

Jan. 7, 1930.

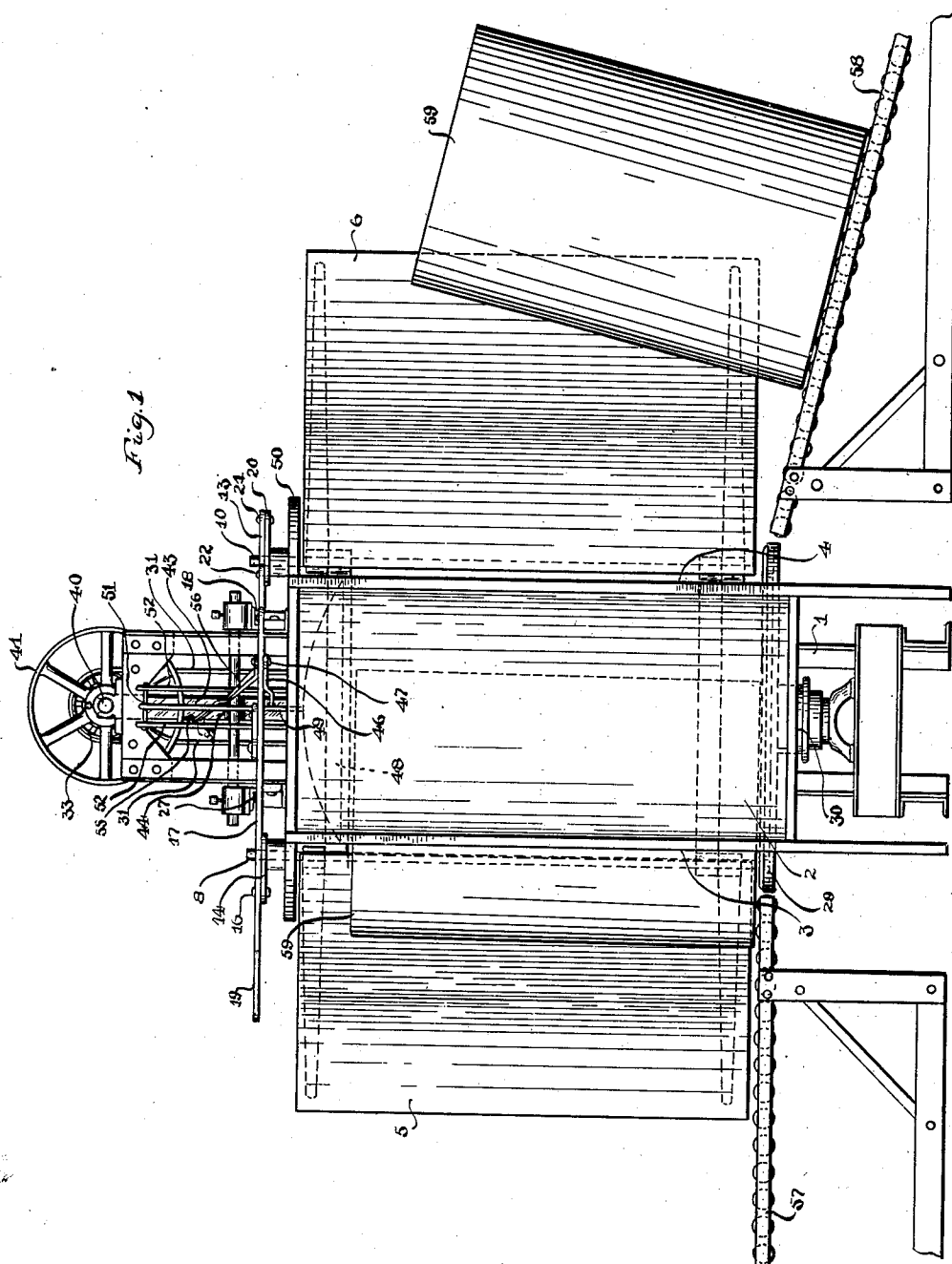
C. L. HOOPER ET AL

1,742,393

INCLOSURE FOR ARTICLES BEING SPRAYED

Filed May 14, 1927

4 Sheets-Sheet 1



INVENTOR  
Charles L. Hooper  
and  
Robert F. Sutherland  
BY  
*H. H. Smith*  
their ATTORNEY

Jan. 7, 1930.

