

(No Model.)

2 Sheets—Sheet 1.

E. R. HYDE.

MECHANISM FOR WETTING EMERY WHEELS.

No. 538,331.

Patented Apr. 30, 1895.

Fig. 1.

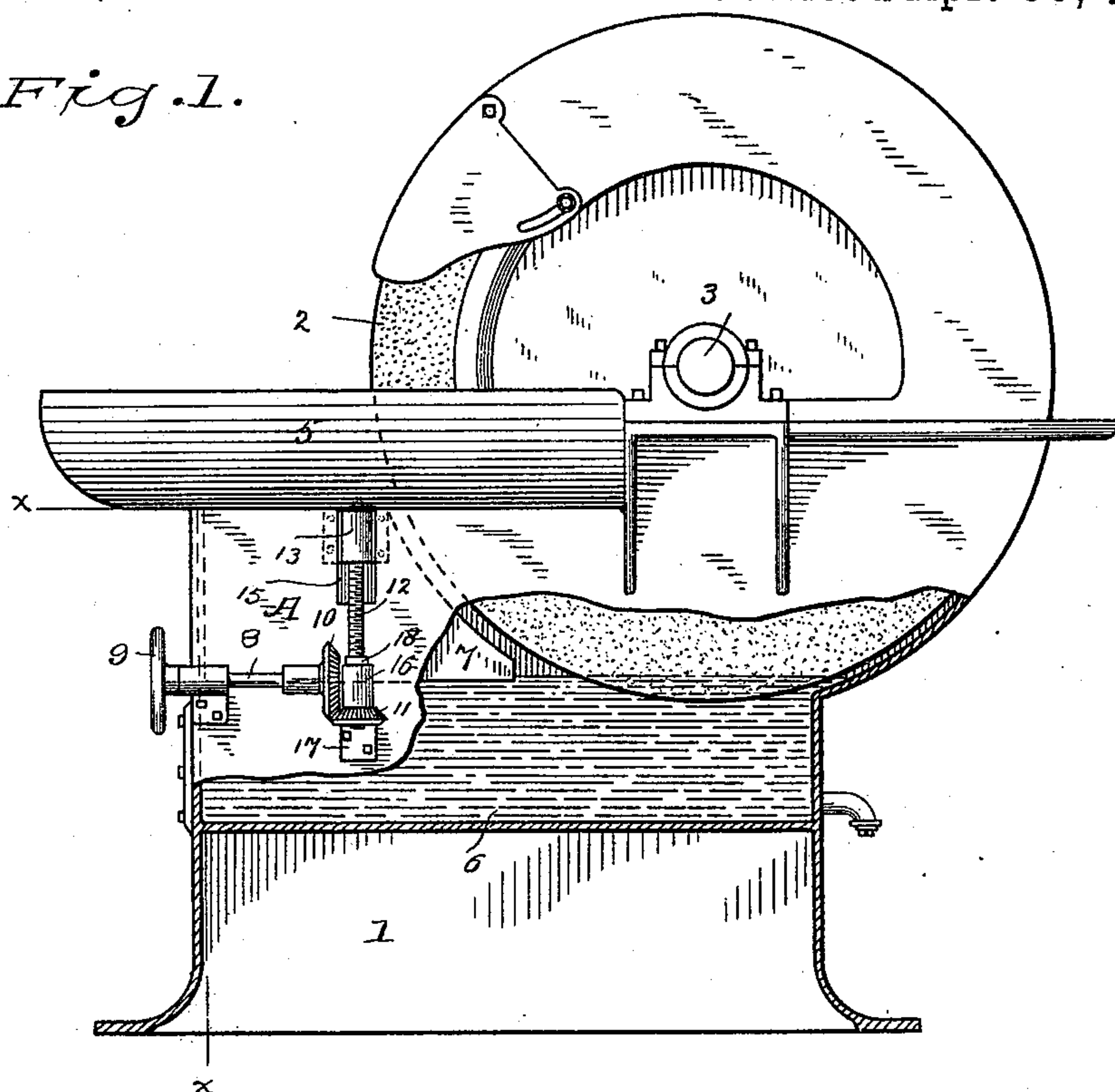
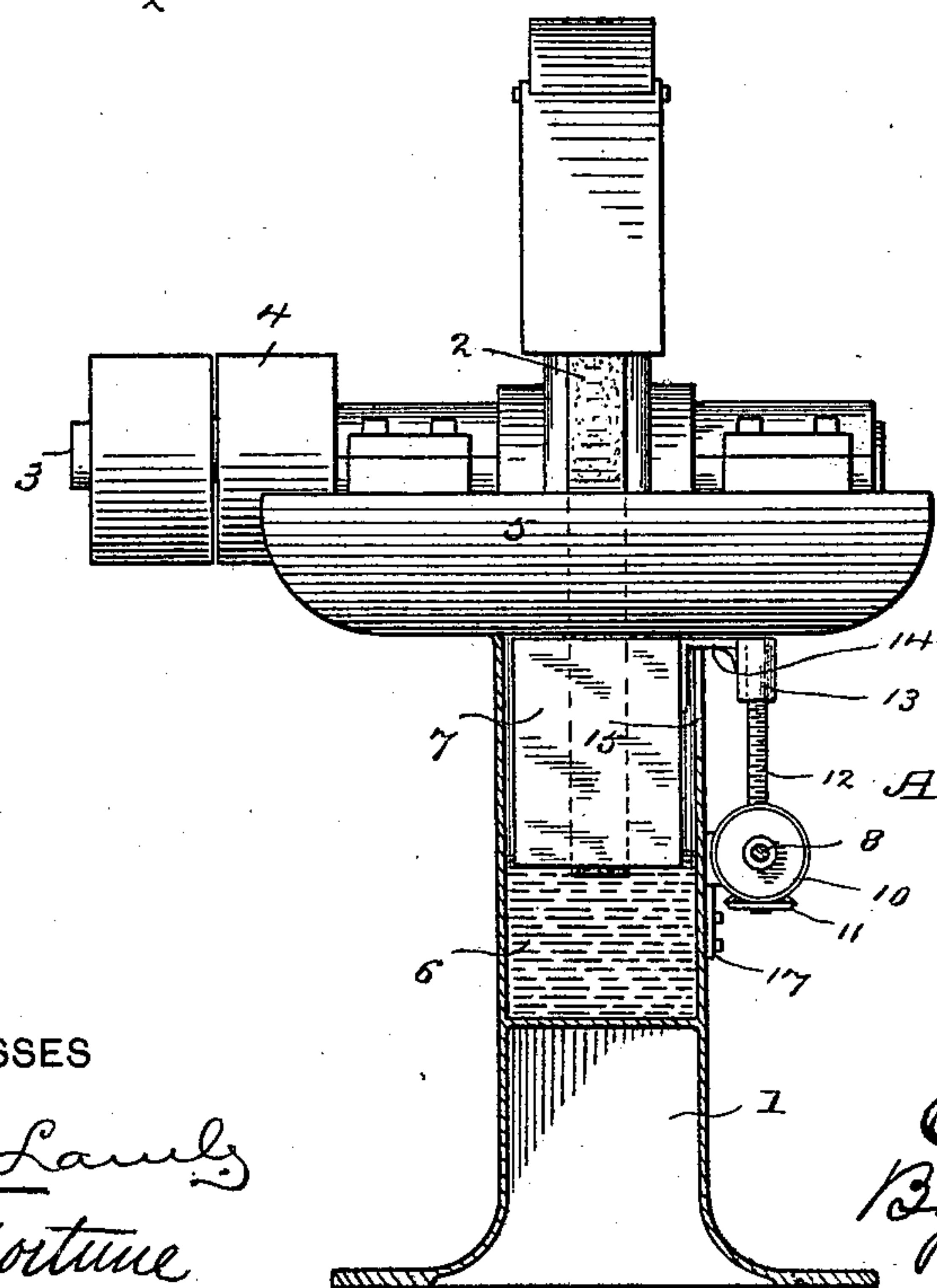


Fig. 2.



WITNESSES

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Fig. 3.

