

(No Model.)

2 Sheets—Sheet 1

T. F. GILROY.

AUTOMATIC FEEDING-UP DEVICE FOR GLASS POLISHING WHEELS.

No. 559,699.

Patented May 5, 1896.

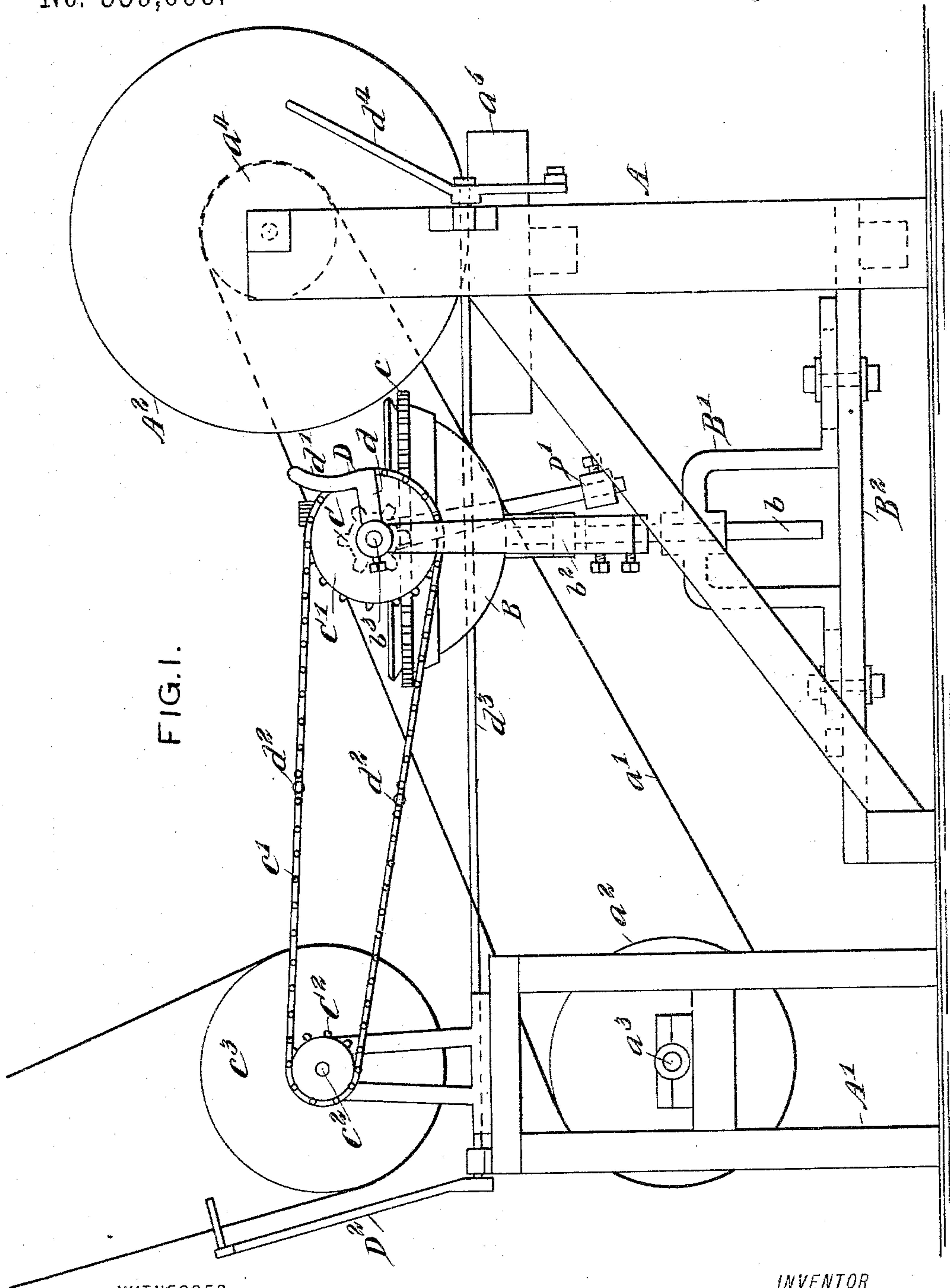


FIG. 1.