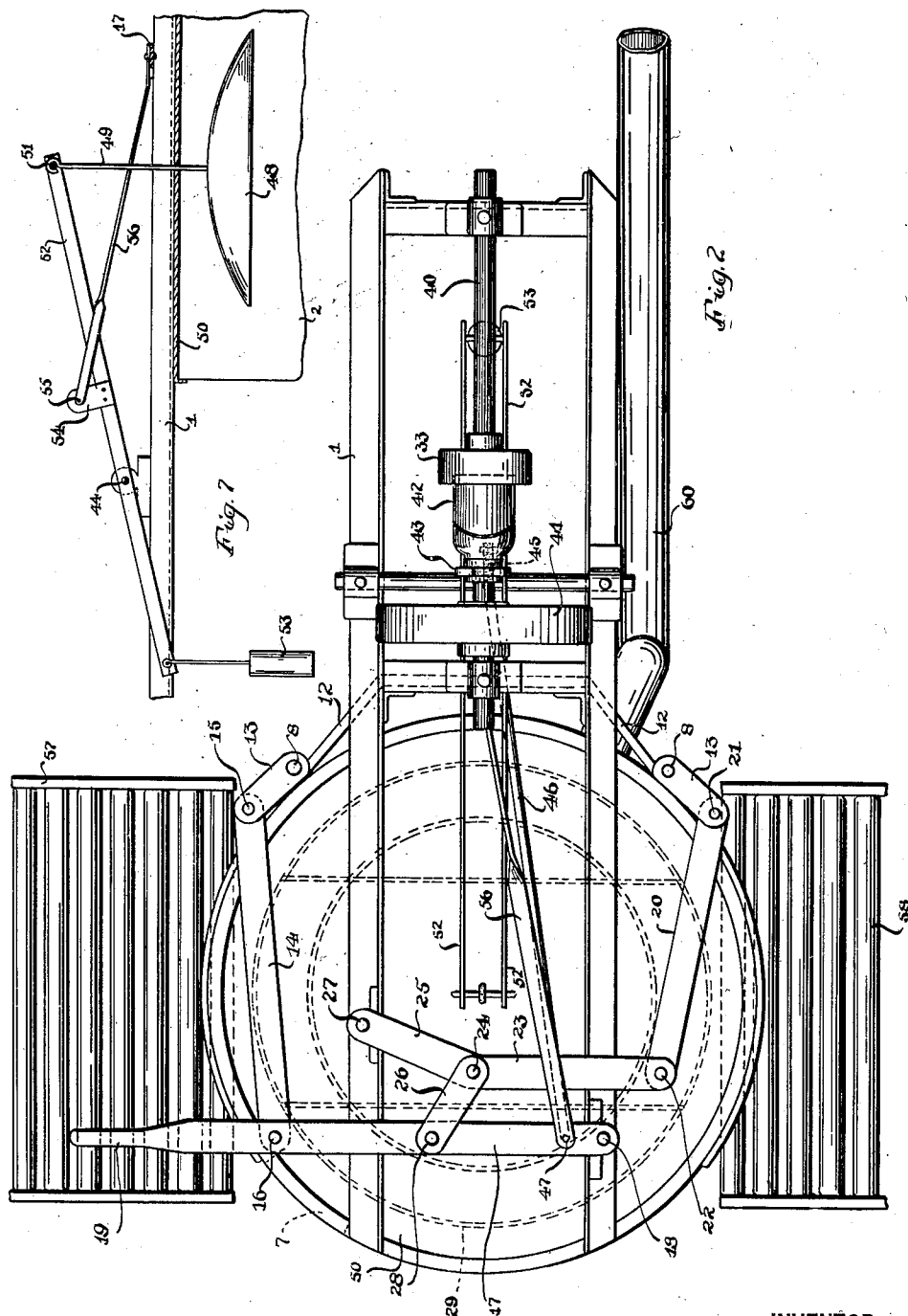
C. L. HOOPER ET AL

1,742,393

INCLOSURE FOR ARTICLES BEING SPRAYED

Filed May 14, 1927

4 Sheets-Sheet 2



INVENTOR  
Charles L. Hooper  
Robert F. Sutherland  
BY  
*H. N. Limmo*  
their ATTORNEY

Jan. 7, 1930.

