M. PORWSKA.

GLASS GRINDING MACHINE.

APPLICATION FILED MAY 8, 1916.

1,234,562.

Patented July 24, 1917.

3 SHEETS—SHEET 1.

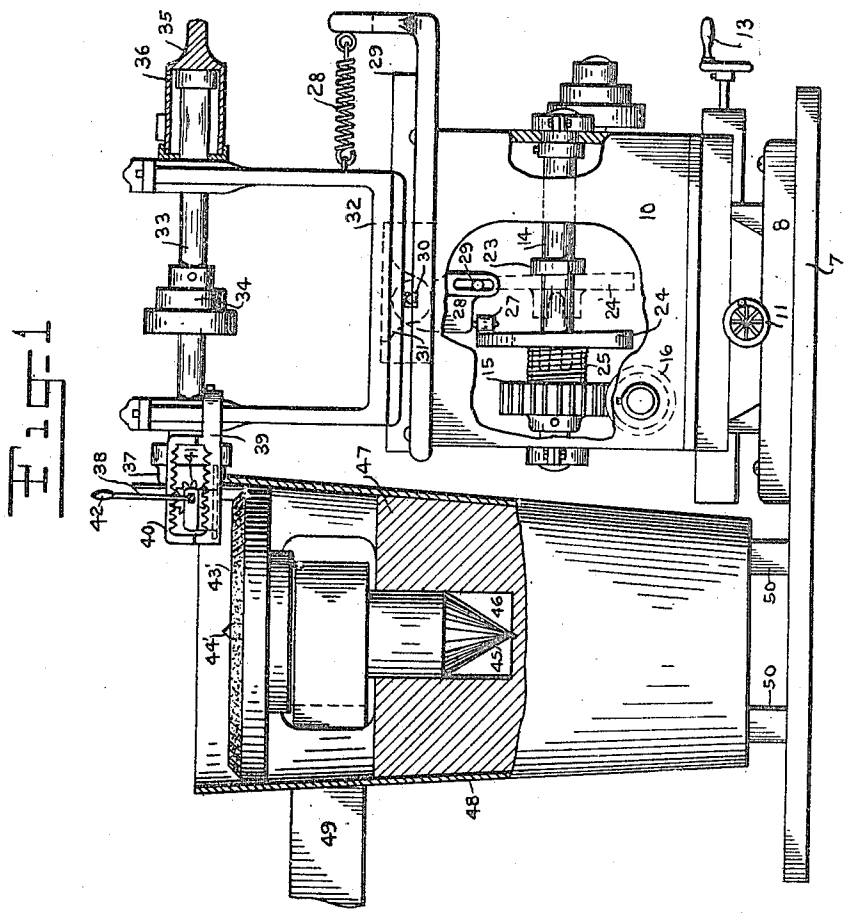


Fig. 1

Marta Porwska, Inventor

By her Attorney

Thomas Fitch.

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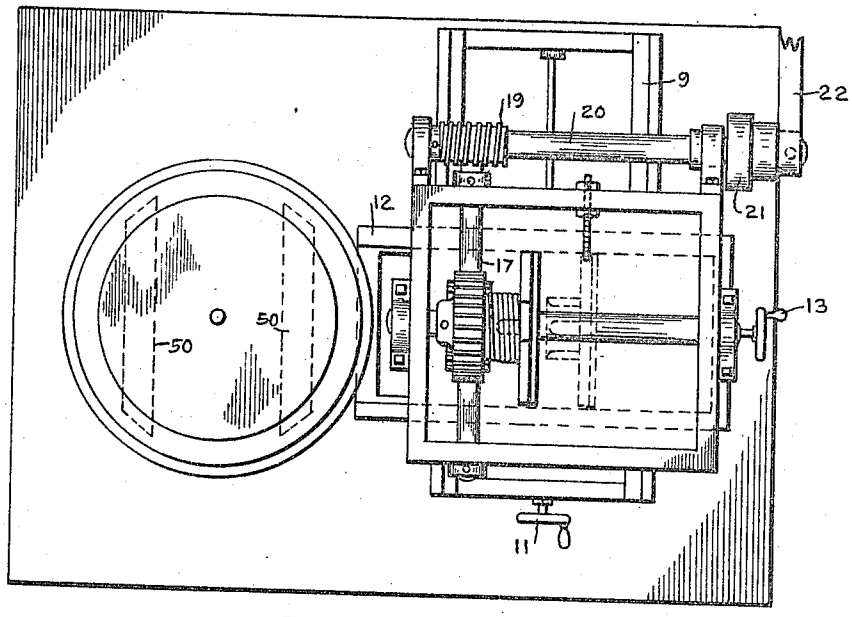