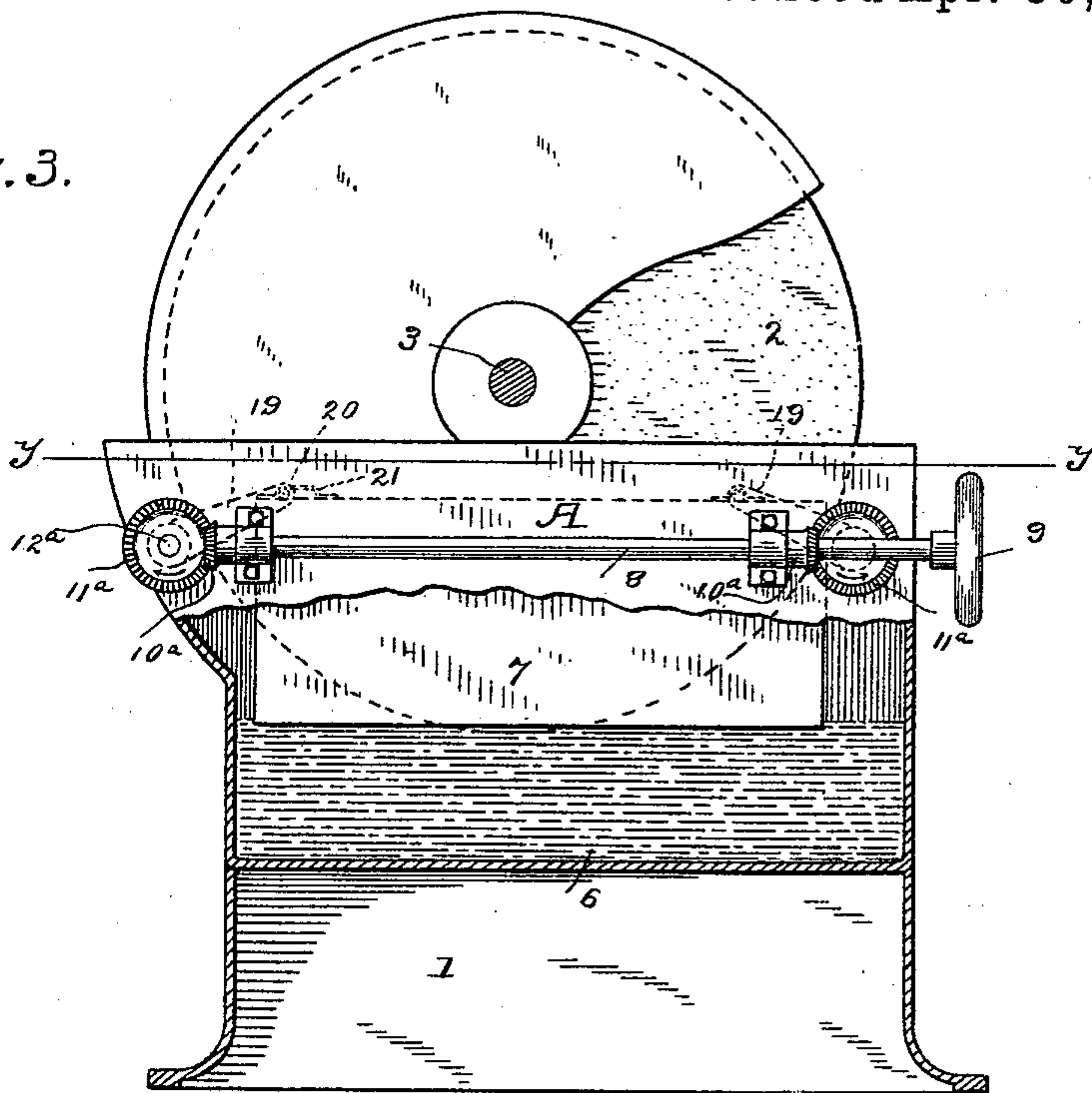
