(No Model.)

T. F. GILROY.

GLASS BEVELING MACHINE.

No. 344,179. Patented June 22, 1886.

Fig. 2

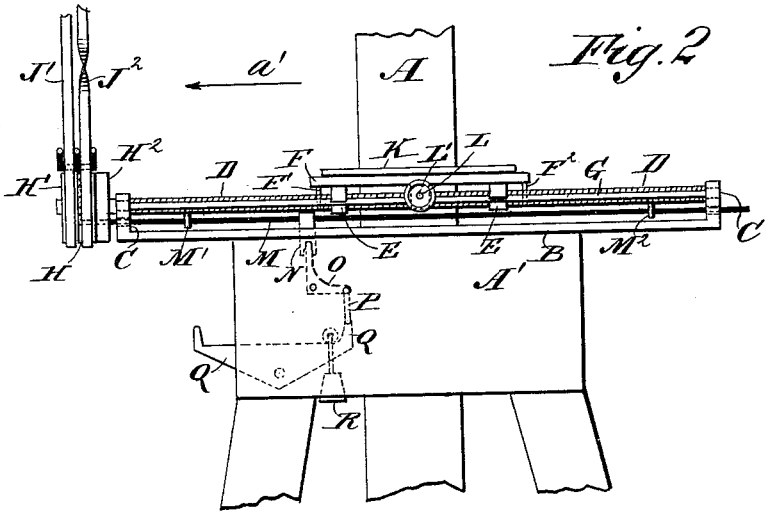


Fig. 1

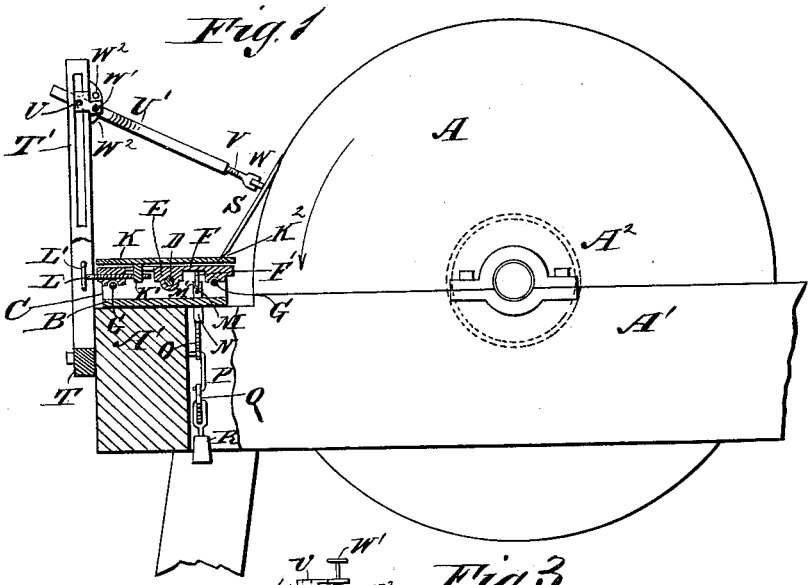


Fig. 4

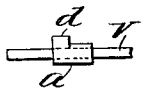
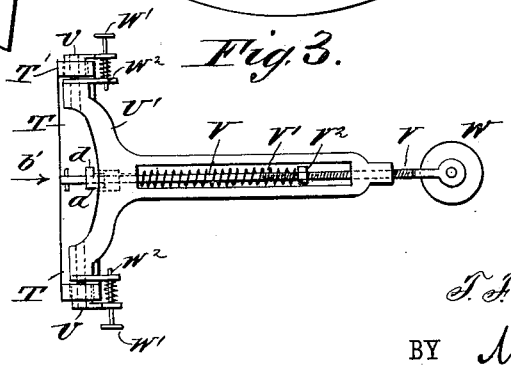


Fig. 3.



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THOMAS F. GILROY, OF NEW YORK, N. Y.

GLASS-BEVELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 344,179, dated June 22, 1886.

Application filed March 30, 1885. Serial No. 160,704. (No model.)

To all whom it may concern:

Be it known that I, THOMAS F. GILROY, of the city, county, and State of New York, have invented a new and Improved Glass-Beveling Machine, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved machine for automatically shifting a glass plate that is to be beveled and for pressing the edge of the glass against the stone.

The invention consists in the combination of parts, as hereinafter described and claimed.

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

Figure 1 is a side view of my improved glass-beveling machine, parts being broken away and the carriage shown in section. Fig. 2 is an enlarged front view of part of the same. Fig. 3 is a plan view of the pressing-arm. Fig. 4 is a detail view of the pressing-rod.

The grindstone A is journaled in a frame, A′, and is revolved by a belt passed over a pulley, A^2, on the shaft on which the grindstone is mounted. A plate, B, having upwardly-projecting end pieces, C, is secured on the frame A′, and in the said end pieces a screw-spindle, D, is journaled, which passes through nuts E on the under side of a carriage, F, arranged to slide parallel with the axis of the stone A on rods G, connecting the end pieces C. On one end of the spindle the fixed belt-pulleys H′ and H^2 are rigidly mounted, and between them the pulley H is loosely mounted. An open belt, J′, and a crossed belt, J^2, are arranged upon these pulleys, so that the said pulleys H′ and H^2 can be revolved in opposite directions.

