No. 860,936. PATENTED JULY 23, 1907.

M. W. NORKEWITZ.

BOTTLE CARRIER FOR BOTTLING ESTABLISHMENTS.

APPLICATION FILED NOV. 9, 1906. RENEWED JUNE 22, 1907.

2 SHEETS—SHEET 1.

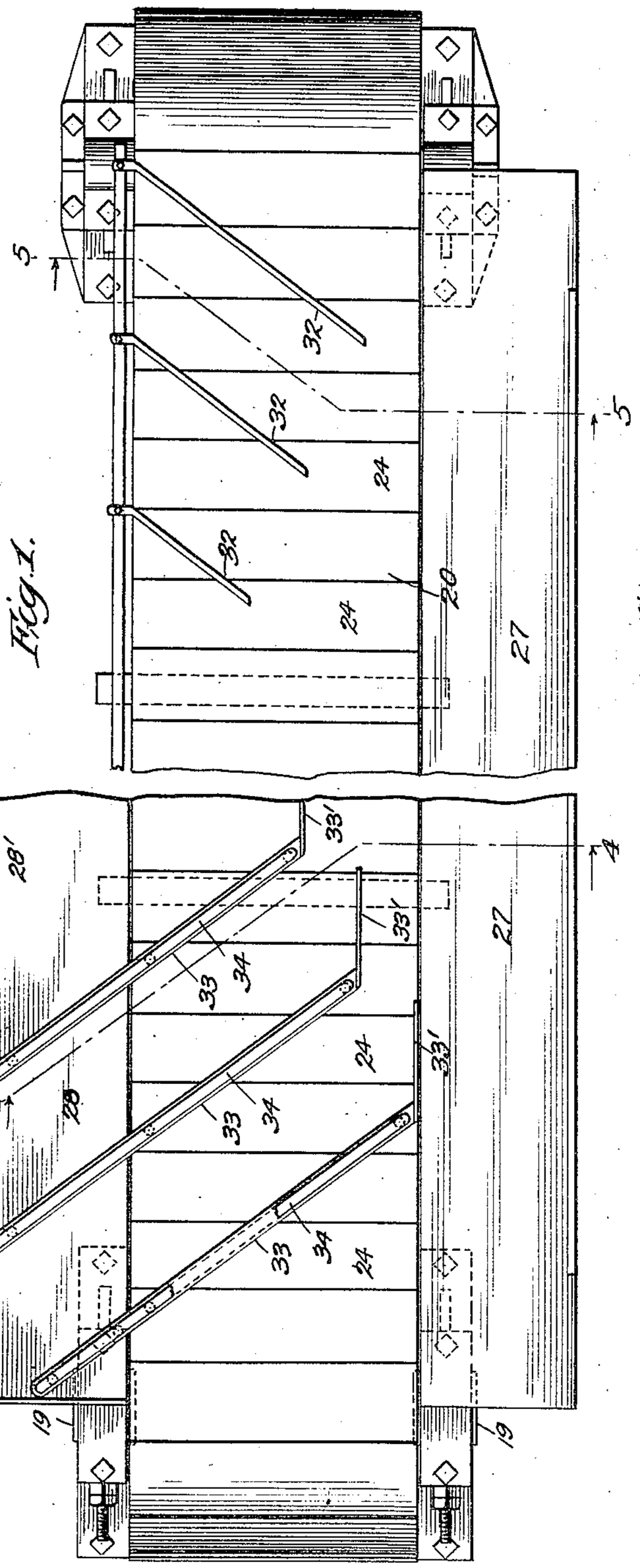

Fig. 1.

