H. C. WATSON.

GLASS GLAZING MACHINE.

APPLICATION FILED MAY 15, 1914.

1,135,640.

Patented Apr. 13, 1915.

2 SHEETS—SHEET 1.

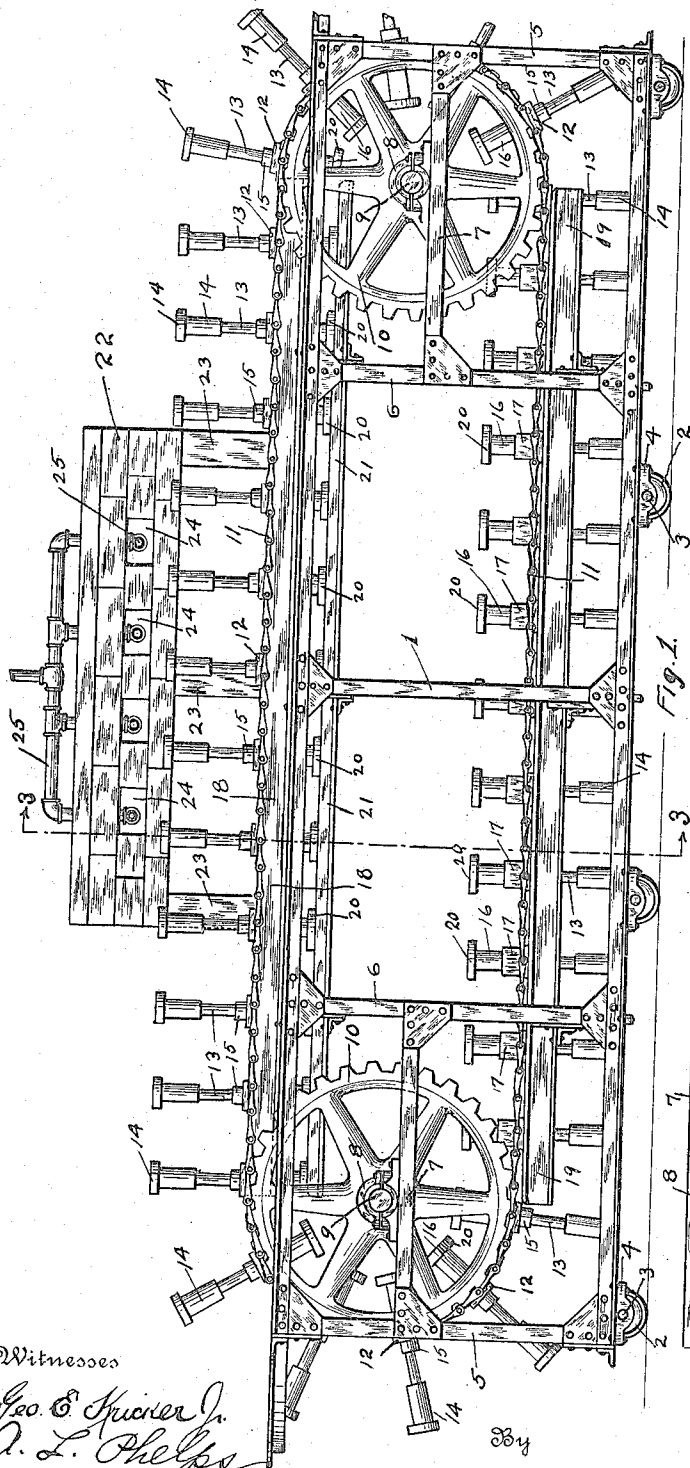


Fig. 1.

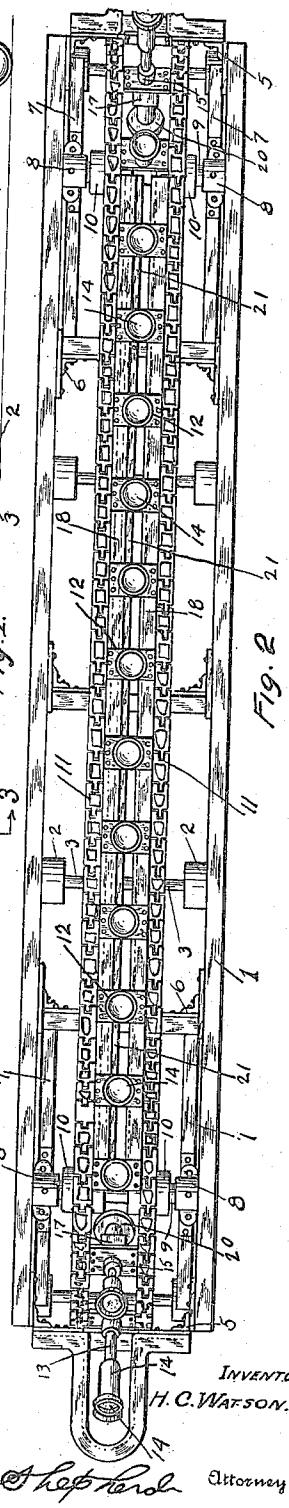


Fig. 2.