C. L. HOOPER ET AL

1,742,393

INCLOSURE FOR ARTICLES BEING SPRAYED

Filed May 14, 1927

4 Sheets-Sheet 3

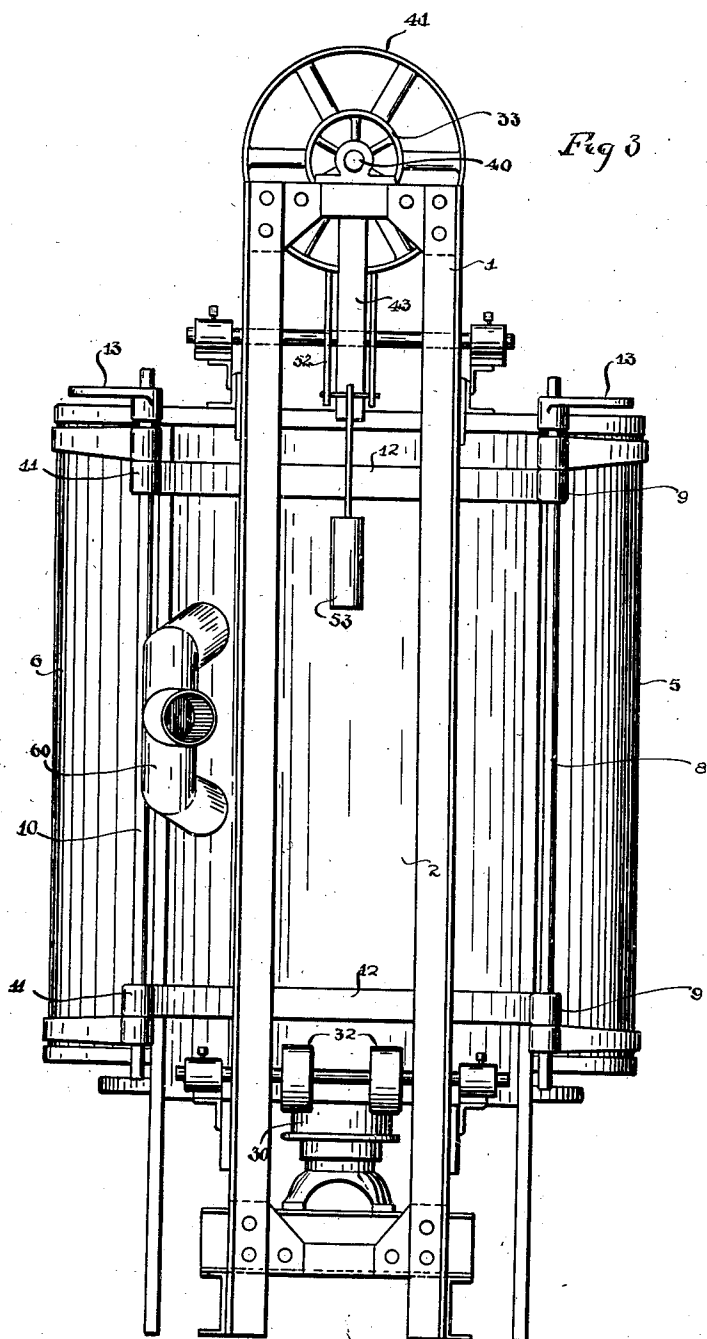


Fig 3

INVENTOR  
Charles L. Hooper  
Robert F. Sutherland  
BY  
H. V. Simms  
their ATTORNEY

Jan. 7, 1930.

