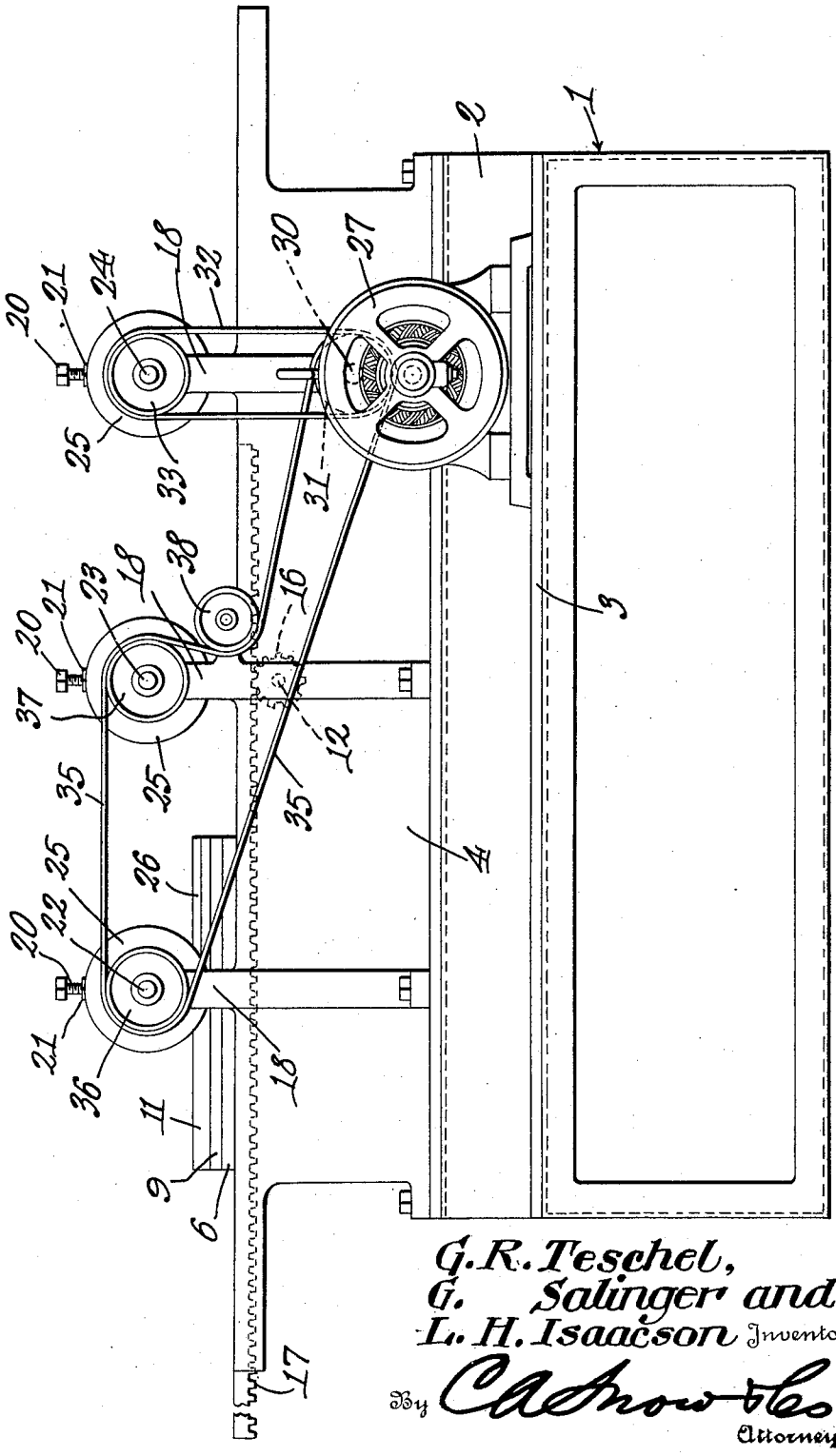
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BEVELING MACHINE

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Fig. 1.



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Fig. 2.