Witnesses

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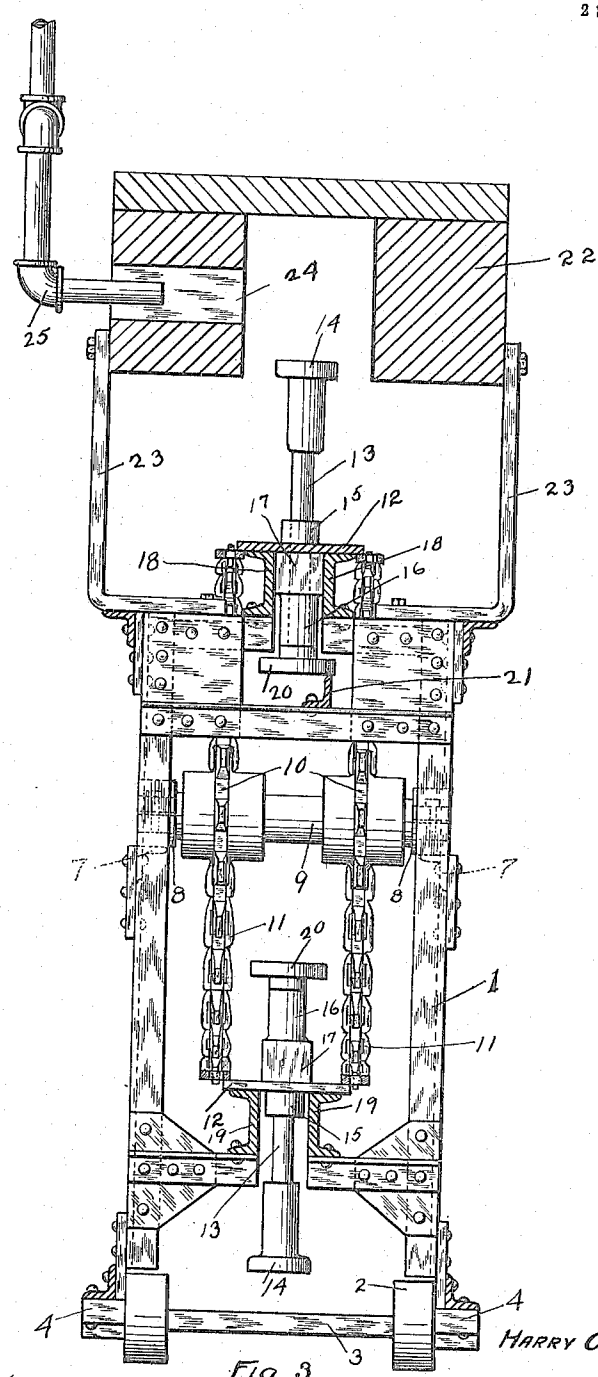


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

HARRY C. WATSON, OF LANCASTER, OHIO.

GLASS-GLAZING MACHINE.

1,135,640. Specification of Letters Patent. Patented Apr. 13, 1915.

Application filed May 15, 1914. Serial No. 838,875.

To all whom it may concern:

Be it known that I, HARRY C. WATSON, a citizen of the United States, residing at Lancaster, in the county of Fairfield and State of Ohio, have invented certain new and useful Improvements in Glass-Glazing Machines, of which the following is a specification.

In the production of glass tumblers and similar pressed ware, a raw edge is usually produced along the open-mouth portion, which must be removed before the article is commercially fit.

My invention aims to produce a machine which will operate to both remove this raw edge and fire polish or glaze the ware. Its primary object is to subject the ware to an intense heat, this heat being applied continuously for a given time, so that it may act upon the ware to produce the desired finish.

My machine also contemplates the provision of means for continuously rotating the ware as it passes through the furnace or heated zone. Its passage through this heated zone, is preferably accomplished by a conveyer structure and it will, therefore, be apparent that the ware is both moved forward and rotated during its passage in order that it may be given a uniform heat wherever this heat is desired.