WITNESSES:

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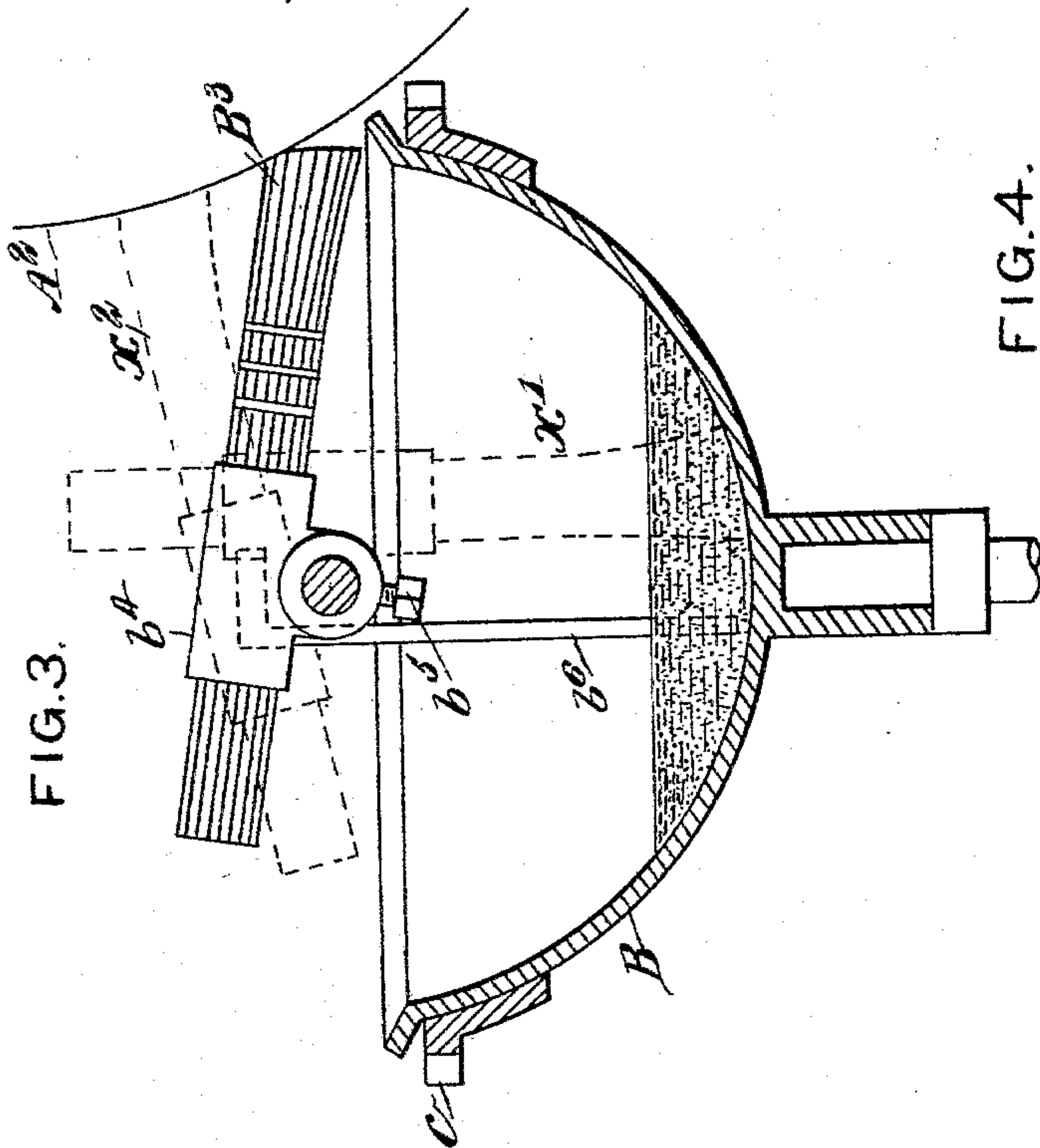


FIG. 4.

