 and at its outer end has a bearing in the wall of the hopper. The conveyer is driven by a sprocket chain 15 running on sprocket wheels 16 and 17 and arranged on the end of the conveyer shaft and on the prolonged end of one of the shafts 7. The relative size of the sprocket wheels 16 and 17 may be changed to secure the desired speed for the conveyer in its operation. The inner end of the tubular extension 8 is preferably closed by a cap 18 having a reduced opening at 19 through which the molten sulfur is delivered into the burner. To enable the hopper extension 8^a to be introduced through the opening 10 or removed therefrom, the stand 9 is provided with the jointed section 9^a attached directly at its upper end to the hopper and pivotally jointed to the head 9^b of the stand by a bolt 20. Provision is made for a swinging motion on the bolt 20 as a pivot by providing the slotted opening 21 in which the securing bolt 22 is placed. When the bolt 22 is loosened the hopper with its extension may be tilted to bring the hopper extension into a substantially horizontal position. In its normal working position it will be arranged on a downward incline as shown in Fig. 2. In order to adjust the height of the hopper and its tubular extension, and more particularly the position of the plate 11 the stand 9 is made adjustable by providing a piece 9^b with a vertical slotted opening as shown at 23 through which and the base of the stand passes the bolt 24. When this bolt is loosened the stand can be adjusted vertically and secured at any desired position within the limits of the slot 23.

In operation the burner 5 will, of course, be rotated and in connection therewith the conveyer 14 will be rotated. A quantity of sulfur will be introduced into the hopper 8 and gradually moved by the conveyer 14 into the reservoir 8^a. The heat from the burning sulfur in the burner will melt the sulfur in the reservoir and the same will be discharged in a more or less fluid state through the opening 19 into the burner or retort. The hopper 8 will preferably be kept full or well replenished with sulfur, which acts as a seal for the opening through the hopper into the retort and on this account the draft through the openings *a* in the plate 11 and ring 12 can be nicely adjusted to the requirements for proper oxidation.

Various modifications and changes in and from the construction herein described may

be made without departing from the spirit of my invention as particularly pointed out in the claims.

What I claim as new and desire to secure by Letters Patent is:

1. The combination in a feeding device of the character described of a hopper, a melting reservoir extended from the hopper into the burner and means in the bottom of the hopper to move the contents into the reservoir, substantially as set forth.

2. The combination in a feeding device of the character described of a hopper mounted on a stand, an inclined reservoir extension from the hopper adapted to be introduced into the burner and a conveyer arranged in the bottom of the hopper, substantially as set forth.

3. The combination in a feeding device of the character described of a hopper, a tubular inclined melting reservoir, a conveyer in the hopper, a closing plate for the opening in the burner all mounted on a stand for coöperation with a rotary sulfur burner, substantially as set forth.

4. The combination in a feeding device of the character described of a hopper, an angularly arranged reservoir extension adapted to be projected into the burner, an angularly adjustable stand on which the hopper and extension are mounted and a conveyer in the hopper for moving the contents into the extension, substantially as set forth.

In witness whereof, I have affixed my signature, in presence of two witnesses, this 28 day of June 1907.

ANDREW TROMBLEE.

Witnesses:
H. W. Wells,
H. Prior King.