

G. D. BARNES, JR.
 COMBINED CONVEYER AND INSPECTION TABLE.
 APPLICATION FILED OCT. 4, 1909.

1,006,455.

Patented Oct. 24, 1911.

2 SHEETS—SHEET 1.

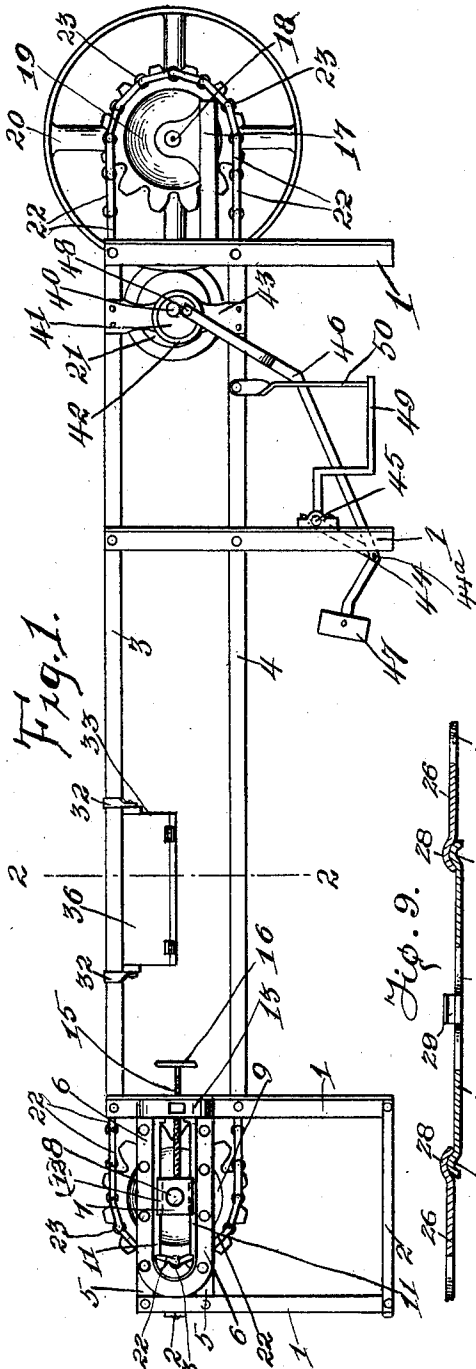


Fig. 1.



Fig. 9.

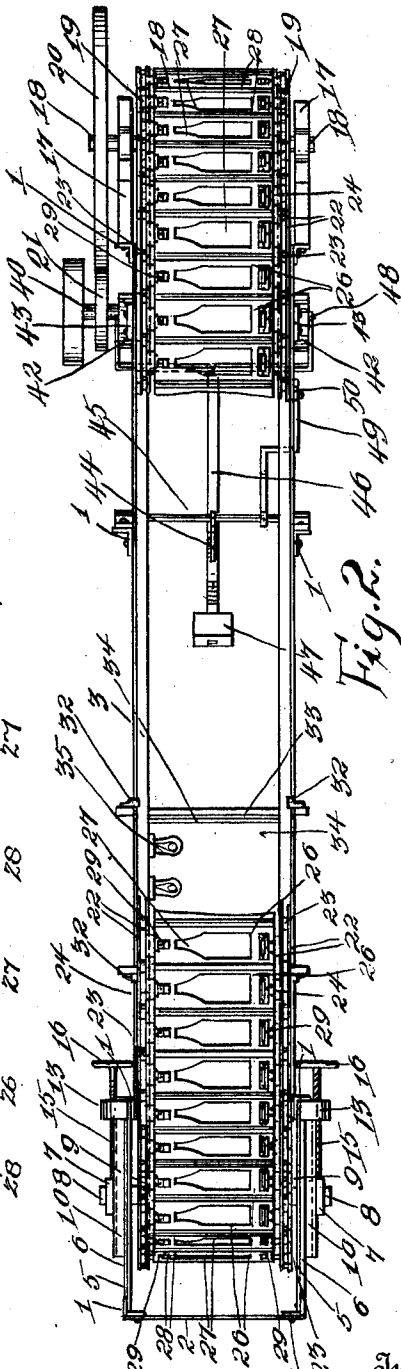


Fig. 2.

