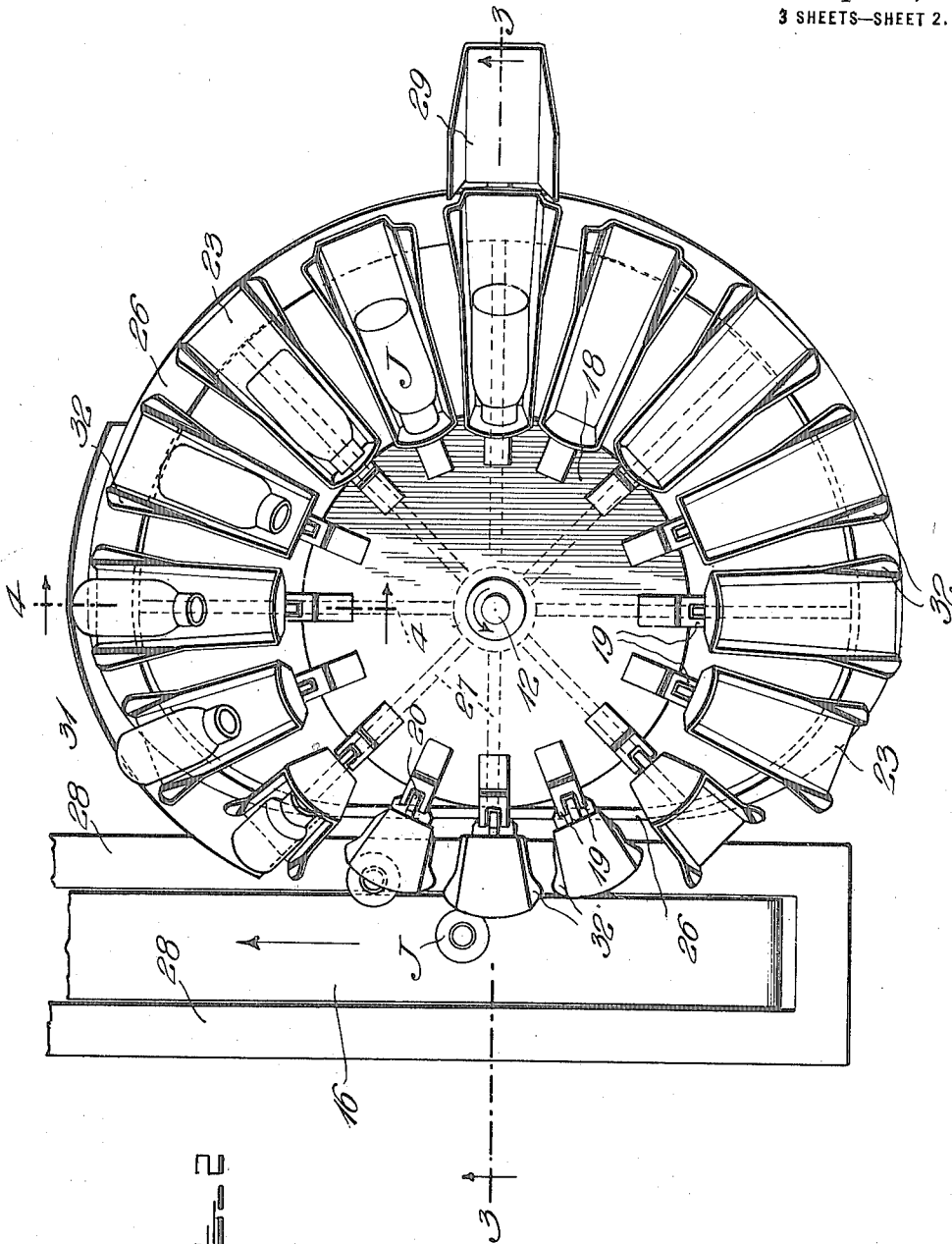


S. M. THORNBURG.
 JAR TRANSFERRING MACHINE.
 APPLICATION FILED FEB. 5, 1917.

1,263,485.

Patented Apr. 23, 1918.
 3 SHEETS—SHEET 2.



Witness
 J. C. ...