C. L. HOOPER ET AL

1,742,393

INCLOSURE FOR ARTICLES BEING SPRAYED

Filed May 14, 1927

4 Sheets-Sheet 4

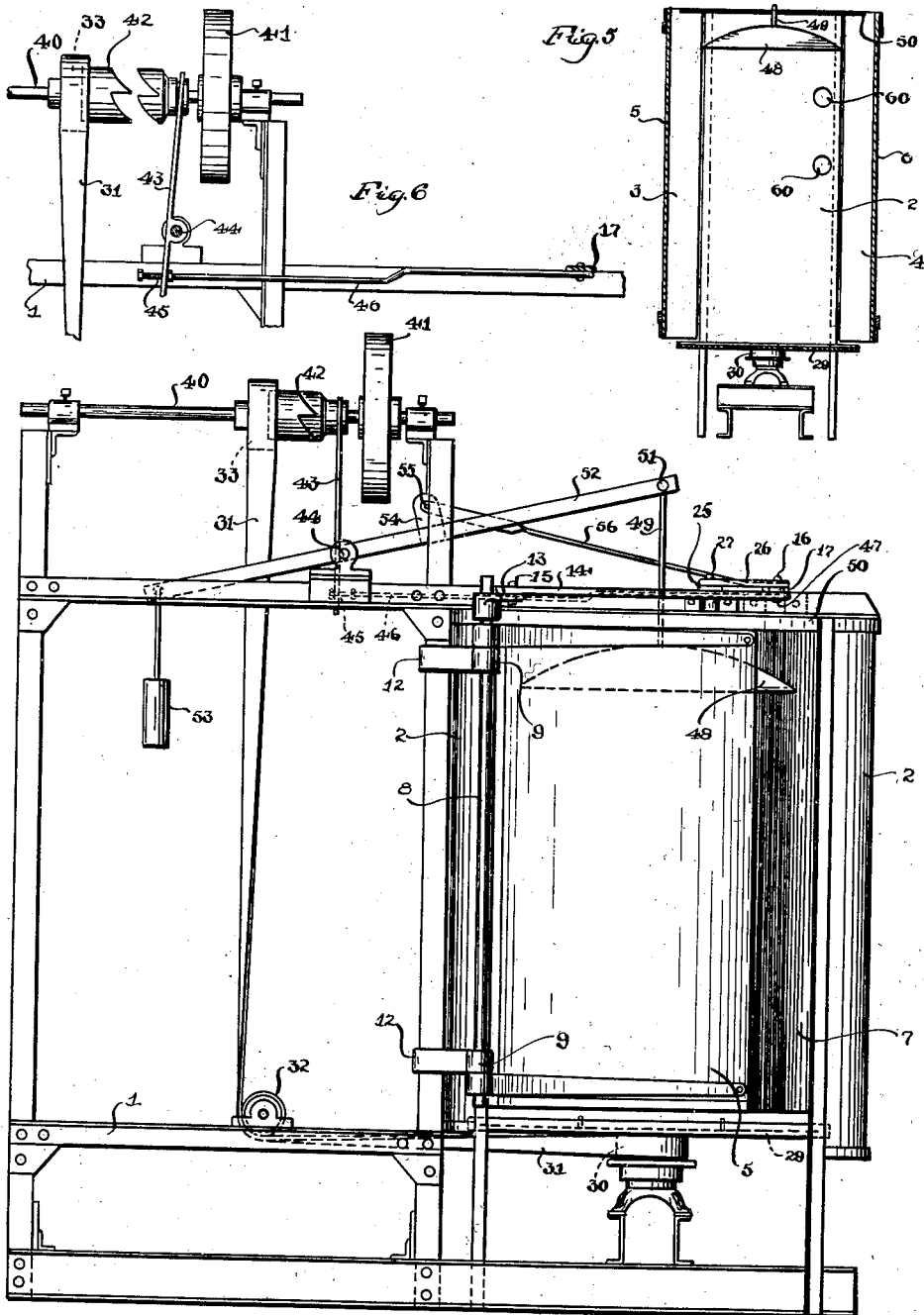


Fig. 4

INVENTOR  
Charles L. Hooper  
Robert F. Sutherland  
BY  
J. H. Simms  
their ATTORNEY

## UNITED STATES PATENT OFFICE

CHARLES L. HOOPER AND ROBERT F. SUTHERLAND, OF ROCHESTER, NEW YORK, ASSIGNORS TO VACUUM OIL COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

## INCLOSURE FOR ARTICLES BEING SPRAYED

Application filed May 14, 1927. Serial No. 191,506.

The present invention relates to inclosures for articles being sprayed and an object of the invention is to provide an inclosure into which cylindrical receptacles may be readily fed from a conveyor and from which they may be readily discharged onto another conveyor. Another object of the invention is to provide a casing having inlet and outlet doors on opposite sides thereof and provided with a rotary means which permits all portions of a container to move past a spray gun positioned at one point in the casing. Still another object of the invention is to provide for covering the upper head of a container as it is being rotated in an inclosed casing past a spray gun, in order to protect the head against this spray. A still further object of this invention is to provide a common operating means for the doors of a casing and a cover for a container rotating in the casing past a spray gun.