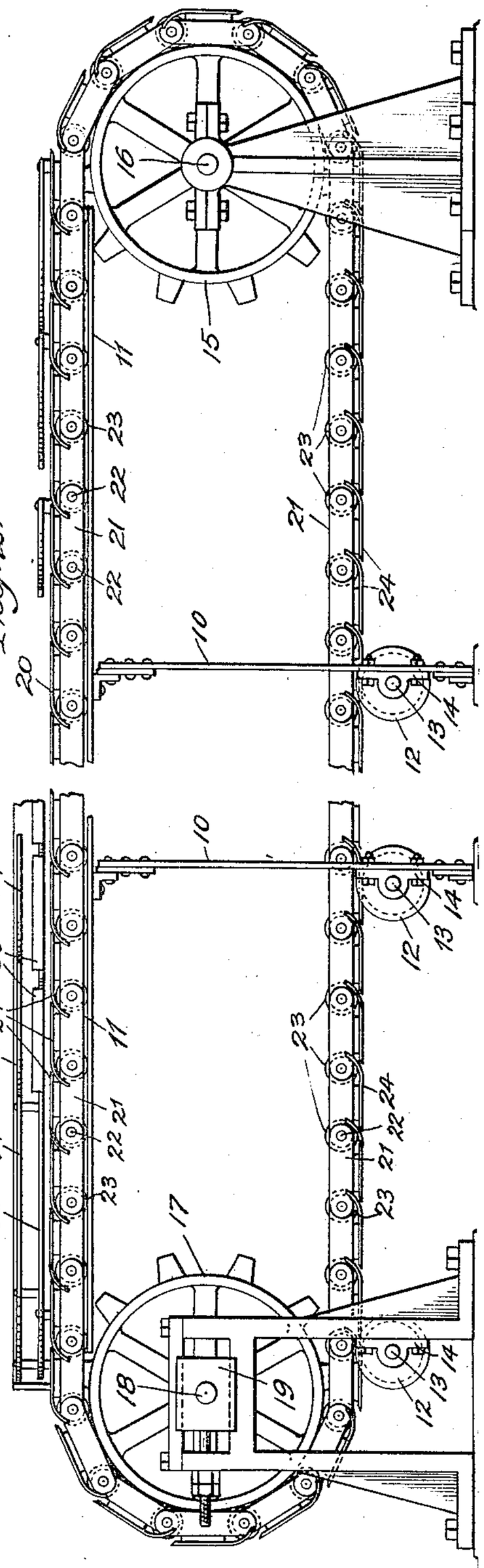

Fig. 2.

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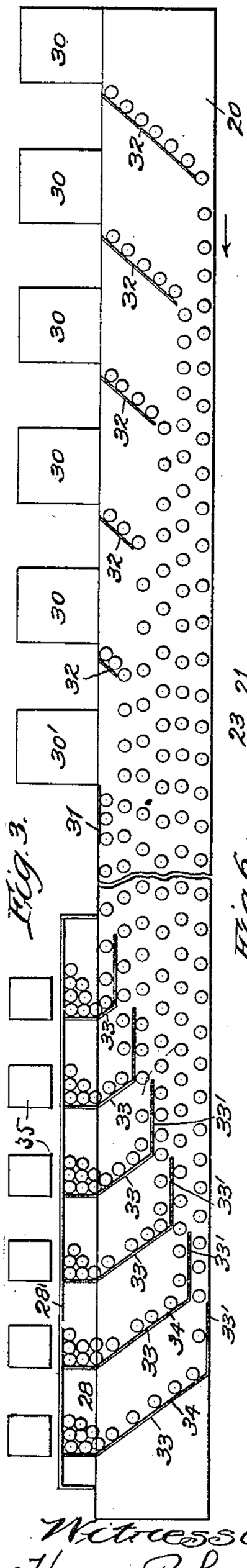
2 SHEETS—SHEET 2.

Fig. 3.



Witnesses
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Fig. 5.

