

(No Model.)

2 Sheets—Sheet 1.

M. O'GORMAN.
BEVELING MACHINE.

No. 449,131.

Patented Mar. 31, 1891.

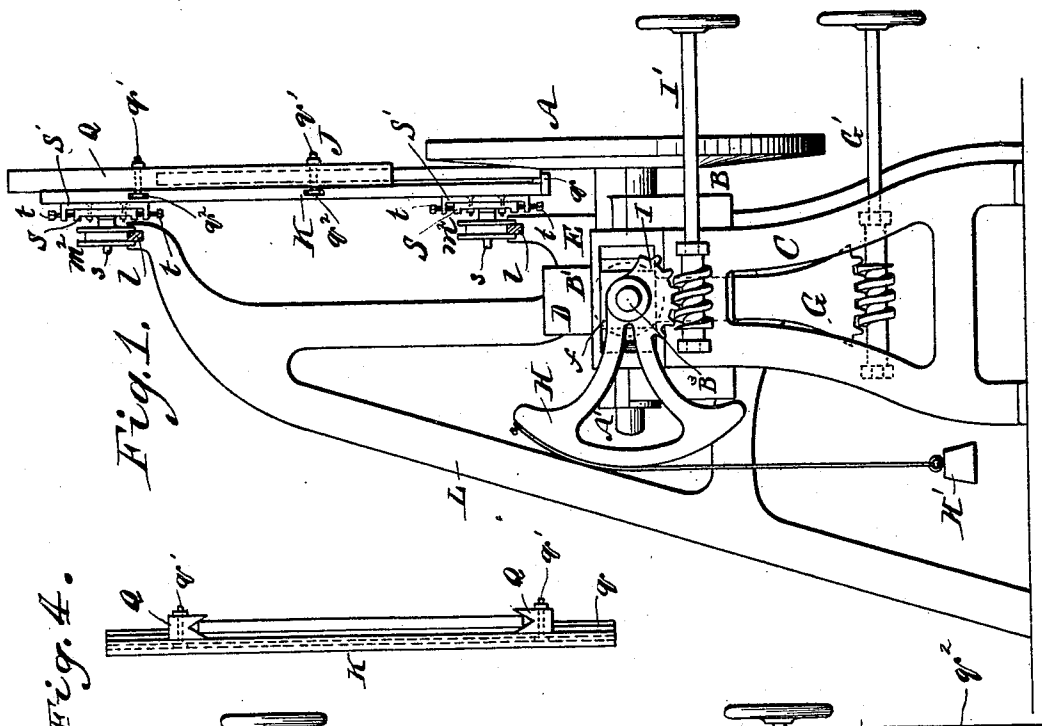


Fig. 4.

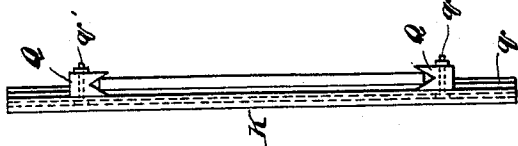


Fig. 2.