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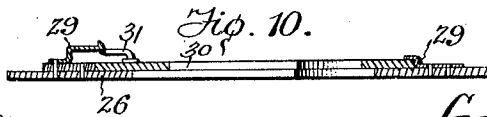
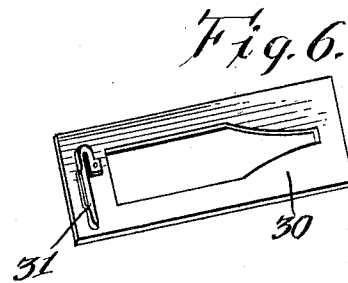
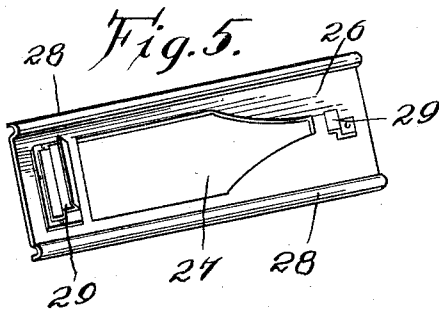
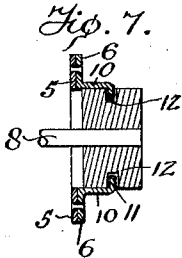
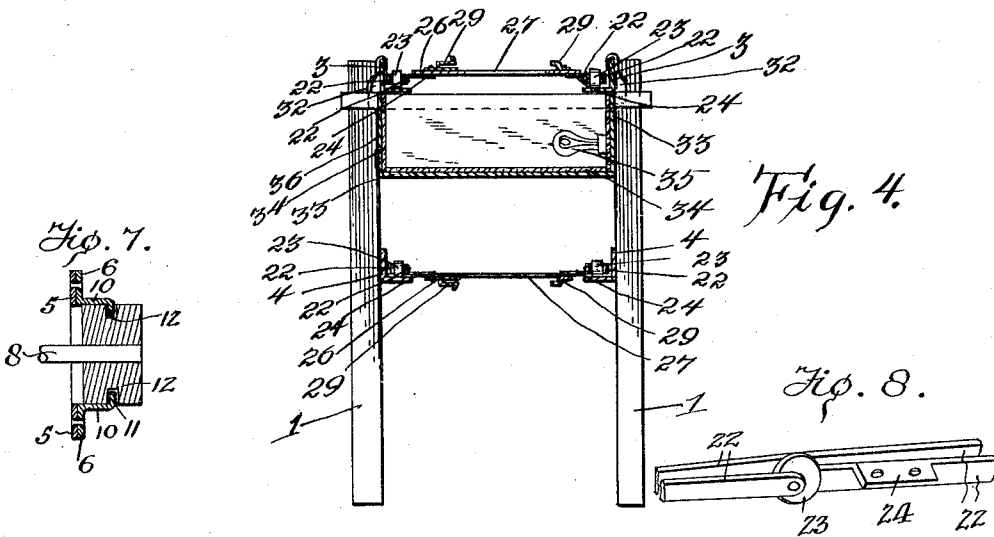
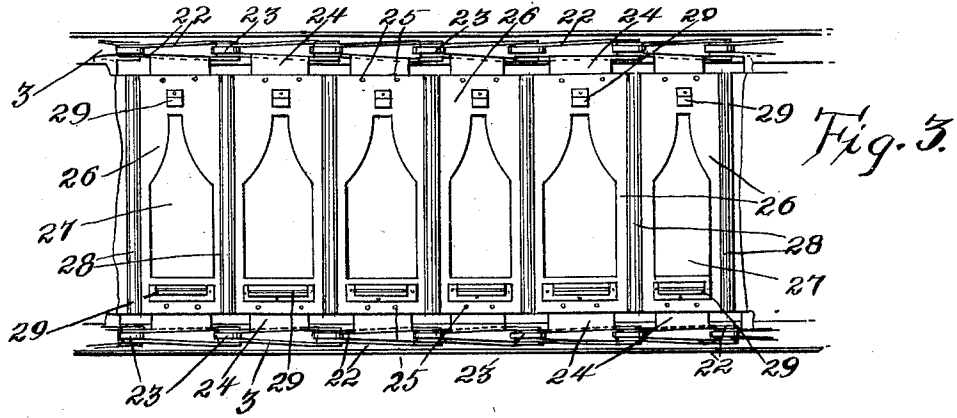
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