Fig. 2

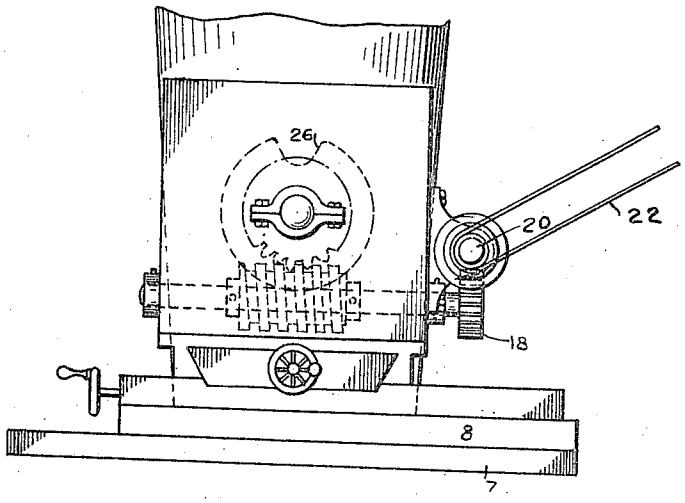



Fig. 3

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Thomas Oifield.

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3 SHEETS—SHEET 3.

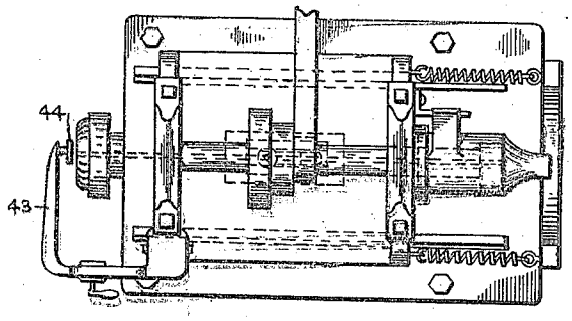



Fig. 4

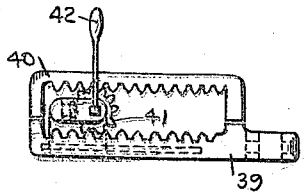



Fig. 5

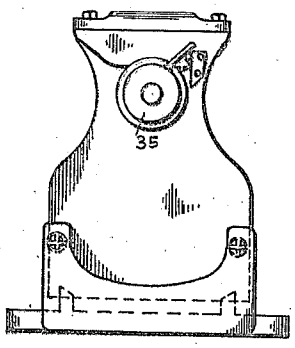



Fig. 6

Marta Porwska, Inventor

By her Attorney

Thomas D. Hill.

# UNITED STATES PATENT OFFICE.

MARTA PORWSKA, OF BROOKLYN, NEW YORK.

## GLASS-GRINDING MACHINE.

1,234,562. Specification of Letters Patent. Patented July 24, 1917.

Application filed May 8, 1916. Serial No. 96,089.

*To all whom it may concern:*

Be it known that I, MARTA PORWSKA, a citizen of Poland, residing at Brooklyn, New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Glass-Grinding Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in glass beveling machines and more particularly has reference to and is illustrated in the accompanying drawings in its application as a pocket mirror beveling machine, the same being particularly well adapted for the beveling of peripheral adjacent portions of glass disks.

In the accompanying drawings I have illustrated in Figure 1 in side elevation partly in cross-section and partly broken away an application of my invention as applied to a pocket mirror beveling machine. Fig. 2 is a plan view with the superstructure removed. Fig. 3 is an end view looking from right to left with the superstructure removed. Fig. 4 is a plan view of the superstructure. Fig. 5 is an enlarged side elevation of a suitable work retaining device and Fig. 6 is a view looking from right to left at the superstructure.