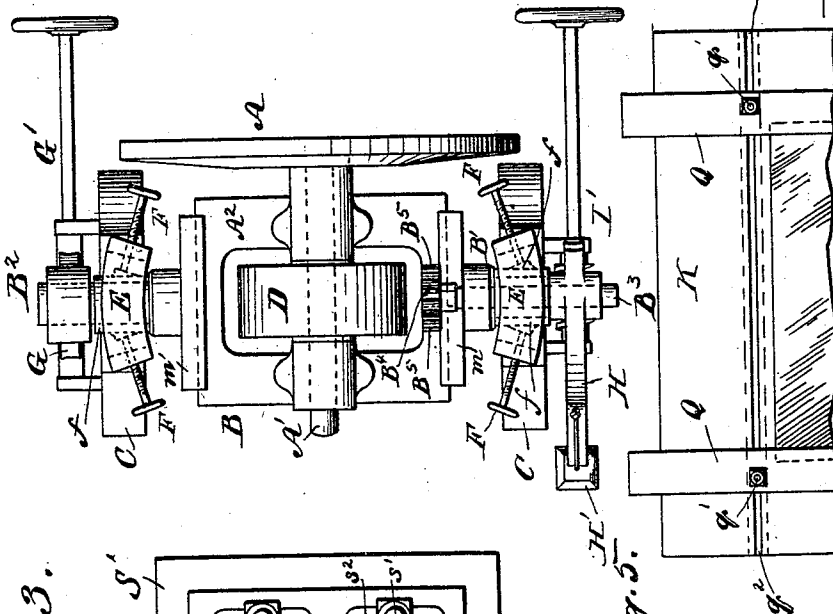


Fig. 3.

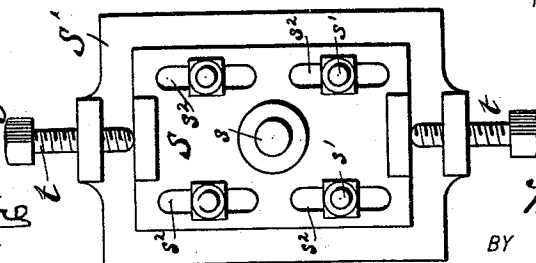
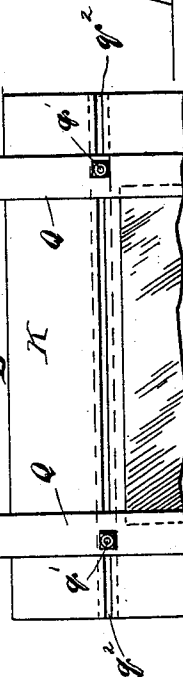


Fig. 5.



WITNESSES:
John M. Deemore
C. Sedgwick

INVENTOR:
M. O'Gorman
BY *Munn & Co.*
ATTORNEYS

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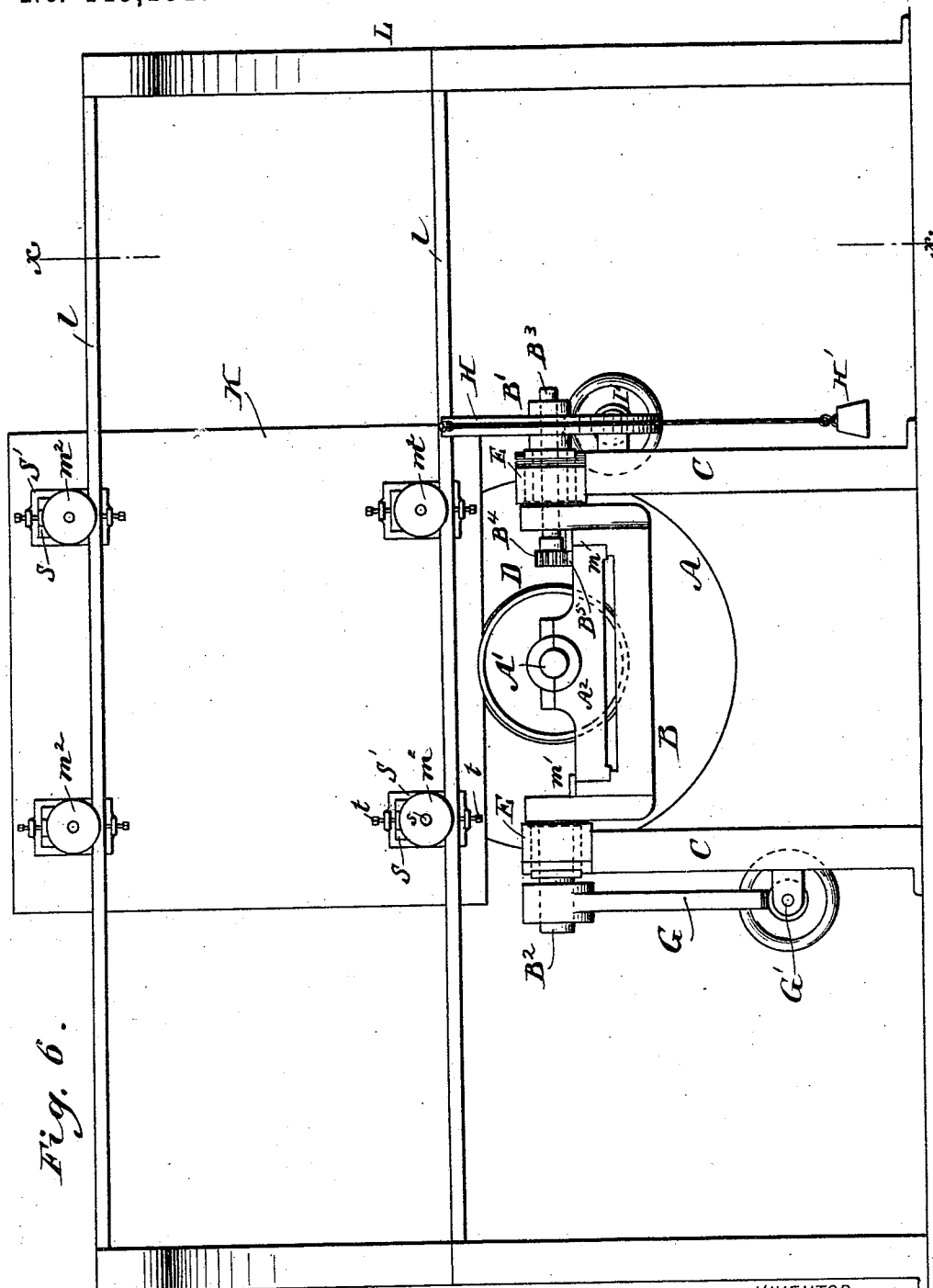


