

UNITED STATES PATENT OFFICE

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CONVEYER CHAIN

John A. Crowley, Jr., Scarsdale, N. Y., and
William D. MacGeorge, Drexel Hill, Pa., as-
signors to Socony-Vacuum Oil Company, In-
corporated, New York, N. Y., a corporation of
New York

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1 Claim. (Cl. 198—151)

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This invention is concerned with an improved form of link construction for use in chain belts, particularly those used as the carrier member in a bucket-conveyor or bucket-elevator and with the link member so constructed.

It has for its object the provision of a link of improved strength, of cheap design and of easy fabrication.

The invention may be readily understood by reference to the drawing attached hereto in which Figure 1 shows a plan view of the improved link, Figure 2 is a section thereof and Figure 3 is an elevation. These figures show the bucket-carrier link of a chain belt supported bucket conveyor. In Figure 1, the link is seen to be composed of two side members 4 and 5, joined by two tubular knuckle-pins 6 and 7, which knuckle pins, in use, through a pin, carry the adjoining links, as indicated in dotted lines at 8, as is well known in the art. Each side member is provided with appropriate holes 9, 9, and 10, 10 whereby, through the agency of rivets or bolts, the link may be attached to the bucket. In prior practise, these links, including the two side bars and the connecting links, have been cast integrally of cast iron, malleable iron or cast steel. It has been found that the link so formed is weak, particularly at the juncture of knuckle pin and side bar. To improve this, this invention provides the construction shown in greater detail in the section of Figure 2. In this form, we have the side bars 4 and 5, as before, which may be cast of malleable iron or of steel, or may be fabricated from a rolled steel "angle iron" for severe service. Each side bar is drilled at 11, and then, for a knuckle pin 7, there is used a piece of extra heavy steel pipe or tubing 7. This pipe or tube extends beyond each side bar as at 12, and is welded thereto, as at 13, the whole giving a construction found to be much more capable of withstanding the severe usage to which such chains are subjected than are

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former constructions. Figure 2 also shows, in dotted lines, at 14, how the bucket is mounted upon the link, held thereto by rivets 15.

Figure 3 is a side elevation of the link.

5 Such construction as here disclosed has been found, in extensive trial, to be most suitable for bucket-elevators conveying hot (800-900° F.), materials of a moderately abrasive nature, such as fuller's earth, and various natural and synthetic catalytic materials.

We claim:

15 A unitary bucket carrying link for use in a bucket chain conveyor comprising two angular side bars each presenting a bucket-supporting face and an upstanding flange extending away from the bucket-supporting face, and two knuckle pins, one mounted between each end of said side bars, the said knuckle pins being formed of tubes extending through drilled holes in the upstanding flanges of said side bars and slightly beyond the external faces of said flanges and being rigidly attached to said flanges by welds extending substantially completely around the exterior ends of said knuckle-pins.

JOHN A. CROWLEY, JR.
WILLIAM D. MACGEORGE.

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