

(No Model.)

F. SCHEFOLD.
MACHINE FOR POLISHING GLASS.

No. 453,566.

Patented June 2, 1891.

Fig 1

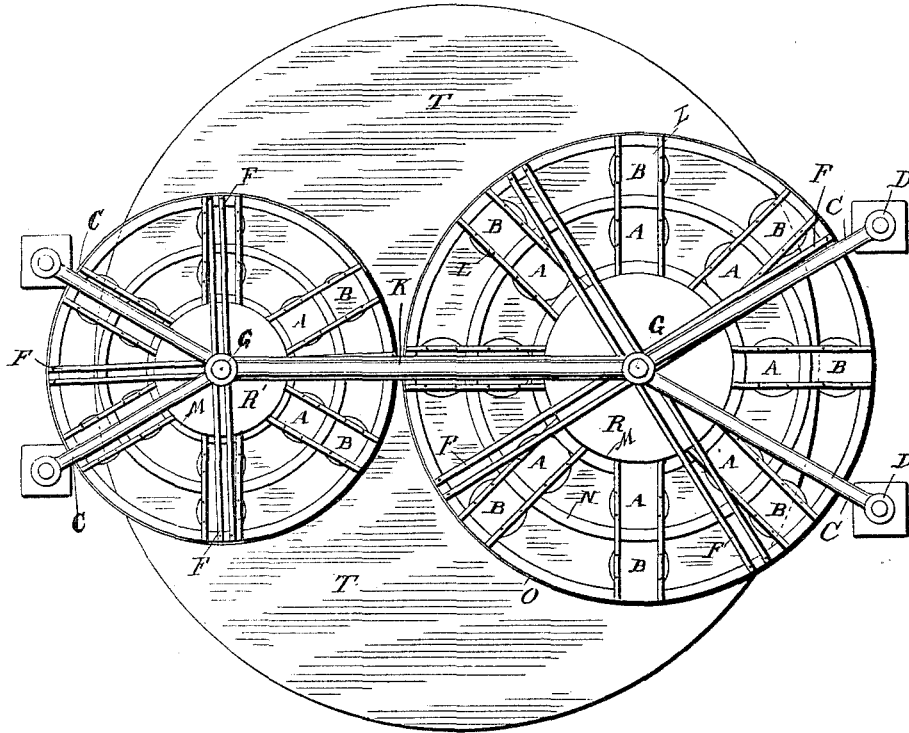
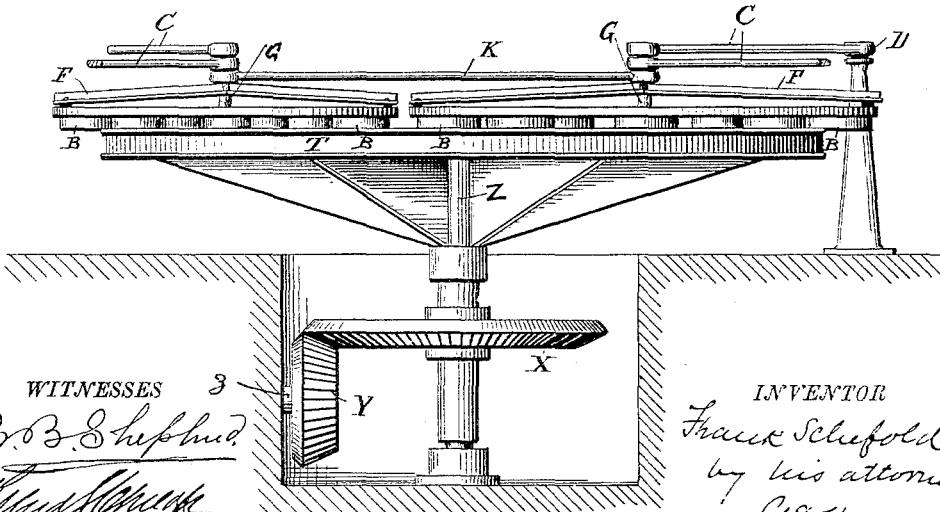


Fig. 2.



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FRANK SCHEFOLD, OF NEW ALBANY, INDIANA, ASSIGNOR TO THE W. C. DE PAUW COMPANY, OF SAME PLACE.

MACHINE FOR POLISHING GLASS.

SPECIFICATION forming part of Letters Patent No. 453,566, dated June 2, 1891.

Application filed May 24, 1888. Serial No. 274,908. (No model.)

To all whom it may concern:

Be it known that I, FRANK SCHEFOLD, a citizen of the United States, and a resident of New Albany, county of Floyd, and State of Indiana, have invented a new and useful Improvement in Machines for Polishing Glass, of which the following is a true and exact description, due reference being had to the drawings which accompany and form part of this specification, and in which similar letters denote similar parts.

