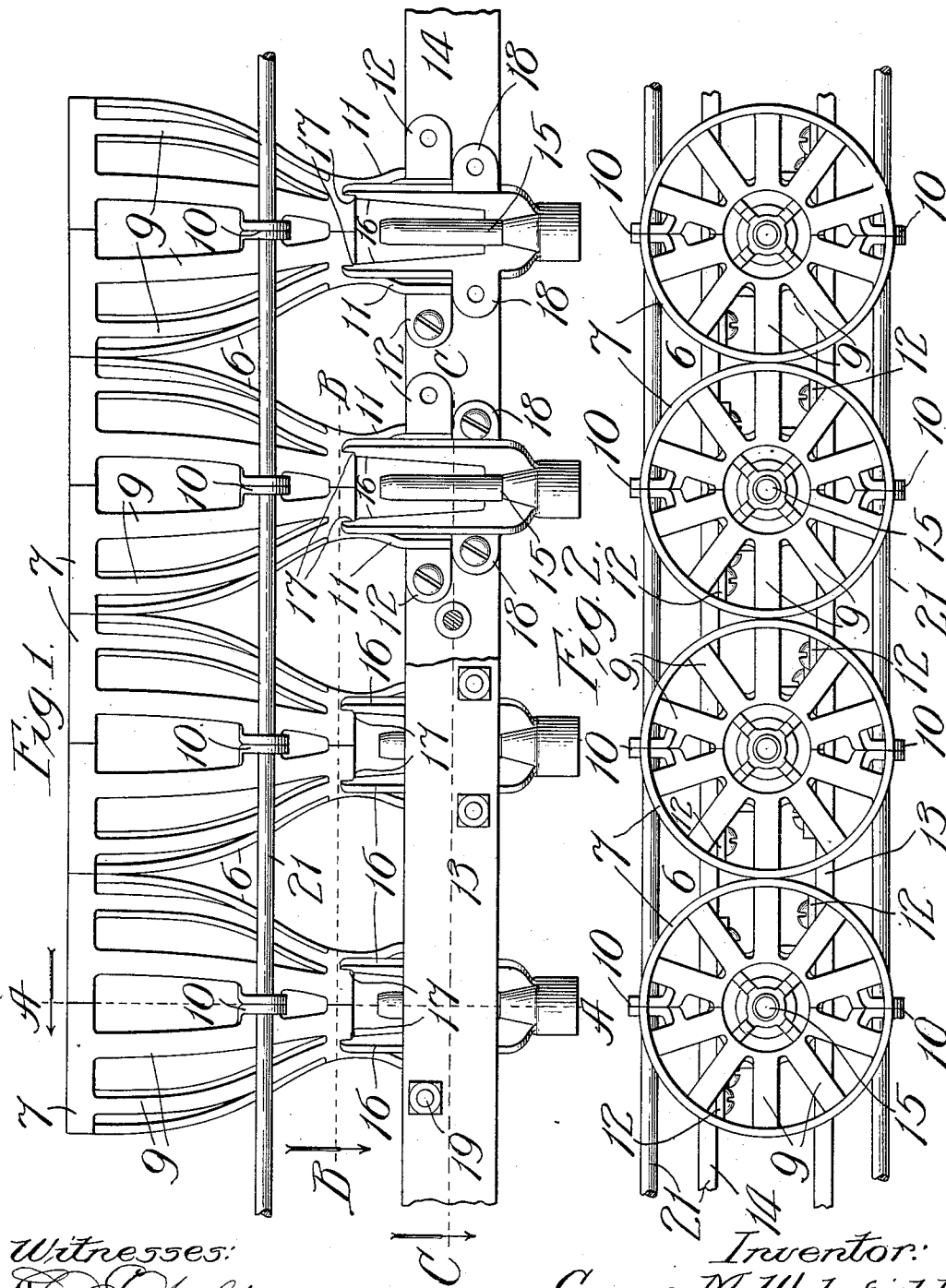


G. M. WAKEFIELD.
BOTTLE HOLDER FOR BOTTLE CLEANSING MACHINES.
APPLICATION FILED OCT. 8, 1910.

1,017,829.

Patented Feb. 20, 1912.