Fig. 6.

WITNESSES:

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UNITED-STATES PATENT OFFICE.

MICHAEL O'GORMAN, OF JERSEY CITY, NEW JERSEY, ASSIGNOR OF ONE-HALF TO M. A. CUMING, OF NEW YORK, N. Y.

BEVELING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 449,131, dated March 31, 1891.

Application filed June 18, 1890. Serial No. 355,853. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL O'GORMAN, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Beveling-Machine, of which the following is a full, clear, and exact description.

My invention relates to a machine designed more particularly for beveling glass; and the invention consists, principally, in adapting the shaft or arbor which carries the grinding-disk to have various adjustments for changing the angle or pitch of the disk.

The invention also consists in journaling the disk shaft or arbor in an adjustable carriage held in the main frame, so that the adjustment of the grinding-disk may be easily effected.

My invention further consists in the combination, with the grinding-disk, of a counterpoise which adapts the disk to be held in contact with the object being beveled by a yielding pressure to obviate danger of breakage in case any foreign substance of unusual size should interpose between the glass and grinding-disk.

The invention finally consists of the construction, arrangement, and combination of parts, all as hereinafter described and claimed.

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

Figure 1 is a side elevation of my new beveling-machine, showing the rails of the supporting-frame in section on line *x x* of Fig. 6.

Fig. 2 is a plan view of the machine without the supporting-frame. Fig. 3 is an enlarged plan view of one of the roller-plates of the supporting-frame. Fig. 4 is a plan view of the glass-holding plate. Fig. 5 is a detailed front view of the same, and Fig. 6 is a rear elevation of the complete machine.

A represents the grinding-disk fixed to the shaft or arbor *A'*, which is journaled in the center of the plate *A²*, held on the carriage *B*, which is itself journaled on trunnions *B' B²* in the main standards *C C*. The pulley *D*, for revolving the grinding-disk and its shaft, is located on the shaft at the center of the carriage *B*, as shown, so that when the pitch or angle of the grinding-disk is changed the re-

lation of the pulley to its belt and prime motor remains substantially the same.

