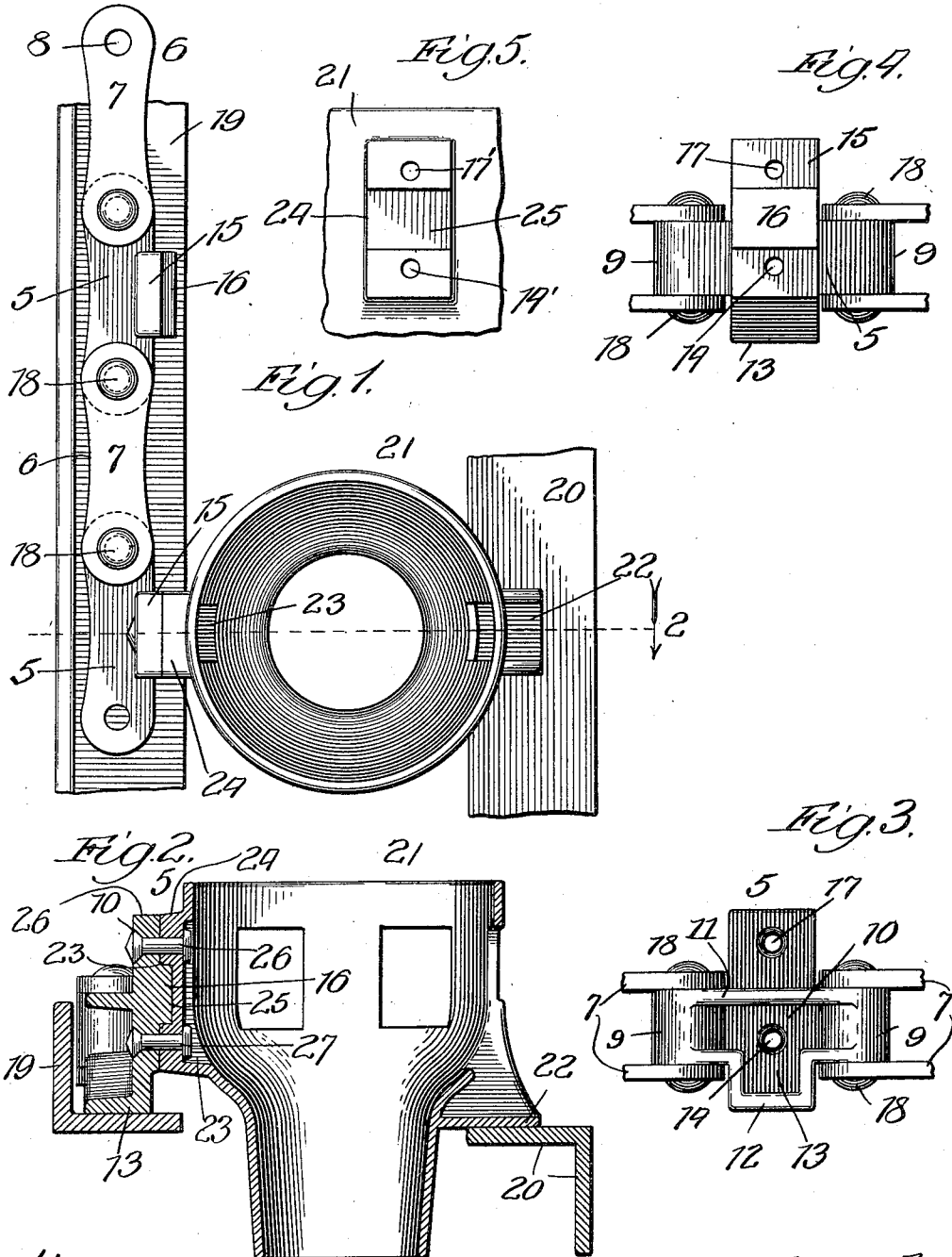


J. T. H. PAUL.  
CONVEYER CHAIN.  
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1,013,052.

Patented Dec. 26, 1911.



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# UNITED STATES PATENT OFFICE.

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## CONVEYER-CHAIN.

1,013,052.

Specification of Letters Patent.

Patented Dec. 26, 1911.

Application filed March 22, 1911. Serial No. 616,218.

*To all whom it may concern:*

Be it known that I, JOHN T. H. PAUL, 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 Conveyer-Chains, of which the following is a specification.