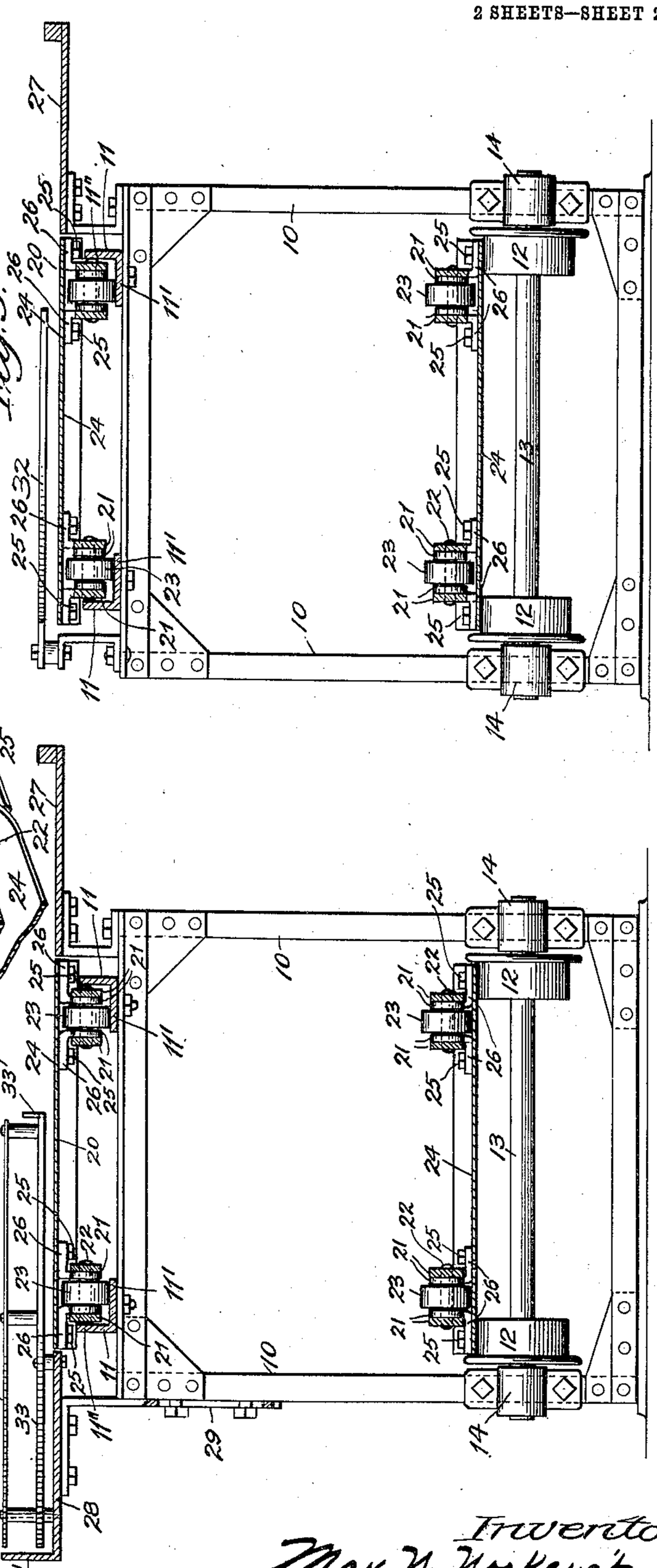

Fig. 6.

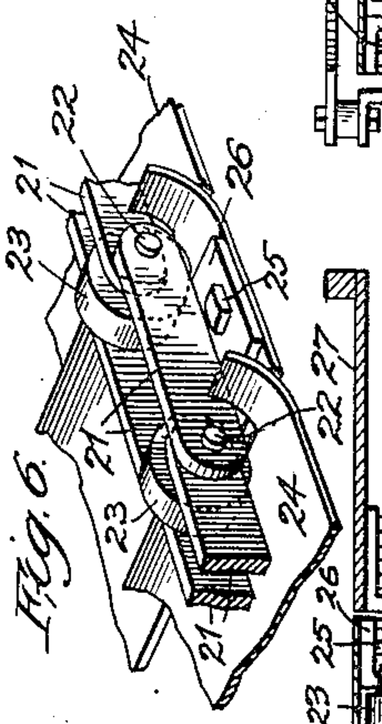

Fig. 4.

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UNITED STATES PATENT OFFICE.

MAX W. NORKEWITZ, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO E. GOLDMAN & COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

BOTTLE-CARRIER FOR BOTTLING ESTABLISHMENTS.

No. 860,936. Specification of Letters Patent. Patented July 23, 1907.

Application filed November 9, 1906, Serial No. 342,622. Renewed June 22, 1907. Serial No. 380,244.

To all whom it may concern:

Be it known that I, MAX W. NORKEWITZ, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented new and useful Improvements in Bottle-Carriers for Bottling Establishments, of which the following is a specification.

This invention relates particularly to machinery for bottling establishments and it is intended primarily to dispose of the bottles expeditiously from a gang of labeling machines and facilitate the operation of packing them in cases.

My invention is intended for use principally in those bottling establishments where a number of brands of beer or other liquid are bottled and labeled at the same time and its object is to provide means for carrying the bottles away from a gang of labeling machines to the packing tables and without mixing them.

Further objects and the advantages of the invention will be pointed out hereafter in a detailed description thereof with reference to the accompanying drawings which show one embodiment of the invention and in which

Figure 1 is a top plan view. Fig. 2 is a side elevation. Fig. 3 is a diagrammatic plan view. Figs. 4 and 5 are transverse sectional views on the lines 4—4 and 5—5 of Fig. 1. Fig. 6 is a detail sectional view of a portion of the carrier.