2 SHEETS—SHEET 1.



Witnesses:
Edw. O. Chubb
Chas. H. Buell

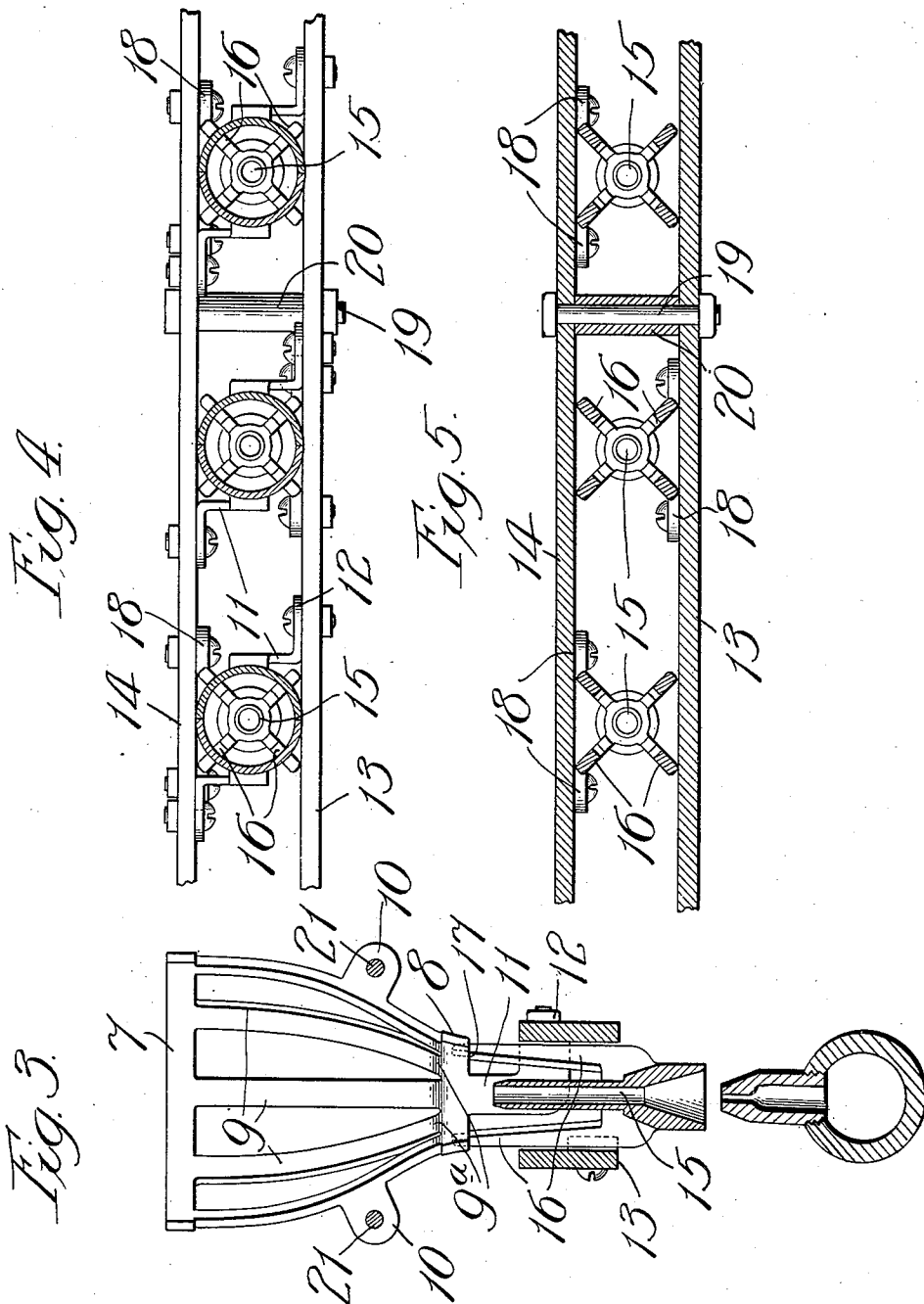
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Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE M. WAKEFIELD, OF CHICAGO, ILLINOIS, ASSIGNOR TO E. GOLDMAN & CO., INC.,
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BOTTLE-HOLDER FOR BOTTLE-CLEANSING MACHINES.

