C. L. HOOPER

APPARATUS FOR CASING CANS.

APPLICATION FILED APR. 19, 1920.

1,422,057.

Patented July 4, 1922.

3 SHEETS—SHEET 1.

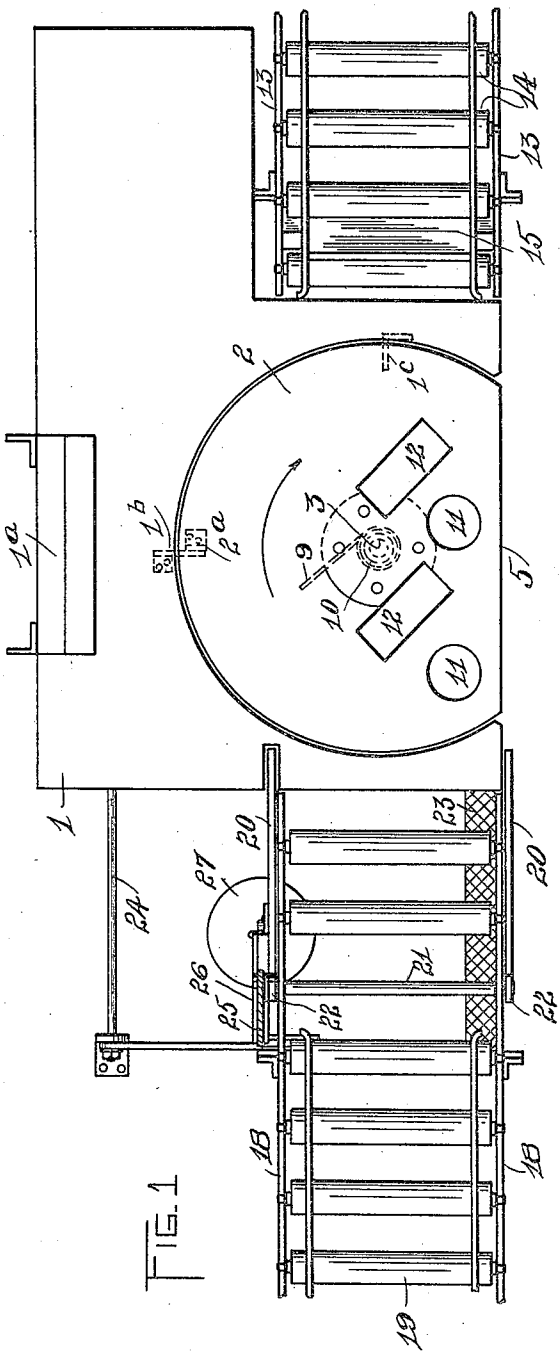


FIG. 1

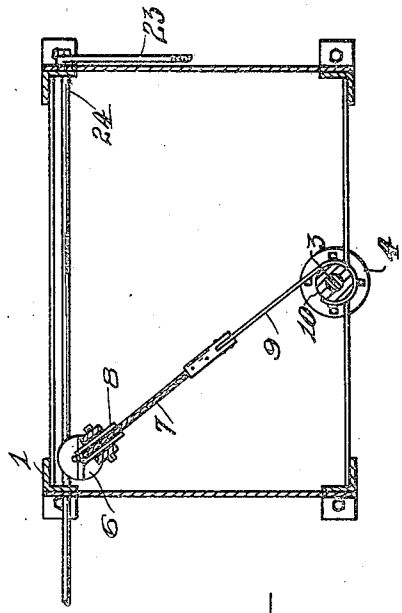