On the carriage F a plate, K, is arranged to slide to and from the edge of the stone, and is provided on its under side with a screw-spindle, L, passed through a nut, K′, on the under side of the plate K, and a hand-wheel, L′, is formed on the end of the spindle L. A rod, M, is arranged to slide in the end pieces of the plate B, and has the projections M′ and M^2 near the ends. On one end of the said rod the belt-shifting forks or prongs are formed. A forked piece, N, projects downward from the rod M, and in between its prongs one end of an angle-lever, O, is passed, the other end of the lever being connected by a rod, P, with one end of a lever, Q, on which a weight, R, is arranged to run, the lever Q having its ends bent up to form stops or checks for the weight R. The plate K is provided with a groove, K^2, for receiving the lower end of the piece, S, of glass to be beveled. An upright frame, T, is secured on the frame A′. In the slotted side pieces, T′, of the said frame T blocks U are held to slide vertically, and on the said blocks a rocking or swinging frame, U′, is pivoted, in which a rod, V, is arranged to slide, the said rod having its end forked, and a roller, W, pivoted in the said forked end. A spiral spring, V′, surrounds the rod V between a nut, V^2, and the cross-piece of the swinging frame U′, and presses the rod V in the direction of the arrow *b*′. A spring-latch, W′, is held in an arm on the outer end of each block U, which latches are adapted to engage in apertures W^2 in the flanged ends of the frame U′, and serve to lock the said frame at the desired inclination. A block, *a*, having an offset or shoulder, *d*, is secured on the rod V, for a purpose that will be set forth hereinafter.

The operation is as follows: The glass plate S is placed on the plate K, the lower edge of the glass plate resting in the groove K^2, and the upper edge resting against the edge of the stone A. By means of the screw L the plate K is shifted toward or from the edge of the stone A, to give the plate S the desired inclination for the desired bevel. The roller W is rested against the plate S, and presses the edge of the same against the stone. The spindle D is revolved, and moves the carriage F in the direction of the arrow *a*′. A lug or jaw, F′, on the carriage strikes the projection M′ and moves the rod M a short distance in the direction of the arrow *a*′, whereby the lever O is swung up and raises the lever Q, slightly causing the weight R to run down the lever Q, thereby tilting it, whereby the forked piece N and the rod M are moved by the elbow-lever O sufficiently in the direction of the arrow *a*′ to shift the belts. This reverses the screw, and the carriage is moved

in the inverse direction of the arrow *a'*. When another jaw or lug, F^2, on the carriage strikes the projection M^2, the rod M is moved in the inverse direction of the arrow *a'*, that end of the lever Q connected with the lever O is swung down, the weight R runs in the inverse direction of the arrow *a'*, and the rod M is moved sufficiently in the inverse direction of the arrow to shift the belts, and so on. The frame U', in which the rod V is held, can be held at any desired inclination by adjusting the latch W' into any desired aperture W^2. When the roller W is to be held withdrawn from the plate S, the rod V is pulled in the inverse direction of the arrow *b'* and turned ninety degrees on its axis, so as to engage the shoulder *d* with the frame U', thus preventing the spring V' from pressing the rod V in the direction of the arrow *b'*. The tension of the spring V' can easily be adjusted by means of the nut V^2.

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

1. In a glass-beveling machine, the combination, with a grindstone, a carriage, and means for moving the carriage back and forth parallel with the axis of the grindstone, of an adjustably-pivoted and spring-pressed rod for holding the glass plate on the carriage against the grindstone, substantially as herein shown and described.

2. In a glass-beveling machine, the combination, with a grindstone, a carriage, and means for moving the carriage back and forth parallel with the axis of the grindstone, of a plate mounted on the carriage, means for sliding the plate at right angles to the line of movement of the carriage, and a swinging and yielding rod for holding the glass plate on the carriage against the grindstone, substantially as herein shown and described.

3. In a glass-beveling machine, the combination, with a reciprocating carriage and a belt-shifting rod, of an elbow-lever pivoted below the said shifting-rod and engaging the same, a centrally-pivoted lever having one end connected to the elbow-lever, and a weight on the said centrally-pivoted lever, substantially as herein shown and described.

4. In a glass-beveling machine, the combination, with a carriage having downwardly-projecting lugs, and a screw-spindle for operating said carriage, of the belt-shifting rod M, provided with the projections M' M^2, and the fork N, the elbow-lever O, the lever Q, the link P, and the weight R, substantially as herein shown and described.

5. In a glass-beveling machine, the combination, with the upright frame T, of the frame U', pivoted to said frame T, and the spring-pressed rod V, mounted in the frame U', and provided with the roller W, substantially as herein shown and described.

6. In a glass-beveling machine, the combination, with the frame T, having slotted side pieces, T', of the sliding blocks U, the frame U', pivoted to the said sliding blocks, the rod V, provided with the roller W, the spring V', surrounding the rod, and spring-latches W', substantially as herein shown and described.

7. In a glass-beveling machine, the combination, with the swinging frame U', of the rod V, the spring V', and the block *a* on the rod V, and provided with the shoulder *d*, substantially as herein shown and described.

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