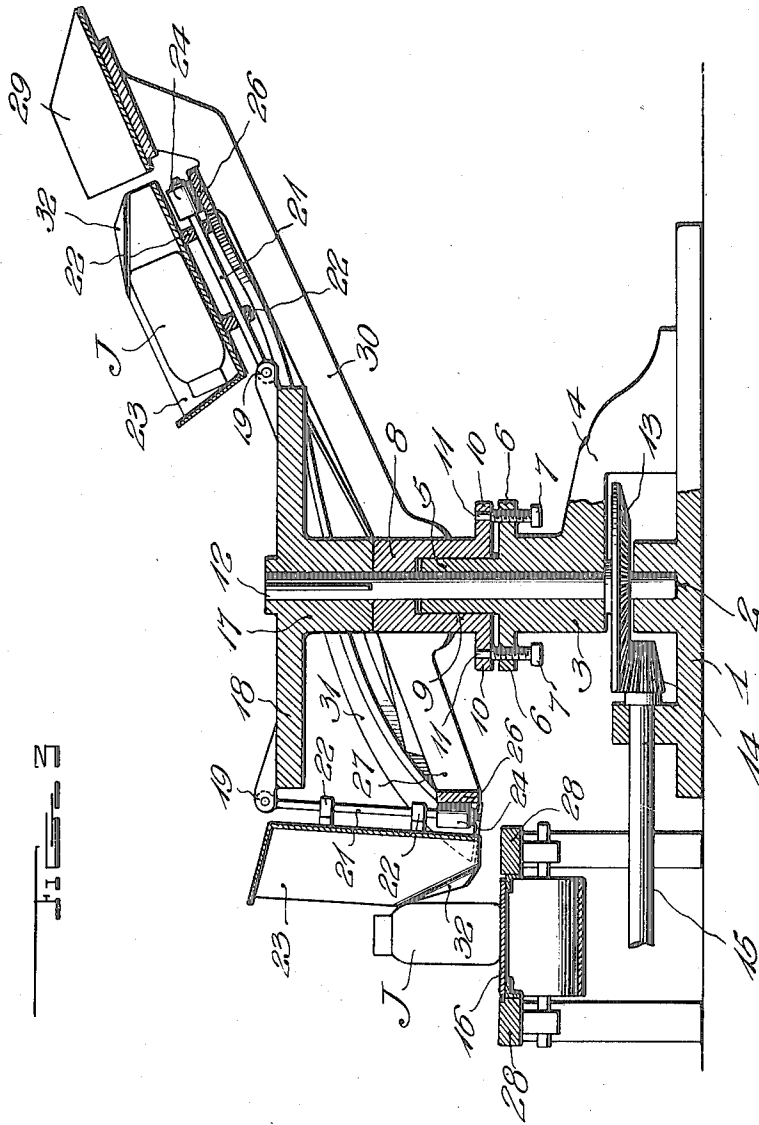
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UNITED STATES PATENT OFFICE.

SAMUEL M. THORNBURG, OF MUNCIE, INDIANA.

JAR-TRANSFERRING MACHINE.

1,263,485.

Specification of Letters Patent. Patented Apr. 23, 1918.

Application filed February 5, 1917. Serial No. 146,741.

To all whom it may concern:

Be it known, that I, SAMUEL M. THORNBURG, a citizen of the United States, residing at Muncie, in the county of Delaware and State of Indiana, have invented certain new and useful Improvements in Jar-Transferring Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide a simply constructed and inexpensive yet efficient and durable machine for transferring glass fruit jars and the like from a blowing machine to a conveyer which carries the same to the oven or leer.

With the foregoing general object in view the invention resides in certain novel features of construction and unique combinations of parts to be hereinafter fully described and claimed, the descriptive matter being supplemented by the accompanying drawings which constitute a part of this application and in which:—

Figure 1 is a side elevation of the improved machine;

Fig. 2 is a top plan view thereof; and,

Figs. 3 and 4 are vertical sectional views on the planes of the lines 3—3 and 4—4 of Fig. 2.

In the drawings above briefly described the numeral 1 designates a base having a bearing socket 2 on its upper side and having a vertically disposed bearing 3 aligned with said socket, said bearing 3 being supported by a suitable web or webs 4. The upper end of the bearing 3 is reduced in diameter as shown at 5 and immediately below this reduced portion is formed with oppositely extending ears 6 through which set screws 7 are threaded upwardly.

An upper vertically disposed bearing 8 is formed in its lower end with a socket 9 receiving the reduced upper end 5 of the bearing 3 and said upper bearing is provided with oppositely extending ears 10 disposed above the ears 6. The ears 10 are formed with vertical openings receiving rotatably therein the unthreaded upper ends 11 of the screw 7 so that adjustment of these screws will similarly adjust the bearing 8, said screws also serving to prevent rotation of said bearing 8.

A vertical shaft 12 is rotatably mounted in the bearings 3 and 8 and the socket 2 and

is provided on its lower end with a bevel gear 13 meshing with a pinion 14 on a drive shaft 15 which will by preference be driven from the conveyer 16 which carries the jars J from the transferring machine in a manner to be described. Keyed on the upper end of the shaft 12 and resting on the bearing 8 is the hub 17 of a rotary head 18, said head being preferably in the form of a flat disk as shown.