GEORGE D. BARNES, JR., OF MEMPHIS, TENNESSEE.

COMBINED CONVEYER AND INSPECTION-TABLE.

1,006,455.

Specification of Letters Patent. Patented Oct. 24, 1911.

Application filed October 4, 1909. Serial No. 520,913.

To all whom it may concern:

Be it known that I, GEORGE D. BARNES, JR., a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Combined Conveyers and Inspection-Tables, of which the following is a specification.

My invention relates to a device designed for use in connection with the usual machinery used in the bottling of beverages, and more particularly to a combined conveyer and inspection table, comprising, broadly stated, an endless conveyer having a plurality of bottle-carrying plates and a source of artificial light mounted beneath the upper portion of the conveyer whereby the bottles in passing thereover may be inspected.

Heretofore, in the bottling of beverages, is has been necessary to rehandle the bottles after having been filled in order to inspect them, and the principal object of my invention consists in the production of a device of the above character whereby the bottles can be inspected as they are conveyed from the filling machine, thus obviating the necessity of rehandling the bottles for this purpose, and consequently the saving of considerable time and labor.

A further object of my invention consists in the production of a device of this kind having means for attaching bottle-carrying plates of different sizes to the conveyer, whereby bottles of different capacities or sizes may be handled.

The preferred embodiment of my invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation thereof; Fig. 2 is a top plan view; Fig. 3 is an enlarged detail view showing a portion of the endless conveyer; Fig. 4 is a transverse section taken on the line 2—2 of Fig. 1; and Fig. 5 is a perspective view of one of the bottle-carrying plates; Fig. 6 is a similar view of a plate supplemental to that shown in Fig. 5. Fig. 7 is a detail vertical section through the adjustable journal block and its support, at one end of the forward conveyer shaft. Fig. 8 is a detail perspective view of a fragment of one of the conveyer chains. Fig. 9 is a detail cross-section through several of the main bottle-holding plates, showing their overlapping relation, and, Fig. 10 is a detail longitudinal section through a portion of

one of the main bottle-holding plates and one of the interchangeable plates held thereon.

Referring specifically to the drawings, it will be seen that I provide a rectangular frame on which the several parts of my invention are mounted or supported. This frame comprises upright angle bars 1 arranged in groups of four each, located at opposite ends of the device and suitably braced by transverse bars 2. Connecting the rear pair of the uprights 1 of the forward group to the uprights of the rear group are upper and lower pairs of longitudinally parallel spaced angle bars 3 and 4, respectively, for a purpose to be hereinafter described. Connected to the uprights of the forward groups are longitudinally arranged side bars 5, to which are bolted journal box guides 6 in which the journal boxes 7 loosely mounted on opposite ends of the shaft 8 of the forward sprocket wheels 9 are placed. Each of these journal box guides is provided with outwardly extending flanges 10 suitably spaced apart and having their outer edges provided with inwardly extending projections 11 which are received in the longitudinal grooves 12 formed in opposite sides of the journal boxes 7. The inner ends of the guides 6 are formed with head-blocks 13 extending transversely through which, and in alinement with the center of the journal boxes 7, are internally threaded holes through which pass the threaded stems 15, the inner ends of which bear against the adjacent sides of the journal boxes. To the outer ends of these threaded stems are fixed hand wheels 16, whereby the stems may be manipulated to advance the journal boxes in the guides and thereby take up any slack in the endless conveyer.