To these and other ends, the invention consists of certain parts and combinations of parts all of which will be hereinafter described, the novel features being pointed out in the appended claims.

In the drawings:

Fig. 1 is a view in elevation of an apparatus constructed in accordance with this invention;

Fig. 2 is a plan view of the same apparatus;

Fig. 3 is a rear view;

Fig. 4 is a view of the intake side of the apparatus;

Fig. 5 is a vertical section through the apparatus;

Fig. 6 is a detail view of the clutch operating mechanism; and

Fig. 7 is a detail view of the head cover operating mechanism.

In the illustrated embodiment of the invention there is provided a main frame 1 supporting a casing or housing comprising, in this instance, two segments 2 of a circular wall spaced at their lower ends from the lower part of the frame and spaced at their vertical edges from each other to provide an intake opening and an outlet opening 3 and 4 respectively. The intake opening is closed

by a door 5 while the outlet opening is closed by a door 6, the door 5 being narrower than the intake opening so that a vertically extending opening 7 is provided between the free edge of the door and the adjacent edge of one of the wall sections 2 through which a spray gun may be operated. The door 5 has a hinge bar 8 turning in bearings 9 while the door 6 has a hinge bar 10 turning in bearings 11. The bearings 9 and 11 are formed at the opposite ends of two straps 12 which are secured to the main frame 1 and extend in rear of the rear section 2 of the casing.

A novel means is employed for effecting the simultaneous opening and closing of the door. In this instance, the hinge bars 9 and 10 have arms 13 extending laterally from their upper end. To one of these arms a link 14 is pivoted at 15, said link in turn being pivoted at 16 to an operating lever 17 which is pivoted at one end 18 to the frame 1 and has its other end provided with a grip 19. To the other arm 13, a link 20 is pivoted at 21, this link 20 also being pivoted at 22 to a link 23 which is pivotally connected at 24 to the knuckle of a toggle formed by two links 25 and 26, the former being pivoted at 27 to the frame 1 and the latter being pivoted at 28 to the lever 17. It is apparent with this arrangement, the movement of the operating lever 17 in one direction effects the simultaneous opening of the intake and outlet doors, whereas the movement of the lever 17 in the other direction effects the simultaneous closing of the doors.

Within the lower portion of the casing is mounted to turn a rotary table or support 29 which may have a pulley 30 beneath the same operated in any suitable manner. In this instance, a belt 31 passes about the pulley 30, thence upwardly about two pulleys 32 to a loose pulley 33 on a drive shaft 40. This drive shaft carries a drive pulley 41 which through a clutch connection 42 is adapted to establish driving connection with the pulley 41 in order to effect the turning of the table or rotary support 29.

In order to effect the automatic stopping and turning of the rotary table 29, the movable member of the clutch connection 42 may be connected to a lever 43 which is pivoted at

44 to the frame of the apparatus and has a depending end. Pivoted at 45 to the lower end of the lever 43 is a rod 46, the other end of which is pivoted at 47 to the operating lever 17 so that when the operating lever is moved to close the doors, the clutch connection 42 will be established and the rotary support 29 will start a motion, whereas, when the operating lever 17 is moved in the opposite direction, to open the doors, the clutch connection will be broken and the rotary support will cease its rotation.

With the end in view of protecting the upper head of the receptacle against the spray, a head protector or cover 48 is employed. This head protector is in the form of a concavo-convex disk 48, rotatably supported on the lower end of a rod 49, which is guided for vertical movement through the top wall 50 of the casing and has its upper end pivotally secured at 51 to a lever 52 which is pivoted on the shaft 44 and is counterbalanced by a weight 53 suspended from that end of the lever 52 opposite the cover 48. The cover is operated preferably automatically with the opening and the closing of the doors, being moved downwardly with the closing of the doors and upwardly with the opening of the doors. The lever 52 has an arm 54 which is pivoted at 55 to a link 56, the link in turn being pivoted at 47 to the lever 17. The apparatus is preferably used in connection with a feeding conveyor 57 and a discharge conveyor 58.

