

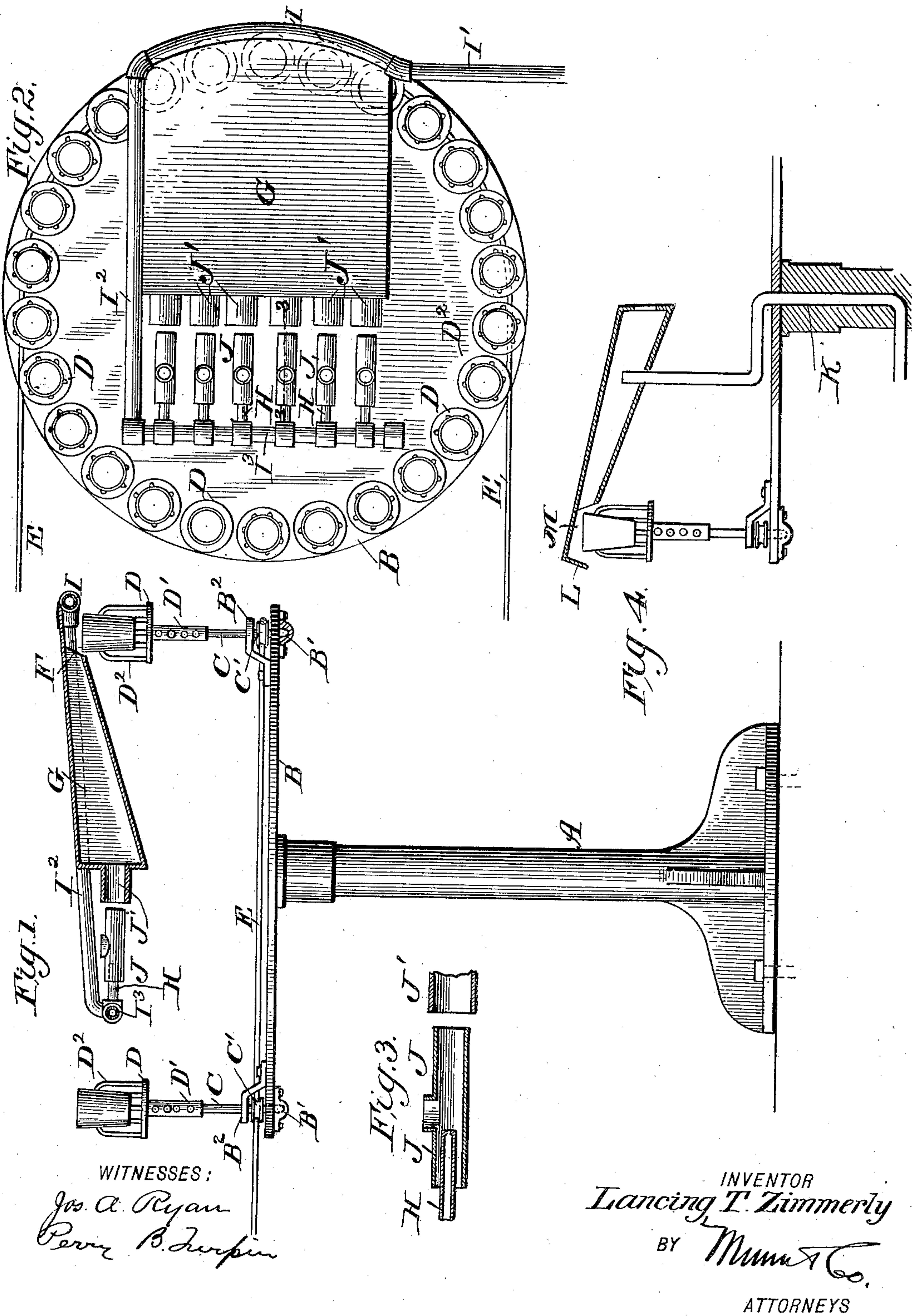
No. 707,045.

Patented Aug. 12, 1902.

L. T. ZIMMERLY.  
GLASS FINISHING MACHINE.

(Application filed Mar. 26, 1902.)

(No Model.)





# UNITED STATES PATENT OFFICE.

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## GLASS-FINISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 707,045, dated August 12, 1902.

Application filed March 26, 1902. Serial No. 100,049. (No model.)

*To all whom it may concern:*

Be it known that I, LANCING T. ZIMMERLY, a citizen of the United States, and a resident of Cumberland, in the county of Allegany and State of Maryland, have made certain new and useful Improvements in Glass-Finishing Machines, of which the following is a specification.

My invention is an improvement in the finishing of the edges of such articles as tumblers, stem-glasses, and other ware which when pressed or blown are rough and uneven; and the invention has for an object to provide an improved machine by which to melt and polish and so finish the edges of the article.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation, partly in section, of a machine embodying my invention. Fig. 2 is a top plan view of the machine. Fig. 3 is a detail sectional view on about line 3 3 of Fig. 2, and Fig. 4 illustrates a construction of retort which may be employed when gas is used as a fuel.