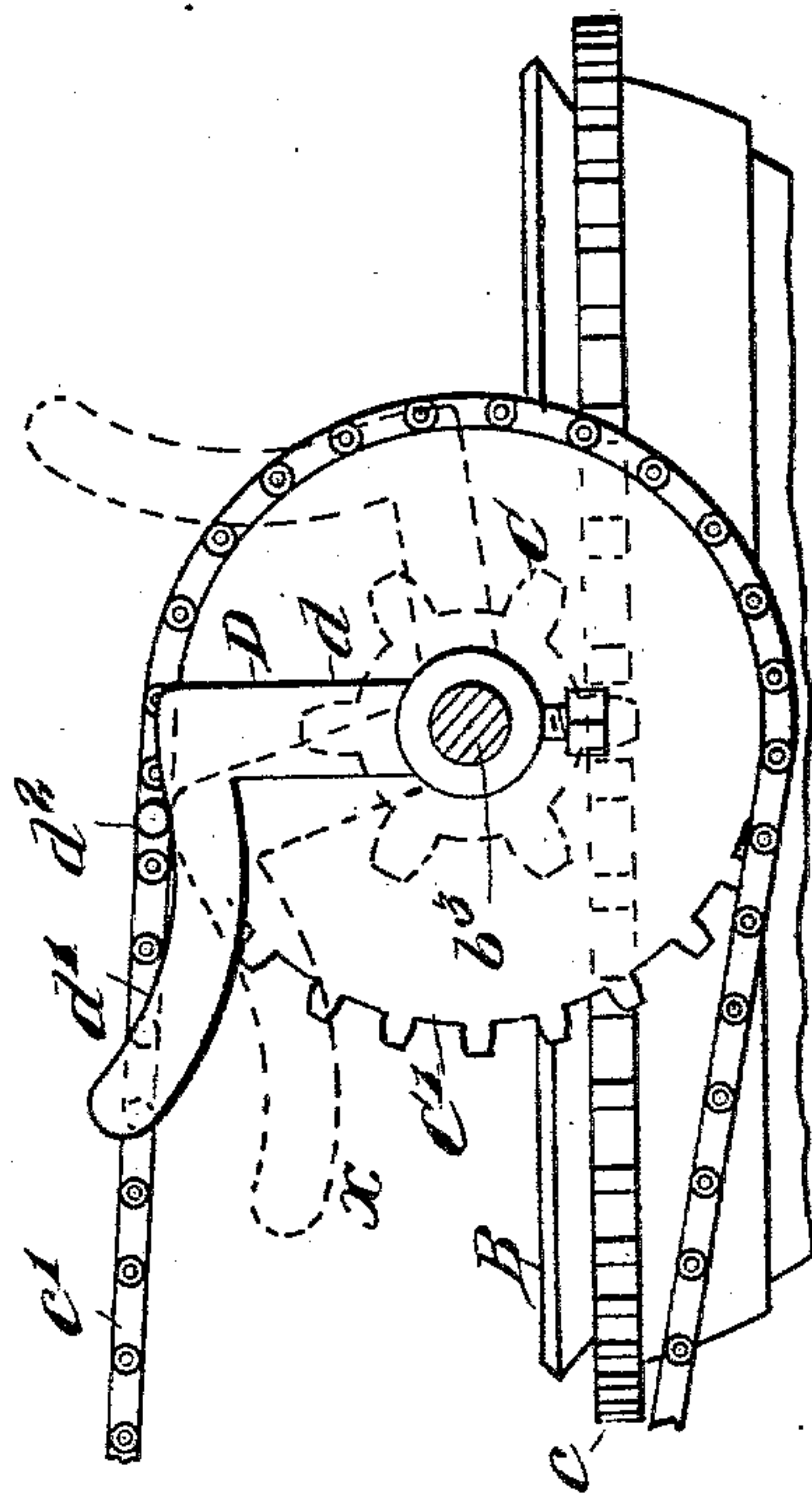