Parallel radially disposed ears 19 are formed on the edge of the head 18 and receive therebetween flat heads 20 on the inner ends of a plurality of radially disposed arms 21, brackets 22 being secured to said arms to support a plurality of jar receptacles 23 which are open at their upper sides and at one end. The outer ends of the arms 21 are provided with anti-friction rollers 24 which travel on a continuous inclined cam track 26, said track being supported by arms 27 which radiate from and are preferably formed integrally with the bearing 8. The lower part of the track 26 is spaced above and laterally from the endless belt conveyer 16 and serves to permit the receptacles 23 to tilt downwardly to discharge the jars J on one side of the conveyer frame 28, said side constituting a horizontal jar receiver disposed in the same plane with the active upper reach of the conveyer 16.

Adjacent the high side of the track 26 is a chute 29 into which the blowing machine (not shown) discharges, said chute being carried by an arm 30 which extends from the bearing 8 and serving to direct the jars into the receptacles 23 as the machine is continuously driven, said receptacles then standing as shown at the right of Fig. 3. As the receptacles 23 progress downwardly along the track 26, however, the inclination of said receptacles is reversed so that it becomes necessary to provide means for preventing the jars J from being prematurely discharged. For this purpose the arcuate guard flange 31 is provided, said flange, however, terminating at such a point as to permit the jars J to drop from the open ends of the receptacles onto the frame 28 upon which they stand on end. Cams 32 with which the receptacles 23 are provided then come into action to force the jars from the frame onto the conveyer 16 which carries them to the oven or leer (not shown).

Although the cams 32 might well be constructed in a number of ways, they are pref-

erably formed by bending the outer corners of the receptacles 23 outwardly so that they stand at obtuse angles to the sides of said receptacles. These cams are preferably
 5 formed on both sides of the receptacles in order that they may operate regardless of the direction in which the machine is driven. By forming the cams by bending the sides of the receptacles outwardly, they also serve
 10 to some extent as means for guiding the jars as the latter leave the chute 29.

A machine constructed as or substantially as shown and described will not only be comparatively simple and inexpensive but
 15 highly efficient and durable. By adjusting the screws 7 it will be obvious that the entire upper portion of the machine including the head 18, the receptacles 23, and the cam track 26, will be adjusted vertically to space
 20 said track a greater or less distance above the conveyer frame, this being particularly advantageous when employing the improved machines in connection with conveyers which have been previously built at different
 25 elevations. This adjustment, in no way affects the operation of the machine since all the principal work performing parts are moved bodily and maintain the same relation, it being understood that in order for
 30 such adjustment to be made, the hub 17 must either be slidably keyed on the shaft 12 or else the latter must be permitted to slide through the gear 13.

Another important feature of the invention is the provision of the cams 32 since they serve the twofold function of guiding the jars into the receptacle and forcing said jars from the conveyer frame onto the conveyer.
 35

On account of the advantages above pointed out, the construction shown constitutes the preferred form of the improved machine but it is to be understood that within the scope of the invention as claimed, numerous
 40 changes may be made without sacrificing the principal advantages.

The receptacles 23 are preferably lined with asbestos or other cushioning and heat insulating material as shown at L in Fig.

4, this lining being omitted from the other views for sake of clearness. 50

I claim:

1. In a jar transferring mechanism, the combination of a horizontally moving conveyer, a horizontal jar receiver at one edge
 55 of and in the horizontal plane of said conveyer, a rotating head spaced above and laterally from said receiver, a plurality of radially disposed jar receptacles pivoted to said head for downward tilting and having
 60 open outer ends, means for controlling the tilting of said receptacles to permit them to deposit the jars on end upon the aforesaid receiver, and cams carried by said receptacles for forcing the jars from said receiver onto the conveyer. 65

2. In a jar transferring mechanism, the combination of a horizontally moving conveyer, a horizontal jar receiver at one edge
 70 of and in the horizontal plane of said conveyer, a rotating head spaced above and laterally from said receiver, a plurality of radially disposed jar receptacles pivoted to said head for downward tilting and having
 75 open outer ends, and means for controlling the tilting of said receptacles to permit them to deposit the jars on end upon the aforesaid receiver, one or both of the outer corners of said receptacles being bent outwardly at obtuse angles to the sides thereof
 80 to form cams for forcing the jars from the receiver onto the conveyer.

3. In a jar transferring machine, a vertical rotary shaft, a plurality of tilting jar receptacles connected with said shaft, and
 85 a cam track for supporting said receptacles and controlling the tilting thereof; in combination with a bearing for said shaft, rigid arms radiating from said bearing and supporting said cam track, and means for adjusting said bearing vertically. 90

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

SAMUEL M. THORNBURG.

Witnesses:

ARTHUR D. MCKINLEY,
 EDITH HURST.