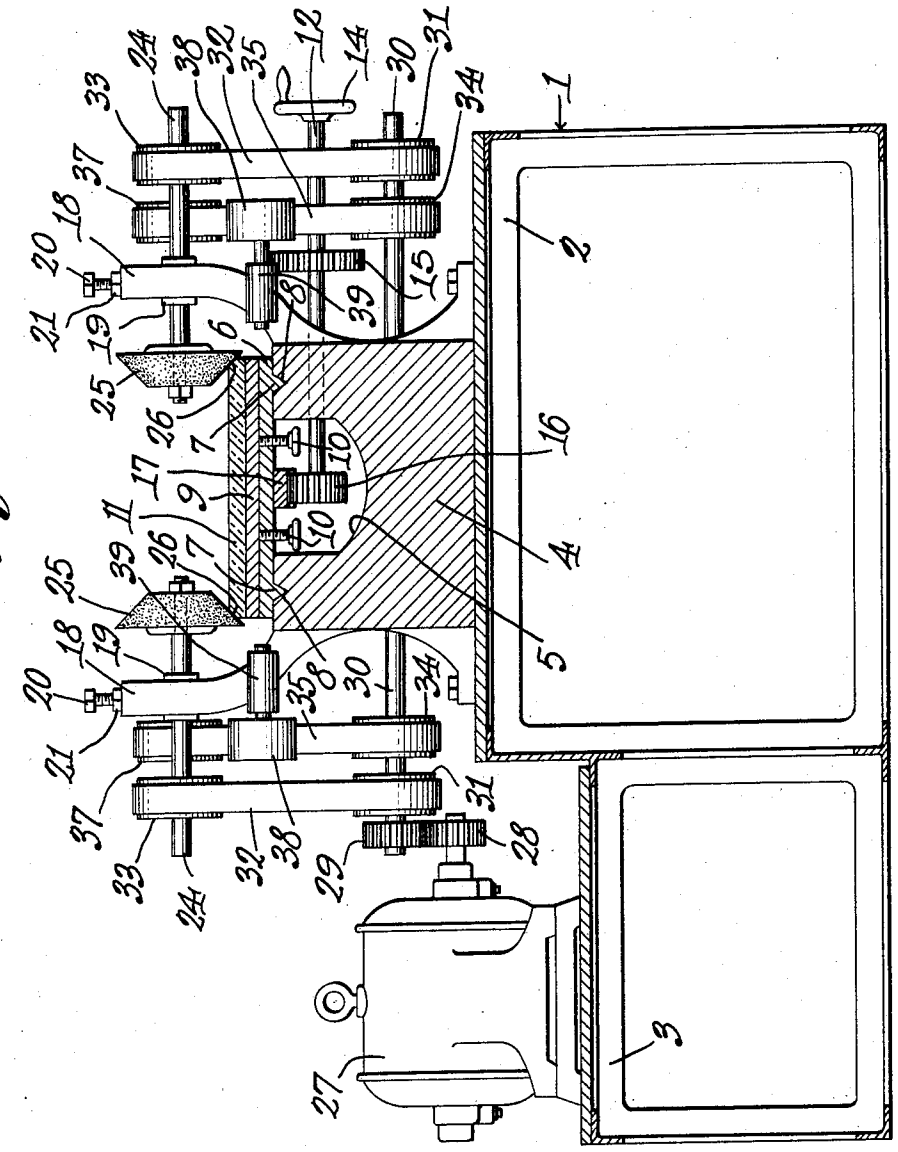
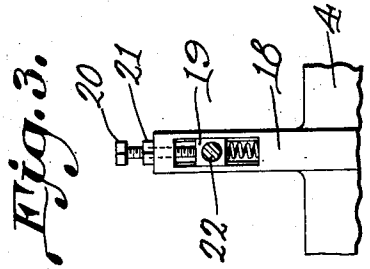


Fig. 3.



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UNITED STATES PATENT OFFICE

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BEVELING MACHINE

Application filed December 17, 1928. Serial No. 326,668.

This invention aims to provide a simple but very efficient machine whereby the edges of plates of glass, or other material, may be beveled. The invention aims to provide novel means for beveling off the edges of the glass, and to provide novel means for moving the glass with respect to the beveling instrumentalities.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in side elevation, a device constructed in accordance with the invention;

Figure 2 is a transverse section of the complete machine;

Figure 3 is a detail showing one of the bearings.

In carrying out the invention, there is provided a support which, as a whole, is designated by the numeral 1. The support 1 preferably includes an elongated main frame 2 in the side of which is located an auxiliary frame 3 which, preferably, is somewhat lower than the main frame 2, as Figure 2 will show. An elongated bed 4 is secured to the main frame 2 and has a recess 5 at its top.

A carriage 6 is mounted to reciprocate on the bed 4, and is provided with depending ribs 7 that are received for sliding movement in grooves 8 formed in the upper surface of the bed 4, the ribs and the grooves holding the carriage 6 on the bed 4 for right line sliding movement. A table 9 is held on the carriage 6 for vertical ajustment by means of screws 10 threaded into the carriage 6 and extended downwardly into the recess 5 of the bed 4. The piece of glass, or other material, which is to be beveled, is marked by the numeral 11 and is supported on the table 9.