A still further object of my invention resides in means for positively guiding the supporting standards upon which the ware is mounted during its passage through the heated zone to maintain the standards in a true vertical position. By this means, should any portion of the ware become plastic, it will not warp or be destroyed by its own flow.

The preferred embodiment of my invention is shown in the accompanying drawings, in which similar characters of reference designate corresponding parts, and in which:

Figure 1 is a side elevation of my machine, Fig. 2 is a top plan view of the structure shown in Fig. 1, with the furnace removed, and Fig. 3 is a section taken on line 3—3 of Fig. 1 and looking in the direction of the arrows.

In carrying out my invention, I provide a suitable framework 1, this framework being shown as made of structural steel, although this is not essential. The entire framework is preferably of a portable nature and I have, therefore, provided a series of rollers 2 mounted upon axles 3 carried by the main framework in bearings 4, these bearings being suitably spaced to carry the weight. Each end of the main framework carries uprights 5 and 6 and in spanning the distance between these uprights, are cross pieces 7 upon which are mounted bearings 8. These bearings 8 receive shafts 9, upon which are mounted sprockets 10 suitably spaced apart and over each of which is adapted to pass an endless chain 11. These chains are so formed that base plates 12 may be readily attached to span the distance between each strand. These base plates are suitably apertured to permit the passage therethrough of ware carrying standards 13, these standards being provided with ware supporting cups 14 at their upper ends and being further provided with collars 15, which serve to lock the standards 13 in position as far as inward movement through the base plates 12 is concerned. Beneath these base plates, I have provided each standard with an additional collar 16, these latter being provided with a square portion 17. The square portions of these inner collars are adapted to cooperate with the inner faces of the upper guide channels shown at 18, to positively maintain the standards in true vertical position during their normal position forward through the framework. It will be noted by reference to Fig. 3, that the upper portions of these channels also serve as a guide and rest, upon which the base plates 12 are adapted to rest and, therefore, true horizontal movement of the supporting standards is insured. The lower portion of the framework is also provided with guide channels 19, these guide channels serving the purpose of preventing abnormal sag of the lower strands of the chain upon their return movement. The inner end of each of the standards 13 is provided with a friction wheel 20, these wheels being rigidly secured to their respective standards and being adapted to coöperate to frictionally contact with an angle iron trackway 21. Therefore, as the conveyer moves along, the friction wheels 20 riding upon the trackway 21, will cause the upstanding standards to rotate about their own axes and thus rotate the ware. Carried in superposed relation to the main framework, is the furnace structure designated as an entirety by the numeral 22 and shown particularly in Fig. 3. This furnace structure may be made of any

refractory material such as firebrick and is preferably held in spaced relation with the main framework by means of upstanding arms 23. One side of the furnace structure is provided with a series of apertures 24 through which project the fuel pipes 25 fed from any desired source.

The ware is placed upon the supporting cups at one end of the machine and the device set into operation. As it approaches the furnace structure, it will become heated to some extent and as it enters the furnace structure, the flames coming from the fuel pipes 25 will play upon that portion above the level of the supporting cups. The intensity of the flame may also govern the depth to which the ware is heated. As the conveyer moves along, the friction wheels 20 engage the trackway 21, and the standards themselves caused to rotate about their own axes. This insures an even heat to the entire surface exposed to the action of the flames. Further, by the provision of the channelways 18, the standards are all positively guided to maintain a true vertical position.

What I claim, is:

1. An apparatus of the character described comprising a suitable frame, an endless chain conveyer mounted on said frame, vertical ware supporting standards supported from said conveyer at approximately their center, ware supporting cups on the outside ends of said standards, spaced guide members extending the length of the conveyer between the chains thereof, square collars on said standards slidingly fitting between said guide members to maintain said standards in true vertical position, friction wheels on the inside ends of said standards adjacent said collars, and a track member carried by said framework against which said friction wheels are adapted to bear to rotate said standards as the conveyer moves.

2. An apparatus of the character described comprising a suitable frame, a conveyer formed of a pair of spaced endless chains mounted in said frame, flat base plates spanning the distance between and secured to said chains, vertical ware supporting standards supported from said plates at approximately their center, ware supporting cups on the outside ends of said standards, spaced guide members extending the length of the conveyer between the chains thereof against which said base plates rest, square collars on said standards slidingly fitting between said guide members to maintain said standards in true vertical position, friction wheels on the inside ends of said standards adjacent said collars, and a track member carried by said framework against which said friction wheels are arranged to bear to rotate said standards as the conveyer moves.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY C. WATSON.

Witnesses:
WM. W. LERCH,
H. W. WOLFORD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."