1,017,829.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed October 8, 1910. Serial No. 585,963.

To all whom it may concern:

Be it known that I, GEORGE M. WAKEFIELD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Bottle-Holders for Bottle-Cleansing Machines, of which the following is a specification.

My invention relates to an improvement in the construction of holders which I have devised for use on machines for washing, soaking, rinsing or sterilizing bottles which are exposed in inverted position to the machine-action to cause the bottles to be subjected both internally and externally to jets of the cleansing-water used. A machine of the type referred to forms the subject of the pending application of J. T. H. Paul, Serial No. 579,470, filed August 29, 1910, for use with which I have more immediately devised my present improvement. The matter of feeding the bottles to the traveling holders therefor on such a machine is one requiring to be performed so expeditiously that care in seating them with their neck-portions about the jetting-nozzles can not be exercised to properly center them and at the same time avoid danger of fracturing them.

The primary object of my improvement is to provide a construction of holder which shall render it self-centering to the bottle introduced into it by guiding the bottle, however carelessly introduced, without danger of fracturing it, to seat its neck about the jetting-nozzle at the center of the holder-bottom.

In the accompanying drawing, Figure 1 is a broken view in elevation of a set of my improved bottle-holders; Fig. 2 is a plan view of the same; Fig. 3 is a section on line A—A, Fig. 1, showing one of the two half-sections of which each receptacle is formed; Fig. 4 is a section on line B—B, Fig. 1; and Fig. 5 is a section on line C—C, Fig. 1, and showing in addition, a section through the water supply pipe and nozzle.

The receptacle 6 of my improved bottle-holder is composed of two similar sections, which may be readily stamped out of sheet-metal. Each section, or half, is formed with a semi-circular upper band 7 of relatively large diameter and a semi-circular

lower or neck band 8 of relatively small diameter, with interposed ribs 9 connecting the bands and spaced apart to render the holder as open as possible, the ribs bulging outwardly between their ends but converging toward their lower ends and there slightly curving inwardly as at 9^a (Fig. 3), where they merge into the band 8 the better to cushion the neck of a bottle dropped in inverted position into a holder, as herein-after explained. Perforated ears 10 are bent to extend outwardly from corresponding points of the outer edges of the end-ribs of each receptacle-section, and a tongue 11, of general L-shape, depends from the neck-band midway between its ends and has its lower arm bent to a right angle to form an ear 12 which is perforated. Two of the described sections interfit by abutting at the projecting ends of their upper and lower curved bands to form a receptacle, thereby also causing the ears 10 on corresponding edges of the sections to meet.

It is customary to provide on a machine of the kind referred to a series of rows of bottle-holders at suitable intervals along the traveling conveyer for carrying them and arresting the inverted bottles in them successively in registration with spaced jetting-stations, each row extending transversely across the conveyer. For that use the members of each row are supported between parallel bars 13, 14, as are also the jetting-nozzles 15. Each of these nozzles shown has four arms 16 extending upwardly and substantially parallel with it from its base portion, the arms being provided with notches 17 in their upper ends at which to engage the lower edges of the lower receptacle-bands; and the arms at one side of each nozzle have perforated ears 18 extending from them. The bars are permanently secured together in their parallel spaced relation as by studs 19, at intervals, surrounded by spacing-sleeves 20.

To assemble the parts forming the equipment for a set or row of the holders, the series of jetting-nozzles are riveted through their ears 18 alternately to the opposite inner faces of the bars, and the two sections of each receptacle are riveted through the ears 12 on their depending tongues 11 alter-

nately to the same faces of the bars. Thus, by fastening together in parallel relation two bars 13 and 14 with the nozzles and holder-parts secured upon them, the ears 10 on opposite sides of each pair of the receptacle-forming sections are brought together, presenting a series of alining pairs of the ears on each side of the series of receptacles, and the ears in each series are connected together by a rod 21 passing through them and riveted or otherwise secured at its ends, (not shown) thereby reinforcing and rendering rigid the structure. The nozzles register with the centers of the lower annular necks of the receptacles formed by the meeting semi-circular bands 8 of each, and the internal shape of the receptacles causes them to guidingly slide bottles dropped in inverted condition into their upper, wider open ends toward the nozzles and center the bottle-necks thereon with precision and without any tendency to interference with their progress in self-seating and to consequent breakage.