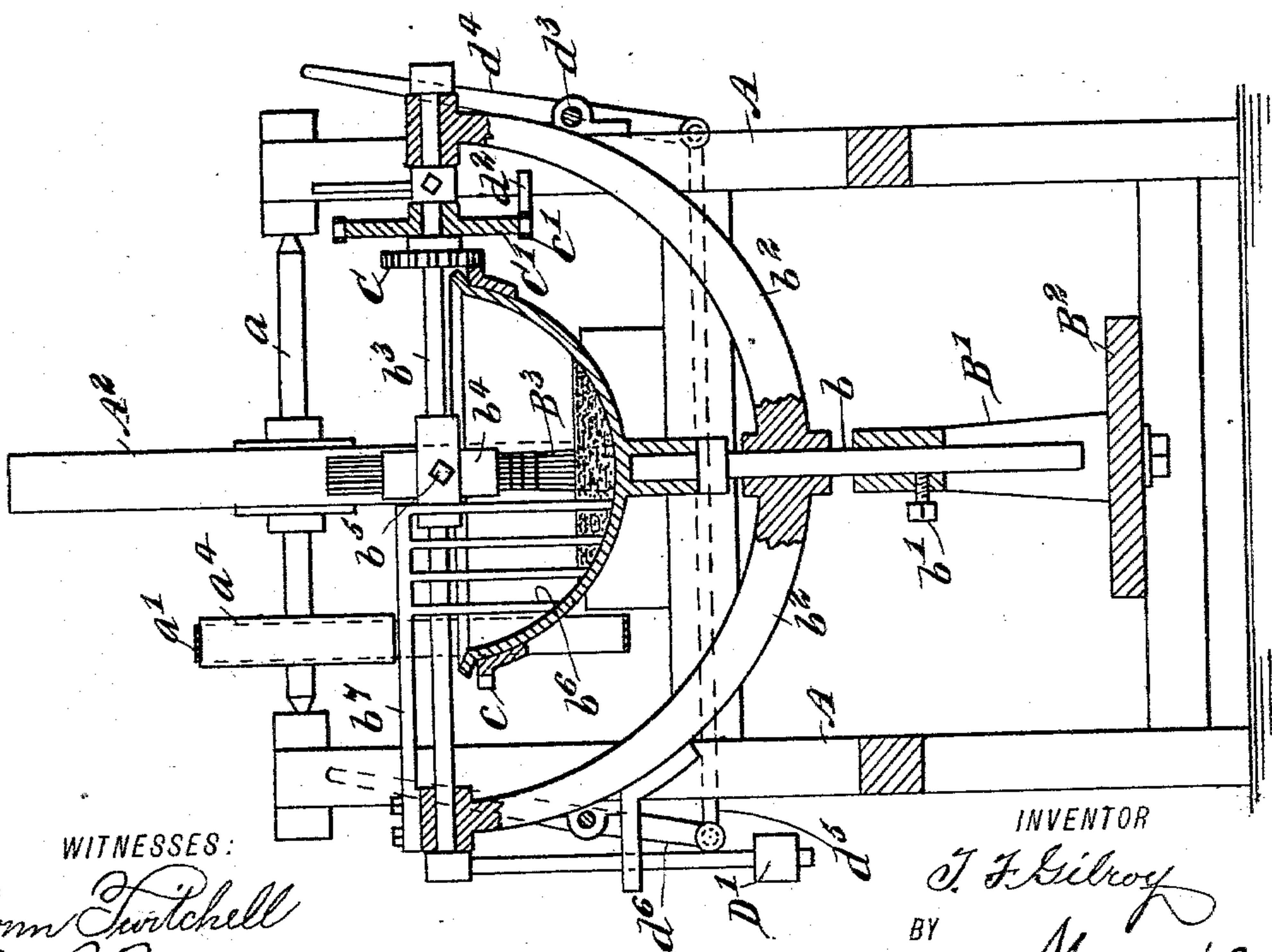