The object of my invention is to provide a novel construction of chain which shall adapt it for use more particularly in bottle-cleansing machines to form the conveyer equipped with pockets at intervals for holding bottles to be cleaned. I have especially devised my improvement for the endless conveyer in the bottle-washing machine which forms the subject of the pending application for Letters Patent of George W. Dobson, Serial No. 601,572, filed January 9, 1911.

In the accompanying drawing, Figure 1 is a broken plan view showing a section of my improved chain illustrating its construction and use as a pocket-equipped conveyer supported to travel on a track; Fig. 2 is a section on line 2, Fig. 1; Fig. 3 illustrates a broken portion of the chain showing by an outer face view one of the two varieties of links employed in its construction; Fig. 4 is a similar view of the same showing the inner face of the link, and Fig. 5 is a broken view in elevation of one of the bottle-pockets as adapted to have the aforesaid link of Figs. 3 and 4 fastened to it.

The chain is composed of two varieties of links, 5 and 6, formed of different metals to avoid, more particularly, necessity for lubricating their joints, the links 5 being solid and preferably cast of brass or bronze and the links 6 being preferably steel. Each link 6 comprises two bars 7, 7, both preferably alike and stamped out of steel in the shape illustrated, with eyes 8 in their rounded and expanded ends. Each link 5 is a casting formed with hollow cylindrical heads 9 on its ends connected by a web 10 having a flat side 11 and an angular web 12 on its outer side forming a socket 13 of general T-shape, for the purpose herein-after stated, containing a central bolt-hole 14; and on the inner face of the web is formed, to extend centrally from it at a right-angle, a lug 15 having a protuberance 16 formed on its face, the lug containing a rivet-hole 17. The links are connected together by pivot-pins 18 which are passed

through the eyes provided in their lapping ends to receive them, and the projecting ends of the pins may be riveted, as shown.

For the purpose of illustrating the use of my improved chain as a conveyer for the purpose set forth in the aforesaid application, it is represented in Figs. 1 and 2 to be supported on one rail 19 of a track to travel thereon, the companion track-rail 20 supporting holders or pockets, one being shown at 21 fastened to the chain, which carries them at intervals throughout its length. The shape of the pocket illustrated conforms, at least approximately, to the shoulder and neck portions of a bottle to be supported in it in inverted position; but it may be of any other suitable shape and general construction. It is provided on one side with a shoe 22 to rest on and guide the pocket along the rail 20. Diametrically opposite the shoe, at a recess 23 in the inner wall of the pocket is formed on its outer wall a protuberance 24 containing rivet-holes 14' and 17' respectively near its opposite ends and, between the latter, a recess 25. The outer face of the protuberance 24 is the reverse of that of the opposing face of the lug 15 and part of the web 10 from which it extends, whereby they fit against each other, forming joint-members, with the protuberance 16 entering the recess 25 to stably join the pocket to a link 5, to which the pocket is securely fastened as by rivets 26 and 27 passing, respectively, through the coincident holes 14, 14' and 17, 17' with their inner heads within the recess 23 to prevent their being encountered by and breaking a bottle introduced into the pocket and with the outer head of the rivet 27 housed in the link-recess 13.

The chain thus described, besides presenting the advantage referred to because of the different metals composing successive links, is rendered peculiarly strong and durable, for its conveyer-purpose referred to, by reason of the ribbed construction of the links 5; and the provision on the latter of the lug-devices as companions for the recessed protuberances 24 on the pockets for the union of the latter with those links, affords very strong and stable junction between them capable of effectually resisting wear and disorganization of the parts under the great strains to which the conveyer is subjected in use.

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

1. A conveyer-chain having each of its alternate links formed of a pair of bars, and solid intermediate links each composed of a web having end-heads and ribs on one side with a lug on its opposite side, for the purpose set forth.

2. In combination, a chain having each of its alternate links formed of a pair of bars and solid intermediate links each composed of a web having end-heads and a lug extending from one side with a protuberance on its face, and bottle-holders each provided on its outer wall with a protuberance containing a recess and interfitting with and secured to one of said link-lugs.

3. In combination, a chain having its al-

ternate links formed of pairs of bars and the intermediate links solid and each composed of a web having end-heads and ribs on one side with a lug on its opposite side provided with a protuberance and forming a joint-member, and bottle-holders, each provided with a recess in its inner wall and a protuberance forming a joint-member coincident with said recess on its outer wall and containing a recess, said link and holder joint-members interfitting and being pinned together with the inner heads of the pins in said pocket-recesses.

JOHN T. H. PAUL.

In presence of—

R. A. SCHAEFER,  
JOHN WILSON.

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