Upon a suitable stand A is mounted centrally a table B, which can be revolved upon the stand to bring the glasses and other ware finished likewise which are supported on the table into position for operation upon by the retort or glory-hole. Upon the table are journaled upright shafts C, stepped at their lower ends at B' in bearings provided at the under side of the table B and journaled above the table in brackets B<sup>2</sup>, secured to the table, pulleys C' being secured on the shaft C, preferably between the table B and the brackets B<sup>2</sup>, as best shown in Fig. 1. The shafts C are provided with tumbler-holders D, preferably adjustable vertically on the shafts C by means of the sleeves D' fitting over the shafts and secured in different adjustments by pins, as will be understood from Fig. 1. The holder also has a series of fingers D<sup>2</sup> to embrace and hold the glass, such fingers being adapted to expand and contract with the action of the glass under influence of heat and cold. As the table is revolved the tumblers are brought within the glory-hole, so the heat will operate to finish the edges of the

tumblers, and while within the glory-hole the tumblers are revolved by the action of a belt E, which passes around the table and operates to turn the shafts, and so turn the tumblers while they are in the glory-hole, the said belt E fitting the pulleys C' on the shaft C, as will be understood from Figs. 1 and 2. This belt may be driven in any suitable manner.

The glory-hole F is provided in the under side of the retort G, at the upper edge of the latter, the retort being preferably in the form of a box which inclines upwardly from the jets H toward the glory-hole and is provided at its upper edge, in front of the glory-hole, with the pipe I, which communicates at one end with the pipe I' for feeding the hydrocarbon fuel and at its other end with the connecting-pipe I<sup>2</sup>, which extends along the side edge of the retort-box and connects with the burner-tube I<sup>3</sup>, which in turn extends along the lower edge of the retort-box and has the jets or burners H, which discharge into the air-mixer tubes J, which in turn discharge to the mixing-tubes J', which open into the retort-box.

By the described construction it will be noticed I provide a glory-hole by means of a retort-vaporizer, whose tube I extends along and constitutes one side of the glory-hole and receives the full heat from the retort, the said pipe I being curved from end to end on the arc traveled by the tumblers, so it will be heated from end to end in such manner as to secure the desired vaporization of the fuel. It will further be noticed that the connecting-pipe I<sup>2</sup> extends along one side of the retort-box and is heated thereby, so that the fuel will be supplied in the form of gas to the jets or burners and discharged thence into the retort, heating the latter and supplying the desired heat to the glory-hole.

It will be understood that in operation the table is revolved by hand, the belt E only operating to rotate the glass-holders independently, being so arranged as to turn the tumblers while the latter are under treatment within the glory-hole provided by the opening in the under side of the retort-box, near the upper edge of the latter. By the described construction the retort-box is supported by the tubes which supply the fuel



and is located above the table and practically within the circle of the tumblers supported on the table for the finishing operation by the retort.

5 The construction as shown in Figs. 1 and 2 may be used with either natural gas or oil for fuel. It may, however, be desirable in some instances when gas is used as a fuel to extend the gas-pipe, as shown at K in Fig. 4, centrally up through the table and to support the retort over the table by means of the said gas-pipe, as shown in Fig. 4.

15 In Fig. 4 it will be noticed a flange or rib L is provided at the outer edge of the glory-hole M, such flange taking the place of the tube I in the construction shown in Fig. 1 and said parts L and I both forming depending heat-retaining devices extending along the outer edge of the glory-hole and aiding in retaining the heat to properly operate upon the edges of the tumblers.

25 The machine is simple, easily operated, can be conveniently erected and connected for use wherever gas or hydrocarbon supply is available, and will efficiently operate for the desired purpose.

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

30 1. In a machine for fire-finishing the edges of tumblers or the like, the combination of means for supporting and turning tumblers, and the retort comprising the box or casing having its upper plate extending laterally outward beyond its lower plate forming an opening below the upper plate through which

the tumblers may be passed, and provided with a vaporizing-pipe extending below the upper plate of the box or casing at the outer edge thereof, and forming an outer wall for the opening through which the tumblers are directed, and the burner-pipe and connections between the same and the vaporizing-pipe, substantially as set forth. 40

2. In an apparatus for fire-finishing the edges of tumblers and the like, a retort comprising a box or casing tapering toward one end and having at such end its upper plate extending laterally outward beyond its lower plate forming in the under side of the box or casing an opening to receive the tumblers, and having a vaporizing-pipe extending beneath such outward extension of the upper plate, substantially as and for the purposes set forth. 50 55

3. The combination in an apparatus for fire-finishing the edges of tumblers, of the table, devices thereon for supporting the tumblers and the retort composed of the box or casing having in its under side an opening forming the glory-hole, the vaporizing-pipe secured to the box and extending along the outer side of said opening, the feed-pipe connected with the vaporizing-pipe at one end of the latter, the burner-pipe, and the connecting-pipe between the burner-pipe and the vaporizing-pipe, substantially as set forth. 60 65

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Witnesses:

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