The trunnions *B' B²* are journaled in blocks *f*, held in elongated bearings or boxes *E E* at the tops of the standards *C C*, in which they may be adjusted by the screws *F F*, applied to the boxes of the trunnions, as shown clearly in Fig. 2. The inner ends of these screws impinge upon the blocks *f*, fitted in the box and interposed between the ends of the screws. By turning these screws the carriage is set at an angle to the right or left, which will correspondingly change the angle of the grinding-disk *A*.

For changing the vertical angle or pitch of the grinding-disk the carriage is provided at trunnion *B²* preferably with the segmental plate or arm *G*, with which the worm-shaft *G'* engages, so that by turning this shaft the carriage may be turned in either direction on its trunnions. The trunnion *B'* is hollow, and the carriage below the trunnion is provided with a way *m*, which receives the edge of the plate *A²*. The opposite edge of the plate is held in a similar way *m'* below the trunnion *B²*.

In the hollow trunnion *B'* is fitted the shaft *B³*, on the inner end of which is secured the pinion *B⁴*, which meshes with the rack *B⁵* on the plate *A²*.

To the outer end of the shaft *B³* are secured the horizontal arm *H* and worm-segment *I*, which latter engages with the worm-shaft *I'*, so that by turning the said shaft the shaft *B³* is turned for adjusting the plate *A²* and the grinding-disk. A weight *H'* is attached to the arm *H*, which serves to steady the parts and to take up all wear, so that the grinding-disk will at all times have a uniform motion.

The plate of glass is held to the grinding-disk by a plate *K*, held upon a supporting-frame comprising the uprights *L L* and cross bars or tracks *l l*, which support the plate *K* by means of grooved rollers *m²*, which permit the plate and glass to be moved along the tracks as the grinding proceeds. The lower edge of the plate rests upon the ledge *q*, and its side edges are held by the grooved bars *Q Q*, held to the plate *K* by bolts *q'*, the heads of which enter *T*-grooves *q²*, formed in the plate, as shown clearly in Figs. 1 and 5, so

that the grooved bars may be adjusted to plates of different sizes.

The plate K may be adjusted up and down by the plates S, each of which is formed with a gudgeon *s*, on which the wheels are jour-
 5 naled. These plates are bolted to the main plates S' by bolts *s'*, which work in slots *s*² made in the plates S. The said main plates are secured to the back of the plate K, and
 10 they are each fitted at top and bottom with an adjusting-screw *t t*, which impinge against the ends of the plates S, so that by turning said screws the plate K may be raised and lowered.

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

1. The drive-shaft for the grinding-disk, journaled at the center of a sliding plate held
 20 on a carriage mounted in a main frame on trunnions which work in slots in the main frame, substantially as described.

2. The carriage B, provided with trunnions at its ends and having central bearings for
 25 the shaft which carries the grinding-disk, in combination with the main standards provided with boxes or elongated bearings for the trunnions and means for shifting the trunnions, substantially as described.

3. The carriage formed or provided with ways and the plate A², fitted therein, in combination with the main standards and the shaft A', journaled in or upon said plate, substantially as described.

4. The carriage formed or provided with ways and the plate A², fitted therein and formed with a rack B³, in combination with the shaft B³, fitted in the hollow trunnion, and the gear-wheel B⁴, segment I, and worm I', substantially as described.

5. The carriage B and shaft A', journaled in the center thereof, in combination with the arm II, weight II', attached thereto, the segment I, and worm-shaft I', substantially as described.

6. The carriage B, having segment G attached thereto, in combination with the shaft A', grinding-disk A, and worm G', substantially as described.

7. The plate K, provided with plates S', in combination with the plates S, screws *s'*, which work in slots *s*², gudgeon *s*, and adjusting-screws *t* at the ends of the plates S', substantially as and for the purposes set forth.

MICHAEL O'GORMAN.

Witnesses:

II. A. WEST,
 EDGAR TATE.