In the accompanying drawings 10 designates in a general way a frame on the top of which the two angle plates 11 are mounted, the bottom 11′ of said plates forming tracks and the upright sides 11″ forming guides. In the lower part of the frame a number of supporting guide rollers 12 are mounted on axles 13 journaled in bearings 14 on the frame. A sprocket wheel 15 is mounted on a driving shaft 16 at one end of the frame and a smaller sprocket wheel 17 is mounted on a shaft 18 journaled in adjustable bearing blocks 19 at the other end of the frame. A carrier 20 is driven over these sprocket wheels by the driving sprocket 15 and it travels between the guides 11″.

I am aware that carriers of many different kinds may be employed for the purpose of my invention and I do not restrict myself to the particular form of carrier herein shown and described although I have found it to be very satisfactory in actual practice and to have certain advantages over other well known carriers which will be apparent to bottlers and those familiar with conditions prevailing in bottling houses.

I prefer to employ a metal carrier comprising a belt mounted on a pair of endless chains 21 formed of links connected by axles 22 which carry rollers 23 to travel on the tracks 11′. The carrier belt is made up of a plurality of metal sections 24 bolted at 25 to ears 26 on the chain. A table 27 is suitably supported on the frame at one side of the carrier and a table 28 is supported by brackets 29 on the other side of the table, these brackets being adjustable on the frame so that the table 28 can be arranged on an exact level with the upper surface of the carrier belt.

The carrier is located adjacent to a gang of labeling machines 30 (Fig. 3) and these machines are preferably spaced apart to enable the operators to stand between the machines and alongside the carrier. An arm 31 is supported on the frame 10 adjacent to the labeling machine designated 30′ and it extends above and parallel with the carrier at the edge thereof. Arms 32 are also supported on the frame 10 and extend diagonally across the top of the carrier, one of said arms being located adjacent to each of the labeling machines 30. These arms 32 are graduated in length as shown in Fig. 3, the arm nearest the end of the table adjacent to the first labeling machine in the gang being the longest and the arm adjacent to the last labeling machine but one in the gang being the shortest. The arm 31 may be set diagonally if the carrier is wide enough. Arms 33 are mounted on the table 28 and extend across said table and then diagonally over the carrier and have forwardly projecting ends 33′. I may make the arms straight to extend diagonally over the table, as shown in Fig. 1, or they may extend laterally across the table, as shown in Fig. 3. These arms 33 correspond in number to the arms 32 and 31 and said arms are arranged relatively to each other in pairs for a purpose hereafter described. The table 28 has a side 28′ and above each arm 33 is a supplemental arm 34 narrower than the arm 33 (Fig. 4).

In practice, assuming that the carrier is moving and all of the labeling machines are being used, the bottles after being labeled are placed on the carrier in front of the receiving guide arms 32 adjacent to the respective machines. When the bottles contact with the discharge arms 32 they are caused to move in a diagonal direction across the table until they clear the ends of the arms. Then the bottles travel in a straight line with the carrier until they contact with the arms 33, which cause them to move in a diagonal direction back across the carrier until they are discharged from the carrier on to the table 28 in the spaces inclosed by the side 28′ and the parts 33′ of the arms 33. The packing tables 35 are located convenient to the discharge table 28 and the bottles are removed from said table and placed in the cases, which operation is intended to be a continuous one so that the bottles will not accumulate in great numbers on said table. All the bottles from one labeling machine will thus be carried to the same packer and there is no opportunity for the labeled bottles from the several labeling machines to become mixed. The carrier provides a very expeditious and convenient

means for disposing of the bottles from the labeling machines and entirely avoids the noise and confusion which result when the bottles are packed in cases at the labeling machines. As the packers do not have to sort the bottles according to brands they are enabled to work rapidly and steadily and thus the operation of labeling and packing bottles can be conducted with great rapidity. Wrappers can be applied to the bottles while they are traveling with the carrier and for this purpose I provide the table 27 to hold a supply of wrappers.

In order to avoid any possibility of the arms defacing or otherwise spoiling the labels on the bottles I prefer to arrange the receiving arms and the discharging arms so that they will contact with the bottles below or above the labels, preferably below. The supplemental arms 34 are provided to prevent the bottles from falling over when the arms 33 are located close to the carrier belt as shown in the drawings.

While the invention is particularly adapted for use in association with a bottle labeling machine it can obviously be used with equally desirable results in association with machines employed in labeling cans or any other articles.