FIG. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS F. GILROY, OF BROOKLYN, NEW YORK, ASSIGNOR TO HOWARD S. JONES, OF SAME PLACE.

AUTOMATIC FEEDING-UP DEVICE FOR GLASS-POLISHING WHEELS.

SPECIFICATION forming part of Letters Patent No. 559,699, dated May 5, 1896.

Application filed September 13, 1895. Serial No. 562,371. (No model.)

To all whom it may concern:

Be it known that I, THOMAS F. GILROY, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Automatic Feeding-Up Device for Glass-Polishing Wheels, of which the following is a full, clear, and exact description.

This invention relates more particularly to machines for polishing the beveled edges of glass, and the object is to provide a machine for this purpose in which the polishing material is automatically and evenly spread upon the polishing-wheel, and in which the polishing material is maintained in solution.

The invention consists in a brush movable into and out of the polishing material and having a reciprocating motion on the polishing-wheel, and mechanism for causing said movements.

The invention further consists in the construction and novel arrangement of parts, as will hereinafter appear, and be more concisely pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a machine embodying the invention. Fig. 2 is a partial elevation and partial section of the same. Fig. 3 is a section of the container for polishing material, showing the brush in elevation; and Fig. 4 is a side elevation of a portion of the container and certain operating parts.

Referring to the drawings, A designates the front standards of a frame, and A' the rear standards thereof. A² is a polishing-wheel mounted on a shaft a, having bearings in blocks secured to the front standards A.

This polishing-wheel is made of wood or similar soft material, and rotary motion is imparted to it by means of a belt a', extended around a pulley a² on a driving-shaft a³, having bearings in blocks mounted on cross-bars of the rear standards A'. The belt a' extends around a pulley a⁴ on the shaft a. Beneath the polishing-wheel A² is a receiver a⁵ for polishing material dripping or flowing from the wheel.

B is a container for polishing material—such, for instance, as pulverized pumice-stone

and water. This container B is mounted to rotate on a rod b adjustable vertically in a standard B', horizontally adjustable on a base-plate B² of the frame. The standard B', for the purpose of adjustment, is provided with slot-openings, through which bolts extend and engage with the base-plate B², and the rod b is adjustable through a sleeve on the standard B', and is secured as adjusted by means of a set-screw b'. This adjustment of the container is necessary for the purpose of bringing it in proper relation with the polishing-wheel as the said wheel wears away.

Adjustably mounted on and extended outward and upward from the rod b are arms b², in the upper ends of which a horizontal shaft b³ is journaled, and upon this shaft a brush B³ is mounted for the purpose of applying polishing material to the polishing-wheel. The brush is secured in a sleeve b⁴ adjustable longitudinally of the shaft b³ and held as adjusted by means of a set-screw b⁵.

For the purpose of stirring the polishing material in the container to keep the pumice-stone in suspension fingers b⁶ extend into the same, the said fingers being suspended from an arm b⁷, extended from one of the arms b², as shown in Fig. 2. By means of these fingers the polishing material will be thoroughly stirred as the container rotates.

I will now describe the means for imparting rotary motion to the container B and for imparting motion to the brush.

C designates a gear-wheel loosely mounted to rotate on the shaft b³ and engaging with an annular rack c on the container B. Secured to the pinion C is a sprocket-wheel C', from which a sprocket-chain c' extends to a sprocket-wheel C² on a driving-shaft c², which receives motion from a band connection with a drive-wheel c³ on the shaft.

D is an angle-lever rigidly attached to the shaft b³ and comprising a portion d, extended at substantially right angles to the axis of the shaft, and a cam portion d', extended at substantially right angles from the portion d. The portion d' of the lever is curved inward at its outer side between its ends. Extended laterally from the chain c' are pins d², adapted to engage with the lever B for the purpose of rocking the same. I have here shown two

pins d^2 , by means of which the lever will be twice rocked at each complete revolution of the sprocket-chain; but there may be more or less pins, as may be desired.