The operation of the invention will be understood from the foregoing but will be summarized as follows: the containers 59 move along the feeding conveyor 57, while an operative stands at one side of the feeding conveyor in position to grasp the handle 19 of the operating lever 17. Movement of this lever in one direction opens both doors 5 and 6 of the apparatus and also elevates the cover 48 and stops the rotation of the table 49. The operative with his hand pushes the container 59 onto the table or support 29 and this container displaces a container from the rotary support onto the discharge conveyor 58. When the newly entered container is properly centered on the rotary support 29, the operative moves the lever 17 in the other direction, thus closing both doors 5 and 6, starting the rotation of the rotary support 29 and moving the cover 48 into engagement with the upper head of the container. The concave surface of this cover tends to properly center the container on the rotary support as the center of this concave surface is vertically above the axis of rotation of the rotary support. The operative with a spray gun of any suitable construction sprays the container through the opening 7 and the fumes from this coating material pass off through a discharge flue 60.

What we claim as our invention and desire to secure by Letters Patent is:

1. An apparatus of the class described comprising a casing having a door, a rotary container support mounted in the casing to engage one end of the container, a cover mounted in the casing for engaging the opposite end of the container and common controlling means for effecting the closing of the door and the movement of the cover toward the rotary support.

2. An apparatus of the class described comprising a casing, a rotary container support mounted in the casing to turn about a vertical axis to engage the lowermost end of the container, and a cover mounted in the casing vertically above the support for engaging the uppermost end of the container, said cover having a head engaging surface shaped to center a container vertically on the rotary support.

3. An apparatus of the class described comprising a casing, a door for said casing, a rotary support mounted in the casing, means for turning the support a clutch controlling said means, and a door operating means having connection with the clutch to effect the stopping of the rotation of the rotary support on the opening of the door and to effect the rotation of the support on the closing of the door.

4. An apparatus of the class described comprising a casing having door openings in opposite sides thereof, doors closing said openings, a rotary container support mounted at the lower part of the casing, a head cover rotatably mounted in the upper part of the casing, means providing for relative movement one toward and from the other between the head cover and the rotary support, a clutch having driving connection with the rotary support, a controlling member, connection between the controlling member and the doors for effecting the simultaneous opening and closing of the doors, connection between the controlling member and the clutch for effecting the rotation of the rotary member on the closing of the doors and the stopping of the rotation of the rotary member on the opening of the doors, and a connection between the controlling member and the means providing for relative movement between the head cover and the rotary support for effecting movement of one of said parts toward the other on the closing of the doors and movement of one of said parts away from the other upon the opening of the doors.

5. An apparatus of the class described comprising a casing having openings in opposite sides, doors closing the openings, a rotary support in the bottom of the casing, mechanism for rotating said support a rotatably mounted head cover arranged at the top of the casing and movable toward and from the rotary support and common means for ef-

fecting the closing of the door, the movement of the head cover toward the rotary support, and the connection of the mechanism with the support to rotate the latter.

5 6. An apparatus of the class described comprising a rotary support, means for turning the same, a casing entirely surrounding the support and having doors in opposite sides beyond the field of operation of the support, a feeding conveyor leading to one of the  
10 doors, a discharge conveyor leading from the other door, and a common controlling means for opening and closing the doors and controlling the turning means to effect the  
15 turning of the support with the closing of the doors and the stopping of the support with the closing of the doors.

7. An apparatus of the class described comprising a rotary support, means for turning  
20 the same, a casing entirely surrounding the support and having doors in opposite sides beyond the field of operation of the support, a feeding conveyor leading to one of the doors, a discharge conveyor leading from the  
25 other door, a common controlling means for opening and closing the doors and controlling the turning means to effect the turning of the support with the closing of the doors and the stopping of the support with the closing  
30 of the doors, and means provided in a vertical side wall of the casing for effecting the spraying of an article on the support during the turning of the latter.

8. An apparatus of the class described comprising a rotary circular substantially flat  
35 support, means for turning the same, a casing entirely surrounding the support and having doors on opposite sides beyond the field of operation of the support, a feeding conveyor leading to one of the doors and having its discharge  
40 portion adjacent the edge of the circular support so that an article may move from the conveyor on to the substantially flat support, a discharge conveyor leading from the  
45 other door and having its receiving portion adjacent the edge of the support at the opposite side of the axis of turning of the support so that the receptacle moved into the casing from the feeding conveyor will be displaced  
50 onto the discharge conveyor upon the introduction of another receptacle into the casing from the feeding conveyor.

CHARLES L. HOOPER.

ROBERT F. SUTHERLAND.

55

60

65