FIG. 2

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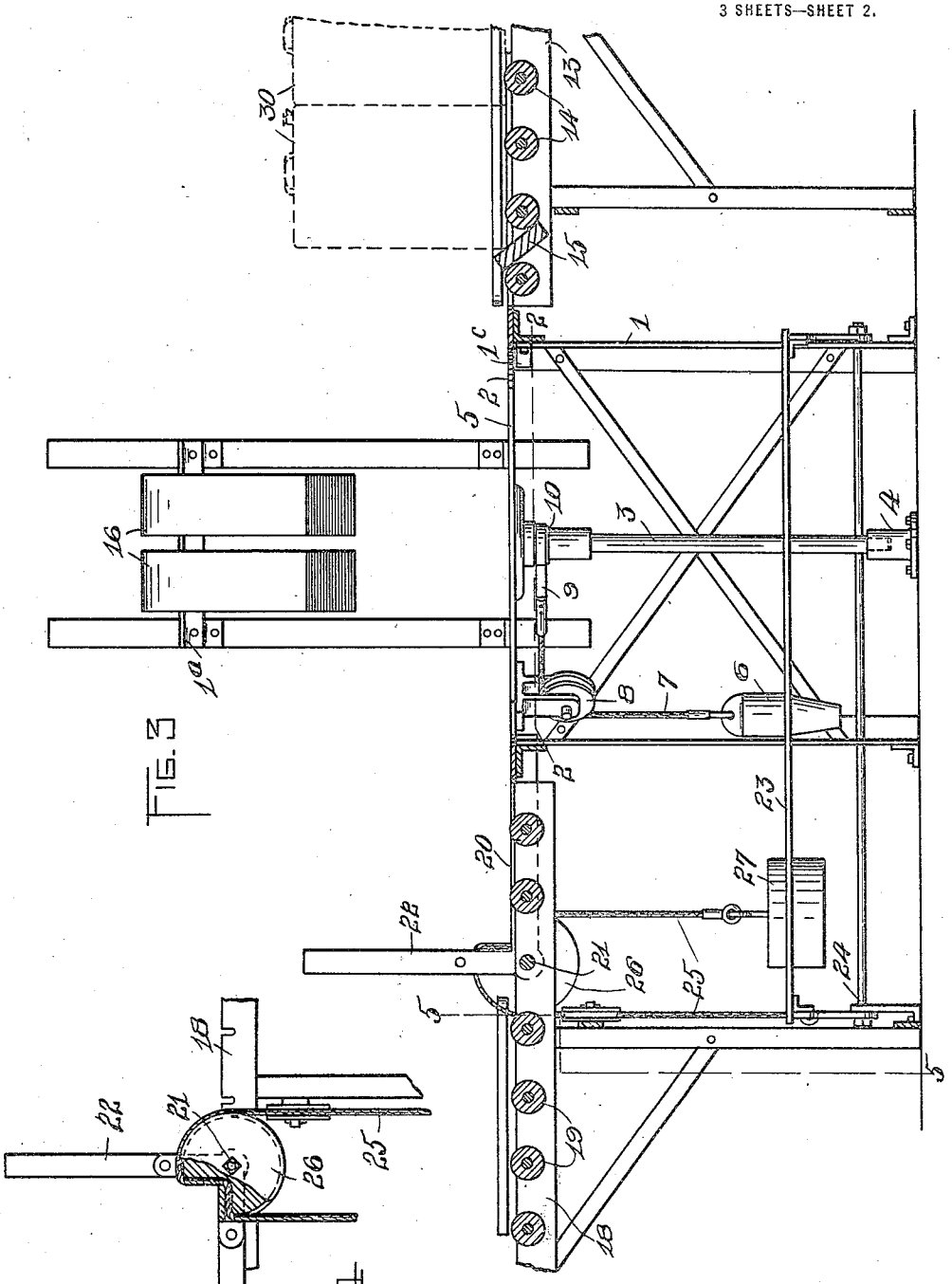


FIG. 3

FIG. 4

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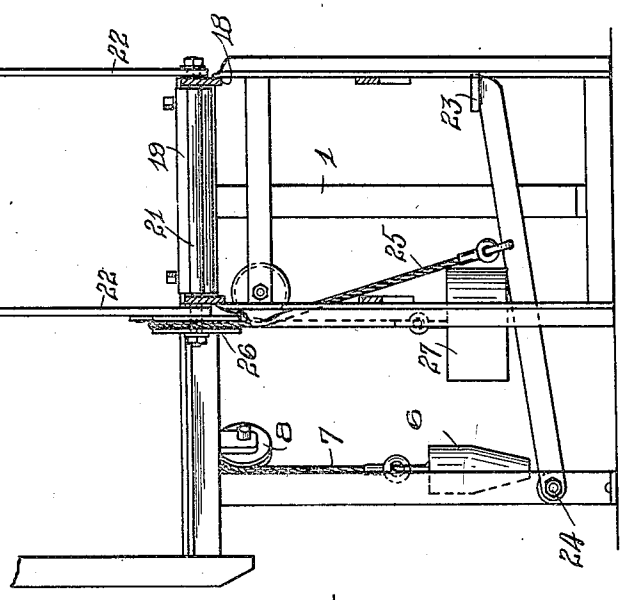