My invention consists in certain improvements in that character of polishing-machines where the runners receive no movement independent of that which the rotation of the table gives them; and it consists in the following: constructing the two runners of unequal size, one runner being of such dimensions that its surface will extend to the outer edge and project beyond the center of the table and the other runner being of less size; second, by the mechanism hereinafter described causing an equal pressure to be exerted by the outer series of polishing-blocks, and thus causing them to perform an amount of work equal to that of the inner polishing-blocks; third, by constructing the polishing-runners separate from the grinding-runners and allowing them to rest unsupported upon the glass at the commencement of polishing with the maximum pressure they will exert at any time during the polishing operation.

Where the runners are constructed of equal size and occupy a fixed position in relation to the surface of the table there is always a certain portion of the glass on the table, at or near the center of the table, which receives less polishing work than the portions at a distance from the center of the table; but by making one of the runners of such diameter that it will extend to the outer edge and project beyond the center of the table and the other runner of smaller diameter the surface of the glass on the table is entirely covered and polished equally by the runners.

It has been found in practice that the polishing-runner being supported from the center the outer polishing-blocks will be held away from the surface of the glass on the table on account of the weight of the runner at the center tending to lift the outer surface.

I have found that if I interpose trusses between the center and the outer surface of the runner the weight of the runner is thrown to the outer portion, and the polishing-blocks at that point are thus forced against the surface of the glass to be polished, while the inner polishing-blocks are held against the glass by their own weight. In this character of polishing-machines it was formerly considered impracticable to place the polishing-runners upon the glass with the maximum pressure they would exert at any time during the operation of polishing, and in practice the polishing-runners were placed upon the surface of the glass with a very slight pressure, which was increased as the polishing continued without interrupting the operation of polishing the glass.

In my improved polishing-machine I construct the polishing-runners separate from the grinding-runners and place them upon the surface of the glass with the maximum pressure which they will exert at any time during the operation of polishing.

In the drawings, Figure 1 is a plan view of the polishing-table and polishing-runners. Fig. 2 is a vertical section of table and runners, showing method of operating the tables.

T represents the table upon which the glass to be polished is placed. This table T is given a rotary movement by the bevel-gear X Y and shaft z. This movement may be given by any other well-known means.

R represents the larger runner; R', the smaller runner. These runners rest unsupported with their entire weight upon the table T and are retained in position by the guide-rods C. The rods C have a ring at their inner ends, which loosely surrounds the small projecting shaft G of the runners. A rod K connects the two runners. As may be seen, no movement is given to the runners, with the exception of that caused by the rotation of the table by which the runners rotate, and these runners are guided by the small shaft G, revolving in the ring on the end of the guides C.

A and B represent the polishing-blocks, A being the inner and B the outer. These blocks are connected to the center rim by the rods L L, &c.

F represents the truss-rods, which project from the shaft G to the outer rim of the polishing-runners. These truss-rods are loosely bolted to the rings M and N and rigidly secured to the outer ring of the runner, and in this manner, as may be clearly seen, the weight of the runner is thrown to the outer surface and the outer polishing-blocks B are forced against the surface of the table and the inner blocks A are held against the table by their own weight, and thus both the inner and outer set of polishing-blocks act upon the glass equally. The runner R is of greater diameter than the runner R' and covers the surface of the table from the outer edge to a point beyond the center of the table T.

The glass to be polished, and which has previously been ground and smoothed, is on the table T, and the grinding and smoothing runners being removed away from the table the polishing-runners R R', which have been suspended above the surface of the table by block and tackle or any other well-known means, are allowed to rest unsupported upon the surface of the glass on the table. The means of suspension being removed and the guide-rods C and K connected to the runners, the table is caused to revolve. It will thus be seen that at the commencement of the polishing operation the maximum pressure of

the runners upon the surface of the glass is exerted. The revolution of the table causes the runners to revolve on their axes, and this movement of the table and runners causes the glass to be polished.

Having now fully described my improvement, what I claim, and desire to protect by Letters Patent, is—

1. In a glass-polishing machine, a runner having rows of polishing-blocks, the said polishing-runner being connected at its center by a truss which is rigidly connected to the exterior of and extends to the center of said polishing-runner.

2. In a glass-polishing machine, in combination, a polishing-runner provided with rows of polishing-blocks, said runner being connected together at its center by a truss, substantially as described, a glass-carrying table upon which said runner rests, and guides connected to the center of said runner, whereby the position of the runner upon the table is retained.

In testimony of which invention I have hereunto set my hand, at New Albany, Indiana, this 16th day of May, A. D. 1888.

FRANK SCHEFOLD.

Witnesses:

E. B. COLLINS,

WILLIAM L. TOWN.