Fastened to the rear group of uprights 1 are rearwardly extending journal brackets 17 in which are journaled the opposite ends of the shaft 18 of the rear sprocket wheels 19. Fixed to one end of which shaft 18 is a wheel 20, the periphery of which is normally in frictional engagement with the drive pulley 21, whereby motion is imparted to the sprocket wheels 19, and hence to the conveyer.

Passing over the sprocket wheels 9 and 19 are endless conveyer chains, comprising links 22 the connecting pivot pins of which support rollers 23 adapted to fall between the teeth of the sprocket wheels and there-

by advance the conveyer. These rollers are also adapted to ride upon the horizontal flanges of the longitudinal parallel angle bars 3 and 4, heretofore mentioned, which
 5 effectually supports the conveyer between the sprocket wheels. The inner members of the links 22 of each chain are provided with inwardly extending flanges 24 to which are fastened, by means of rivets 25, the bot-
 10 tle-carrying plates 26, said plates 26 being formed with openings 27 of a size and shape to conform to the sides of the bottles, but of sufficiently less diameter to prevent the bot-
 15 tles from falling therethrough. The sides of these plates, as will be seen in Fig. 5, are provided with curved parts 28, whereby the same are permitted to flex when passing over the sprockets.

Fastened to the plates 26 adjacent oppo-
 20 site ends of the openings 27 are catch members 29, which are adapted to retain in place the interchangeable plates 30, by inserting one end thereof under one of the catches 29 and providing the opposite end with a
 25 spring catch 31, adapted to be engaged with the other catch member. It will thus be apparent that my conveyer may be easily adjusted to accommodate bottles of different capacities.

30 Suspended by means of links 32, from the upper pair of side bars 3, at a suitable point along the conveyer, but preferably near its forward end, is a light box 33 having its inner faces lined with suitable reflectors 34
 35 and provided with a series of electric lights 35, by means of which arrangement the bottles on the conveyer as it passes over the box 33, may be easily inspected. Access to the interior of the box may be easily had
 40 through the door 36 which is provided at one side thereof.

The drive pulley 21, heretofore mentioned, is fixed to the shaft 40 directly opposite the pulley 20. Said shaft 40 is ro-
 45 tatably mounted in eccentrics 41, which latter are, in turn, rotatably mounted in sleeves 42 formed integral with brackets 43 fastened to the angle bars 3 and 4. Pivotaly

connected at 44^a to an arm 44 fixed to a shaft 45, is an operating arm 46 having a
 50 weight 47 fixed on one end thereof and having its other end forked and connected to the eccentrics 41, as at 48. Also fixed to the shaft 48 is a member 49 which is held in normal position by a trip 50.

55 With the parts in the position shown in Figs. 1 and 2, the conveyer is in operation. To stop the same, all that is necessary to do is to kick the trip 50 rearwardly, which will allow the weighted end of the arm 46 to
 60 drop and as said arm is connected to the arm 44, this action will cause its forked end to move upwardly and rearwardly, thereby turning the eccentrics 41 which will move
 65 the shaft 40 and pulley 21 away from the pulley 20. The parts may be brought to normal position again by pressing down on the member 49.

I claim:

1. In an apparatus of the character de-
 70 scribed, an endless conveyer embodying a plurality of fixed plates having apertures to receive bottles therein and provided with catch members upon opposite sides of the
 75 apertures, and interchangeable plates having apertures to receive smaller bottles and provided with spring catches to engage said members and hold the interchangeable
 plates upon the fixed plates.

2. In an apparatus of the character de-
 80 scribed, an endless conveyer embodying a driven wheel, an eccentrically mounted driving shaft, a driving wheel upon said shaft, and movable therewith to and from said
 85 driven wheel, a weighted member to move said eccentric shaft away from said driven wheel, and a manual trip mechanism normally holding said weighted member in-
 operative.

In testimony whereof I affix my signa-
 90 ture, in presence of two witnesses.

GEORGE D. BARNES, Jr.

Witnesses:

R. J. BLACK,
 E. B. SCHOLL.