FIG. 5

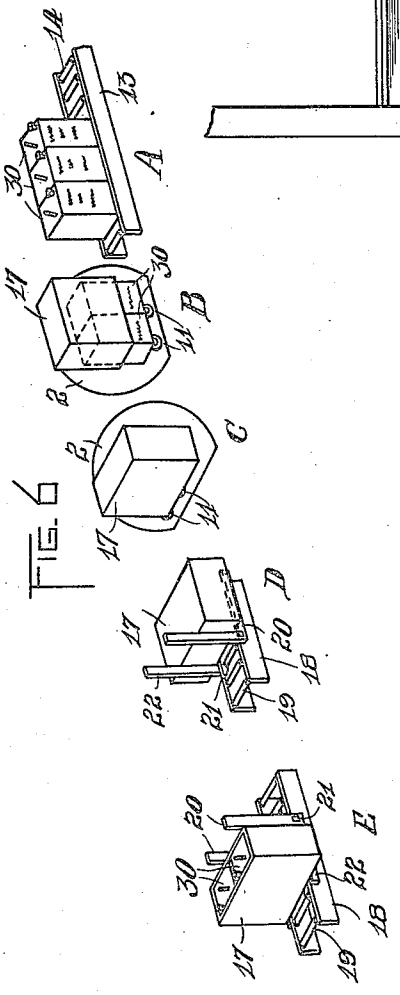


FIG. 6

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UNITED STATES PATENT OFFICE.

CHARLES L. HOOPER, OF ROCHESTER, NEW YORK, ASSIGNOR TO VACUUM OIL COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

APPARATUS FOR CASING CANS.

1,422,057. Specification of Letters Patent. Patented July 4, 1922.

Application filed April 19, 1920. Serial No. 374,925.

To all whom it may concern:

Be it known that I, CHARLES L. HOOPER, a citizen of the United States and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Apparatus for Casing Cans, of which the following is a specification.

The present invention relates to an apparatus used in casing cans, and an object thereof is to provide an apparatus by which oil or other cans may be readily fitted in a case at a certain point and effectively conducted to and from such point so that the labor required in handling the cans is reduced to a minimum.

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 plan view of the apparatus;

Fig. 2 is a sectional view on the line 2—2, Fig. 3;

Fig. 3 shows the apparatus in vertical section;

Fig. 4 is a fragmentary detail view of the uprighting device for shifting the case with the cans therein to an upright position after such case has been delivered onto the conveyor leading from the encasing table;

Fig. 5 is a vertical section on the line 5—5 Fig. 3; and

Fig. 6 is a diagrammatic view showing the cans before they are encased, and their positions during the encasing and thereafter until the case starts again on its travel.

Referring more particularly to the drawings, 1 indicates a frame which has a table 2 mounted thereon to turn about an upright axis, the table preferably having a shaft 3 mounted in the step bearing 4 and normally held so that the straight edge 5 of the table lies in front of the work, this position being preferably maintained by a weight 6 suspended from a cable 7 passing over a pulley 8 mounted on the frame 1, said cable being secured at one end to a tape 9 wrapped about a hub 10 on the shaft 3 of the table 2. The table is preferably provided with positioning means thereon for the cans 30. This positioning means in this instance comprises an opening 11 and an opening 12, the former being provided for the spout of the can and the latter for the handle. Preferably, two pairs of such openings are provided so that two cans may be encased simultaneously.

The cans 30 are delivered to a point adjacent the table 2 by a conveyor comprising in this instance, side pieces 13 and rollers 14 which conduct the cans by gravity to a stop 15, said stop being in the form of a board or plate inclined to the vertical and acting as a fulcrum piece on which the cans may be tilted in order to assist in inverting them on the table. After two of the cans have been arranged side by side on the table 2 in inverted positions with their spouts and handles positioned respectively in the openings 11 and 12, they are each partially wrapped with a strip of paper 16, a supply of paper for this purpose being supported upon a shelf 1^a and after such wrapping, a casing 17 is slipped over them in the manner shown in position B, Fig. 6. When properly encased, the table 2 is turned by hand to the position C, Fig. 6, so that the case with the two cans therein may be tilted onto the discharging conveyor in the manner shown in position D, Fig. 6, the table being automatically returned to its normal position. Rotation of the table is limited by stops 1^b and 1^c on the frame 1 which are engaged by a stop member 2^a carried by the table.

The discharging conveyor comprises preferably, side pieces 18 connected by rollers 19 which feed the cases with the cans therein by gravity to any suitable point. The two cans in the case are tilted from their position on the table 2 onto the discharging conveyor and over two arms 20 of a frame which is pivoted at 21, the other two arms 22 of the frame serving as abutments for the closed end of the case. After the case with the two cans therein rests against the abutments 22, the frame is swung about the axis 21 so that the closed end of the case is brought to rest upon the rollers of the discharging conveyor on the opposite side of the axis 21 and the case with the cans therein and then proceeds under the action of gravity to any desired point. With the end in view of swinging the frame about the axis 21, a treadle 23 is provided pivoted at 24 and having one end of a flexible connection 25 secured thereto, such connection be-

ing secured to and engaging over a segmental pulley 26 rigidly secured to the swinging frame and carrying at its free end a weight 27 which serves to return the frame arms 20 to their original positions after the case has passed off the arms 22.