The means for imparting reciprocation to the carriage 6 includes a shaft 12, extended transversely of the machine, and journaled for rotation in the bed 4. The shaft 12 may be provided at one end with a hand wheel 14, or its equivalent, and the shaft 12 may carry a gear 15, or the like, the construction being such that the shaft may be rotated either by hand, by means of the wheel 14, or by power through the medium of the gear 15.

The shaft 12 extends into the recess 5 in the bed 4, and a pinion 16 is secured to the inner end of the shaft 12. The pinion 16 meshes with a rack 17 secured to the bottom of the carriage 6 and located in the recess 5.

Posts 18 are secured to the bed 4 and extend upwardly with respect to the bed. Bearings 19 are mounted for vertical sliding adjustment in the posts 18 and are raised and lowered through the instrumentality of screws 20 that are held in place by lock nuts 21. In the bearings 19 of the respective posts 18 are journaled shafts 22, 23, and 24, there being a set of these at each side of the machine, as will be understood when Figure 2 is compared with Figure 1. On the inner ends of the shafts 22, 23, and 24, grinding wheels 25 are secured, the wheels being so shaped that they will bevel the edge of the plate 11 of glass, as shown at 26, when the carriage 6 is moved with respect to the wheels.

Any suitable means may be provided for operating the machine. In the present embodiment of the invention, but not of necessity, an electric motor 27 is mounted on the auxiliary frame 3. On the shaft of the motor 27 there is a gear 28 meshing with a gear 29 on a shaft 30, the shaft 30 being mounted to

rotate in the bed 4, and being extended through the machine from side to side.

On the shaft 30 there are pulleys 31 connected by belts 32 with pulleys 33 on the shaft 24. The shaft 30 carries pulleys 34 engaged by belts 35 extended around pulleys 36 on the shaft 22, and around pulleys 37 on the shaft 23. Idlers 38 are supported for rotation, as shown at 39, on the bed 4 and serve to hold down the belts 35 on the pulleys 37.

In practical operation, the piece of glass 11 which is to be beveled is placed on the table 9 and, if necessary, secured thereto. By manipulating the screws 10, the operator can level up the table 9 so that the plate 11 of glass will travel properly with respect to the grinding wheels 25. The shaft 12 is rotated, ether by means of the hand wheel 14 or by means of the power wheel 15, and the pinion 16 on the shaft 12 cooperating with the rack 17 on the carriage 6 will cause the carriage to move with respect to the grinding wheels 25, and since the the grinding wheels are rotated rapidly, the edges of the plate of glass will be bevelled off as shown at 26. The grinding wheels 25 are carried by the shafts 22, 23, and 24, and can be adjusted vertically by means of the bearings 19 shown in Figure 3.

When the motor 27 is in operation, the pinion 28 drives the pinion 29 and rotation is imparted to the shaft 30. From the shaft 30, rotation is imparted to the shafts 24 and their grinding wheels 25 by means of the pulleys 31, the belts 32, and the pulleys 33. From the shaft 30, rotation is imparted to the shafts 22 and 23 by means of the pulleys 34, the belts 35, and the pulleys 36 and 37, the pulleys 36 being individual to the shafts 22, and the pulleys 37 being individual to the shafts 23.

The machine is simple in operation, strong, and inexpensive to manufacture. It will be found thoroughly effective for the ends in view.

What is claimed is:—

In a glass-grinding machine, a bed provided in its upper surface with a longitudinal recess, a work carriage movable longitudinally of the bed, a vertically movable table above the carriage, and movable with the carriage along the bed, a plurality of means mounted in the carriage and engaging the table to raise, lower and level the table, said means extending under the carriage and into the recess, and being accessible for manipulation by way of the recess, mechanism extended into the recess for imparting right-line reciprocation to the carriage, the means for raising, leveling and lowering the table being spaced to clear said means, as the carriage is reciprocated, terminal grinders and an intermediate grinder supported for rotation in operative relation to the carriage, the terminal grinders being spaced from the intermediate grinder by a distance less than the length of the work on the carriage, and the distance between the terminal grinders being greater than the length of the work on the carriage, a shaft journaled in the bed, belt connection between the shaft and one of the terminal grinders, another single, belt connection between the shaft and the intermediate grinder and the other terminal grinder, a motor and means for connecting the motor operatively with the shaft.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures.

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