7 is a suitable base or flooring upon which the machine is mounted. 8 is a bed plate of the principal parts of the machine. 9 indicates a transverse slide bearing upon which the main portion of the machine 10 may be moved transversely by any suitable means such as the hand wheel 11, and 12 indicates a similar longitudinal bearing to facilitate the movement of the main part 10 longitudinally by any suitable means such as the handle 13. The main part 10 has suitably and rotatably mounted therein a shaft 14 provided with a gear 15 which is driven by the worm 16 upon the shaft 17 which in turn is provided with a pinion 18 which is driven by the worm 19 upon the shaft 20 carrying the pulleys such as 21 adapted to be driven by the belt 22 or by other suitable means.

23 is a cam permanently fixed upon the shaft 14 against which the cam 24 is adapted to be driven by coil springs 25 when the opening 26 in said cam comes in alinement with the roller bearing 27 as hereinafter more particularly described.

In operation the cam 24 is brought leftwardly by hand beyond the roller bearing 27 through the opening 26 after which the cam is turned being retained in its leftward position by the roller 27 as shown in Fig. 1. The roller 27 is pivotally mounted on the swinging bracket 28 which is pivoted to swing about the support 29, the upper end of the bracket 28 being pivotally secured at 30 to the bracket 31 extending down from the carriage 32 of the superstructure. From the foregoing it will be seen that as the shaft 14 is rotated through the transmission hereinbefore described, the thickened or enlarged portion of the cam 24 in passing over the surface of the roller 27 presses said roller and the lower end of the bracket 28 rightwardly about the support 29, thus throwing the upper end of the bracket 28 leftwardly against the carriage 32 of the superstructure which feeds the glass as hereinafter described. This feeding continues until the roller slips through the opening 26 in the cam 24 which thereupon being released is thrown back to the position shown in dotted outline indicated by the reference character 24′ under the influence of the spring 25 from which position it may again be moved leftwardly as aforesaid when the next piece of work is to be operated upon. The carriage 32 is likewise drawn leftwardly by the bracket 28 secured at one end thereto and at the opposite end to support 29 as shown.

The upper end of the carriage 32 it will be observed is provided with a rotatable shaft 33 carrying the driving pulleys such as 34. This shaft is preferably hollow and may be covered at the end by a suitable cap such as 35 provided with a bleed hole 36 through which the air may be controlled for creating a vacuum through the chuck 37 at the other end of the shaft 33. 38 indicates a glass disk such as a pocket looking glass which may be held against the mouth of the chuck 37 by the suction aforesaid. 39 is a suitably secured bracket provided with a slidable upper portion 40 the parts 39 and 40 having racks upon the inner surfaces as shown to engage the pinion 41 rotatable by the lever 42 so that as the lever 42 is swung rightwardly or leftwardly looking at Fig. 1, the upper portion 40 is moved to or from the disk 38. This upper portion is provided with the extending finger or arm 43 with a suitable cushion or disk 44 which clamps against the outer face of the disk 38 thereby additionally securing the same against the chuck 37. 43′ is a suitable stone mounted

upon the pivot 44′ in the end of the bearing or support 45 which passes through the recess 46 in the block 47 within the tub 48 and is provided with a suitable pulley or engaging surface by which it is rotated by any suitable means such as the belt 49. This tub may be suitably secured upon the base or platform 7 by any suitable means such as the legs or blocks such as 50.

From the foregoing it will be seen that as the stone rotates, the glass to be beveled is fed leftwardly against the periphery of said stone, the same becoming thereby beveled as the carriage 32 moves leftwardly the glass 38 and stone 43′ being rotated simultaneously and preferably oppositely. As each glass is beveled it is of course replaced with another and the machine again placed in position for feeding the same.

Of course it will be understood that various modifications may be made in the construction and arrangements of parts without departing from the spirit of my invention as claimed.

I claim:

1. In a device of the class described a reciprocatable carriage adapted to carry the work to be operated upon, and adjacent one end thereof, a grindstone adapted to rotate upon an axis at right angles to the axis of rotation of said work, and means beneath said carriage for reciprocating the same with reference to said grindstone.

2. In a device of the class described a reciprocatable carriage adapted to carry the work to be operated upon, and adjacent one end thereof, a grindstone adapted to rotate upon an axis at right angles to the axis of rotation of said work, and means beneath said carriage for reciprocating the same with reference to said grindstone, said means comprising a cam adapted to be rotated adjacent said carriage and a pivoted engaging member adjacent said carriage adapted to be operated upon by said cam.

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

MARTA PORWSKA.

Witnesses:
EVELYN H. LEISTNER,
THOMAS A. HILL.

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