Instead of delivering the bottles from the carrier to the table as herein before described the invention may be employed for delivering the bottles on to another belt which in turn delivers the bottles to a table or to another belt, such arrangement being some times desirable where it is necessary to change the direction of travel of the bottles in order to convey them from the labeling machines to the packing table.

The invention may be used for conveying bottles from one carrier belt to another, the two belts being located side by side and traveling in opposite directions, and the distributing arms may be so arranged that if the bottles are not removed from the second belt they will be shifted back on to the first belt and repeat their cycle of travel. Such an arrangement may be found desirable where the packing tables are located on the opposite side of the carrier to the labeling machines.

It will also be understood that the invention can be used for other purposes than for carrying bottles from labeling machines to the packing tables and I do not restrict myself herein to the particular use which has been described. For example, the invention can be used for conveying bottles from corking machines to a pasteurizer to keep the bottles separated as to size or as to contents.

What I claim and desire to secure by Letters Patent is:—

1. The combination of a moving carrier for conveying bottles from a plurality of labeling or other machines, located at one side of the carrier and means for guiding the bottles from each machine transversely on the carrier to a predetermined position on the carrier so that the bottles from the several machines will travel with the carrier in separate paths.

2. The combination of a moving carrier for conveying bottles from a plurality of labeling or other machines located at one side of the carrier to a corresponding number of packing tables located at one side of the carrier, means for guiding the bottles from each machine transversely on the carrier to a predetermined position on the carrier so that the bottles from the several machines will travel with the carrier in separate paths, and means for discharging the bottles from the carrier in adjacent relation to the packing tables and without mixing the bottles.

3. The combination of a moving carrier for conveying bottles from a plurality of labeling or other machines located at one side of the carrier to a corresponding number of packing tables located at one side of the carrier, a plurality of arms of graduated length projecting over the table for guiding the bottles from the machines to different positions on the carrier so that they will travel in separate paths, and a corresponding number of discharge arms projecting over the carrier for discharging the bottles from the carrier to the packing tables and without mixing the bottles.

4. The combination of a moving carrier for bottles and the like, and two sets of arms projecting over and partly across the carrier, the arms in each set being oppositely and diagonally disposed relatively to the arms in the other set.

5. The combination of a moving carrier for bottles and the like, a plurality of guide arms of graduated length projecting in a diagonal direction over the carrier at its receiving end, and a plurality of discharge arms projecting over the carrier at its discharge end and graduated to correspond with the guide arms.

6. The combination of a moving carrier for bottles and the like, a plurality of guide arms of graduated length projecting in a diagonal direction over the carrier at its receiving end, and a plurality of discharge arms projecting over the carrier at its discharge end, said discharge arms being graduated in length to correspond with the receiving arms and arranged diagonally to said receiving arms.

7. The combination of a moving carrier for bottles and the like, means for guiding bottles to different positions on the carrier so that they will travel with the carrier in separate paths, a discharge table at the side of the carrier, and arms projecting diagonally over the carrier for discharging the bottles on to said table without mixing the bottles.

8. The combination of a moving carrier for bottles and the like, means for guiding bottles to different positions on the carrier so that they will travel with the carrier in separate paths, a discharge table at the side of the carrier, and arms of graduated length projecting diagonally over the carrier in said paths of travel of the bottles to discharge the bottles on to said table without mixing the bottles.

9. The combination of a moving carrier for bottles and the like, means for guiding bottles to different positions on the carrier so that they will travel with the carrier in separate paths, a discharge table at the side of the carrier, arms of graduated length projecting diagonally over the carrier in said paths of travel of the bottles to discharge the bottles on to said table without mixing the bottles, and forward extensions on the ends of said discharge arms above the carrier.

10. The combination of a moving carrier for bottles and the like, means for guiding bottles to different positions on the carrier so that they will travel with the carrier in separate paths, a discharge table at the side of the carrier, means for discharging the bottles from the carrier on to said discharge table without mixing the bottles, and a table located alongside of the carrier between the receiving and discharging ends thereof.

11. The combination of a moving carrier for conveying bottles and the like from a plurality of labeling or other machines, means for causing the bottles to travel with the carrier in separate paths, a plurality of arms for discharging the bottles from the carrier without mixing the bottles, said arms being located so that they will not contact with the labels on the bottles, and a supplemental arm above each of said discharge arms to prevent the bottles from tipping over.

MAX W. NORKEWITZ.

Witnesses:
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JACOB H. SENF.