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

1. A bottle-holder for use in a bottle-cleansing machine of the character described, comprising an open-ended receptacle adapted to receive and support a bottle in inverted position and composed of an open-work-body having a contracted lower end, and a fixed jetting-nozzle registering centrally with the lower annular end of said receptacle and of a length adapted to enter the neck of a bottle introduced therein, the inner surface of said receptacle forming a guide for self-seating and self-centering the bottle-neck about the nozzle.

2. A bottle-holder for use in bottle-cleansing machines of the character described, adapted to receive and support a bottle in inverted position, and comprising a receptacle open at both ends and having a relatively-wide upper part and a relatively-narrow lower part, and a fixed jetting-nozzle registering centrally with the narrow lower part of said receptacle and of a length adapted to enter the neck of a bottle therein, the inner surface of the receptacle forming, for a bottle introduced neck-foremost therein, a guide for self-seating and self-centering the bottle-neck about the nozzle.

3. A bottle-holder for use in bottle-cleansing machines of the character described, comprising a receptacle adapted to receive and support a bottle in inverted position and composed of an upper annular band and a relatively-narrow neck-band spaced ribs connecting said bands, and a fixed jetting-nozzle registering centrally with said neck-band, and of a length adapted to enter the neck of a bottle introduced into the receptacle, the inner surface of the receptacle

forming, for a bottle introduced neck-foremost therein, a guide for self-seating the bottle-neck about the nozzle.

4. A bottle-holder for use in a bottle-cleansing machine of the character described, adapted to receive and support a bottle in inverted position therein, comprising a receptacle composed of an upper annular band and a relatively-narrow band, with spaced connecting-ribs converging toward the neck-band and inwardly curved adjacent to their junction therewith, and a fixed jetting nozzle registering with the center of the neck-band and of a length adapted to enter the neck of the bottle, the inner surface of the receptacle forming, for a bottle introduced neck-foremost therein, a guide for self-seating and self-centering the bottle-neck about the nozzle.

5. A bottle-holder for use in bottle-cleansing machines of the character described, comprising, in combination with a jetting-nozzle, a receptacle composed of meeting sections, each having a semi-circular upper band and a semi-circular and relatively-narrow neck-band with spaced connecting-ribs converging toward the neck-band, and means on the sections for securing them together to form the receptacle with an annular neck-band concentric with said nozzle, and an inner guiding-surface for a bottle introduced neck-foremost into the receptacle for self-seating and self-centering the bottle-neck about the nozzle.

6. A set of bottle-holders for use in bottle-cleansing machines of the character described, comprising a pair of spaced supporting-bars, a series of nozzles supported on said bars to extend between them, and open-ended bottle-receptacles each composed of a pair of meeting sections the members of which are secured respectively to the opposite bars to centralize the lower end of each receptacle with a nozzle, said sections being fastened together, and the inner surfaces of the receptacles forming, for bottles introduced therein neck-foremost, guides for self-seating and self-centering the bottle-necks about the nozzles.

7. A set of bottle-holders for use in bottle-cleansing machines of the character described, comprising a pair of spaced supporting bars, a series of nozzles supported on said bars to extend between them, and open-ended bottle-receptacles composed of pairs of meeting sections each consisting of a semi-circular upper band and a similar but narrower lower band having a fastening-tongue depending from it, and spaced curved ribs connecting said bands and perforated ears on the end-ribs, the tongues of the meeting-members being secured, respectively, to the opposite bars with the said ears opposing each other, and ends passing

through the ears on opposite sides of the receptacles to secure the sections together in their receptacle-forming relation with the lower ends of the receptacles concentric
5 with the nozzles and their inner surfaces forming, for bottles introduced therein neck-foremost, guides for self-seating and self-centering the bottle-necks about the nozzles.

GEORGE M. WAKEFIELD.

In presence of—

R. A. RAYMOND,

PAULINE BECKMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."