5 The operation of the machine is as follows: As the pinion C is rotated by means of the sprocket mechanism rotary motion will be imparted by it to the container B, so that the fingers b^6 will agitate the polishing material.
 10 When a pin d^2 engages with the portion d of the lever D, the lever will be rocked to the position indicated by the dotted lines x in Fig. 4, thus carrying the brush B^3 from the position indicated by the dotted lines x' to the position indicated by the dotted lines x^2 ,
 15 Fig. 3. Then the pin d^2 will ride over the end of the portion d of the lever and engage with the cam or curved portion, and the movement of the pin on said cam portion will cause the
 20 brush to wipe up and down on the polishing-wheel between the points shown by the dotted lines x^2 and the full lines in Fig. 3, thus applying and evenly spreading the polishing material on the wheel. After the pin shall
 25 have left the portion d' of the lever the end of the brush will fall back into the polishing material, and to cause it to fall quickly a counterbalance D' may be attached to the shaft b^3 . During the rotation of the polish-
 30 ing-wheel the operator will hold the glass in the proper position thereon.

To stop or start the machine, I employ a belt-shifter for moving the belt from the wheel c^3 to an idler on the shaft c^2 , which it
 35 is not deemed necessary to show, or from the idler to the wheel. This shifter comprises an arm D^2 , having fingers to engage the opposite edges of the driving-belt. The arm D^2 is mounted on a shaft d^3 , extended longitudi-
 40 nally of the frame and having bearings thereon. At its forward end the shaft d^3 has a hand-lever d^4 affixed to it and extended upward at the side of the polishing-wheel. In order that the operator may operate the shift-
 45 ing mechanism with either hand or at either side of the polishing-wheel, a link d^5 is extended from a downward extension of the hand-lever d^4 to a connection with a hand-lever d^6 , fulcrumed on the machine-frame at the
 50 side opposite that of the lever d^4 , as plainly shown in Fig. 2.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A glass-polishing machine comprising a 55 rotary wheel, a rotary container for polishing material, a brush mounted on a rocking shaft, and mechanism for moving said brush out of the polishing material into contact with the wheel and for imparting an up-and-down wip- 60 ing motion to said brush on the wheel, substantially as specified.

2. A glass-polishing machine comprising a polishing-wheel, a container for polishing ma- 65 terial, means for imparting a rotary motion to said container, a brush mounted on a rocking shaft, and means for moving said brush out of the polishing material to an engage- 70 ment with the wheel, substantially as specified.

3. A glass-polishing machine comprising a polishing-wheel, a brush for applying polish- 75 ing material thereto, a rotary container for polishing material, mechanism for imparting rotary motion thereto, and a stirrer extended into the container, substantially as specified.

4. A glass-polishing machine, comprising a rotary polishing-wheel, a rotary container for 80 polishing material, adjustable relatively to the wheel, a brush movable from a position in the container to an engagement with the wheel, and mechanism for causing said move- 85 ment, substantially as specified.

5. In a glass-polishing machine, the combi- 90 nation with a polishing-wheel, and a rotary container for polishing material, of a rock-shaft, an angle-lever rigidly attached to said rock-shaft and having a longitudinally- 95 curved portion extended from the portion secured to the shaft, a sprocket-wheel loosely mounted on the rock-shaft, a sprocket-chain engaging the sprocket-wheel, a pin on the chain, adapted to engage with the angle-lever 100 to rock the shaft, and a brush mounted on the rock-shaft, substantially as specified.

6. In a glass-polishing machine, the combi- 105 nation with a rotary polishing-wheel, of a container for polishing material, an annular rack on said container, a rock-shaft, a pinion loosely mounted on the rock-shaft and engaging with 110 the rack on the container, means for rotating the pinion, means for rocking the rock-shaft, and a brush mounted on the rock-shaft, substantially as specified.

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Witnesses:

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 HENRY J. OLDRING.