The operation of the invention will be understood from the foregoing description, but it may be summarized as follows:

The cans 30 move down the conveyor leading to the table under the action of gravity until the stop 15 is reached. The workman then grasps the upper end of this can and turns it bottom end up onto the table 2, utilizing the piece 15 as a fulcrum. Two cans are placed upon the table in inverted position, each with its handle and spout in a pair of positioning openings 11 and 12. In these positions, the cans are partially covered with paper and a single casing 17 is fitted over the two cans. The table 2 is now rotated by hand to the position C, Fig. 6, and the casing with the cans thereon is tilted flatwise upon the conveyor leading from the table, the bottom of the casing being brought into abutment with the arms 22. The table returns automatically and the workman depresses the treadle 23 and shifts the pivoted frame so as to swing the arms 20 to an upright position in order that the cans may travel away from the arms 22 on the conveyor leading from the table. This apparatus enables cans to bé encased readily and reduces the handling thereof to a minimum.

What I claim as my invention and desire to secure by Letters Patent is:

1. An apparatus used in casing cans comprising a table adapted to swing back and forth, a conveyor leading to the table, a fulcrum piece arranged adjacent to the delivery end of the table for facilitating the inversion of the cans on the table from their positions on the conveyor, means on the table cooperating with the tops of the cans for positioning a plurality of cans in abutment with each other, a conveyor leading from the table in line with the conveyor leading to the table, means for limiting the swinging movement of the table in both directions, means at the end of the receiving conveyor on which the encased cans are tilted from the table said means being movable for shifting the encased cans to an inverted position from that which they occupied on the table, and controlling means for the shifting means operable by an operative situated in front of the table.

2. An apparatus used in casing cans comprising a table adapted to swing back and forth about an upright axis, a conveyor leading to the table, a fulcrum piece at the end of said conveyor for faciliating the inversion of the cans on the table from the positions they occupied on the conveyor, means on the table for positioning a plurality of cans in abutment with each other, and means for limiting the swinging movement of the table.

3. An apparatus used in casing cans comprising a table adapted to swing back and forth about an upright axis, a conveyor leading to the table, a fulcrumed piece at the end of said conveyor for facilitating the inversion of the cans on the table from the positions they occupied on the conveyor, means on the table for positioning a plurality of cans in abutment with each other, means for limiting the swinging movement of the table, and means for giving to said table a normal tendency to lie at the limit of one of its positions of adjustment.

4. An apparatus used in casing cans comprising a table adapted to swing back and forth 90° about an upright axis a conveyor leading to the table, a conveyor leading from the table in line with the conveyor leading to the table, and means for positioning a plurality of cans in abutment with each other on the table and in a line with the two conveyors, when the table is at one limit of its adjustment so that when the table is swung 90° to the other limit of its adjustment the line of cans will extend transversely of the line of the two conveyors.

5. An apparatus used in casing cans comprising a table adapted to swing back and forth 90° about an upright axis a conveyor leading to the table, a conveyor leading from the table in line with the conveyor leading to the table, means for positioning a plurality of cans in abutment with each other on the table and in line with the two conveyors when the table is at one limit of its adjustment so that when the table is swung 90° to the other limit of its adjustment, the line of cans will extend transversely of the line of the two conveyors, and means for normally holding the table in its position where the line of cans will be in line with the two conveyors.

6. An apparatus used in casing cans comprising two conveyors arranged in line with each other, a table adapted to swing back and forth about an upright axis between the conveyors to receive the cans from one of the conveyors for delivery onto the other conveyor, means for limiting the movement of the table to 90°, and means for holding the table normally at one limit of its adjustment.

7. An apparatus used in casing cans comprising two conveyors arranged in line with each other, a table adapted to swing back and forth 90° about an upright axis and between said conveyors, and a oscillatory frame arranged on the receiving conveyor and having a normal position to receive cans from the table, and means under the control of an operative standing beside the table for shifting said swinging frame to

swing the cans, on the receiving conveyor 90° from the positions in which they are received by the swinging frame.

8. An apparatus used in casing cans comprising two conveyors arranged in line with each other, a table arranged between the two conveyors and adapted to swing back and forth 90° about an upright axis, means normally maintaining said table at one limit of its adjustment, a swinging frame operating at the end of the receiving conveyor to receive cans from the table and shift their positions on said receiving conveyor, means normally holding said swinging frame in a position to receive cans from the table, and a treadle arranged at one side of the table and connected with said swinging frame to permit the shifting of the latter by an operative at the table.

CHARLES L. HOOPER.