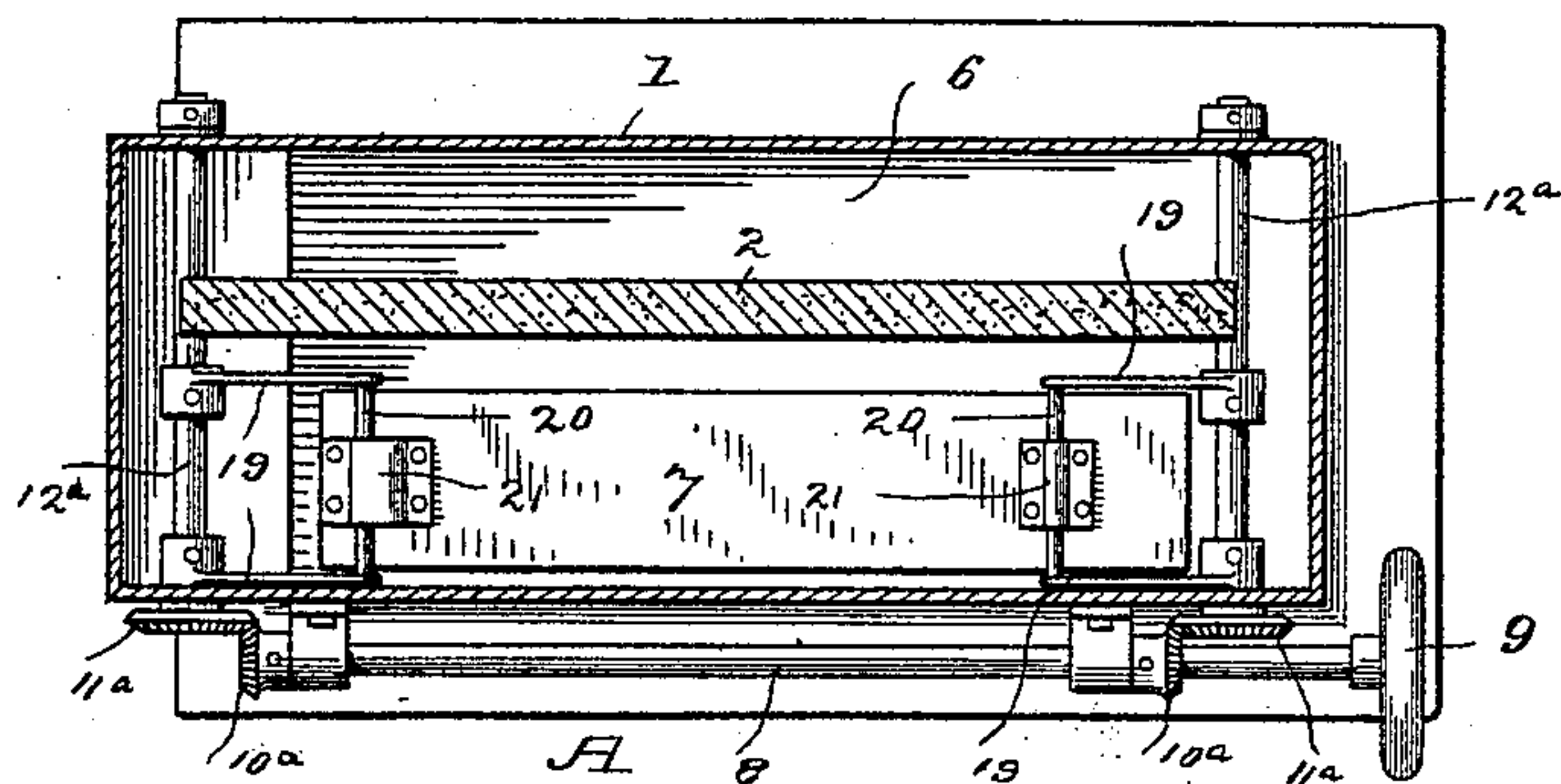


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MECHANISM FOR WETTING EMERY-WHEELS.

SPECIFICATION forming part of Letters Patent No. 538,331, dated April 30, 1895.

Application filed July 23, 1894. Serial No. 518,306. (No model.)

To all whom it may concern:

Be it known that I, ELWIN R. HYDE, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Mechanism for Wet-
5 ting Emery-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable
10 others skilled in the art to which it appertains to make and use the same.

My invention relates to the class of grinding machines in which it is required that the grinding surface of the wheels be kept moist-
15 tened but at the same time it is desirable that as little water as possible be picked up and carried around by the wheels. For this reason it is desirable that the lower edge only of the wheel be immersed in water in the tank, and
20 my invention has for its object to produce simple and inexpensive mechanism adapted to be applied to various styles of grinding machines which by a slight movement will raise the water in the tank above the lower
25 edge of the grinding wheel and retain it there, another movement being required to again raise the water above the lower edge of the grinding wheel when it has dropped below the edge of the stone through waste and evapo-
30 ration. With this end in view I have devised the novel mechanism which I will now describe, referring by numbers to the accompanying drawings, forming part of this specification, in which—

35 Figure 1 is an elevation partly in section illustrating one form in which I have carried my invention into effect; Fig. 2, an end elevation as seen from the left in Fig. 1, and partially in section on the line *x x* in said figure;
40 Fig. 3, an elevation corresponding with Fig. 1 but illustrating another form in which I have carried my invention into effect, and Fig. 4 is a horizontal section on the line *y y* in Fig. 3 looking down.

45 1 denotes the frame of a grinding machine, 2 the grinding wheel, and 3 the shaft by which it is carried and to which power may be applied in any ordinary or preferred manner, as by means of a belt pulley 4. 5 is the
50 trough and 6 a tank adapted to contain water in which the lower edge of the wheel is im-

mersed. These parts may all be of any ordinary or preferred construction and specifically have nothing to do with my present in-
55 vention.

7 denotes a float and suitable mechanism for operating the float, that is pressing it down upon the surface of the water in the tank so as to force the water up to the edge of the wheel sufficiently to wet its surface.
60

In the drawings I have illustrated slightly different modes of operating the float. In both forms 8 is the operating shaft provided with a hand wheel 9 for convenience in operation and a bevel gear 10.
65

In the form illustrated in Figs. 1 and 2 bevel gear 10 meshes with a bevel gear 11 on a secondary shaft 12 the upper end of which is threaded to engage a sleeve 13 carried by a bracket 14 which is itself secured to the tank, 70 the arm of the bracket which carries the sleeve projecting through a slot 15 in the side of the tank. Shaft 12 passes through a bearing 16 carried by a bracket 17 upon the frame, a collar 18 on the shaft retaining the latter in
75 position in the bracket. It will be seen therefore that rotation of shaft 12 through the engagement of the threaded portion of said shaft with sleeve 13 will move the sleeve, bracket 14 and the float up or down as may be re- 80 quired and retain the float in any position in which it is placed. In use, as the water in the tank evaporates a slight movement of the hand wheel in the right direction will cause the float to be depressed in the tank and will
85 raise the water more or less as may be required to wet the surface of the grinding wheel.

In the form illustrated in Figs. 3 and 4 two bevel gears 10^a are placed upon shaft 8 which 90 engage with bevel gears 11^a on two shafts 12^a, which in this instance are journaled horizontally in the frame. Each of the shafts 12^a is provided with a pair of arms 19 connected by a cross piece 20, said cross pieces 95 passing through eyes 21 upon the top of the tank, one of said eyes being elongated so as to permit the cross piece to move inward over the top of the tank as the latter is pressed downward. The operation in this form is 100 precisely the same as in the other form, the operator simply turning the hand wheel to

force the float downward in the tank thereby raising the water as much as may be required about the lower edge of the grinding wheel.

Having thus described my invention, I
5 claim—

In a grinding machine the combination with a tank adapted to receive water in which the lower edge of the grinding wheel is immersed, of a float, an operating shaft carrying
10 a hand wheel and a bevel gear, a secondary shaft carrying a bevel gear meshing therewith

and connections intermediate the secondary shaft and the float whereby the latter is forced downward in the tank when the operating shaft is rotated, and retained in position to
15 wet the grinding wheel.

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

ELWIN R. HYDE.

Witnesses:

A. M. WOOSTER,
S. V. RICHARDSON.