(No Model.)

C. A. BARTLIFF.

PUMP BUCKET.

No. 583,020. Patented May 25, 1897.

Fig. 1.

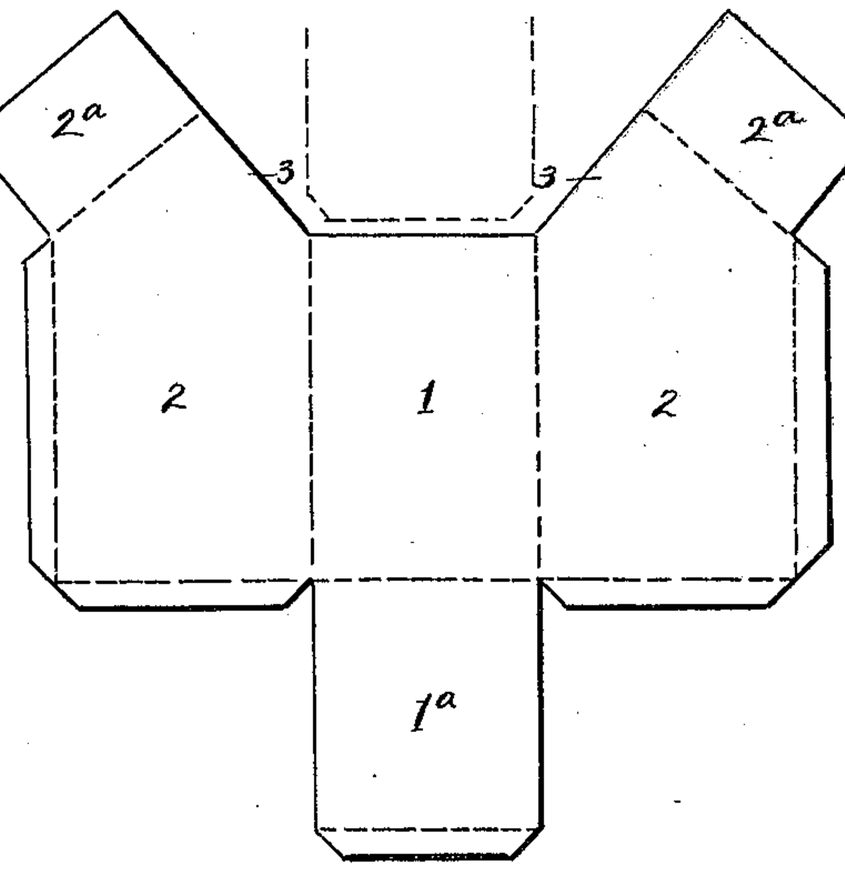


Fig. 3.

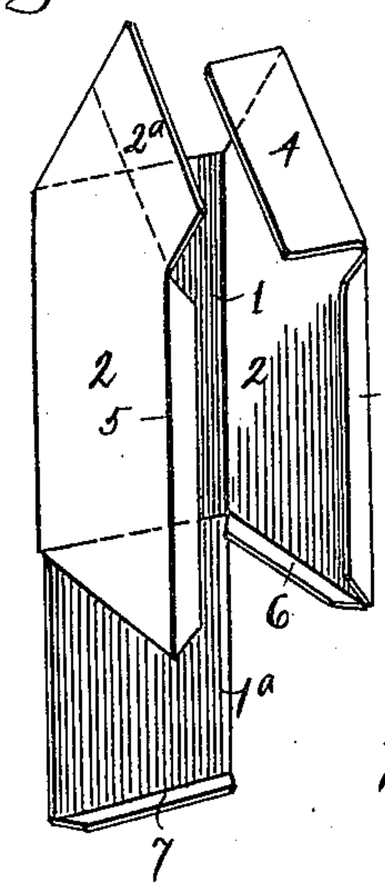


Fig. 5.

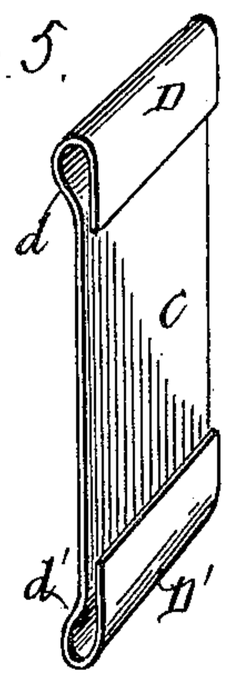


Fig. 4.

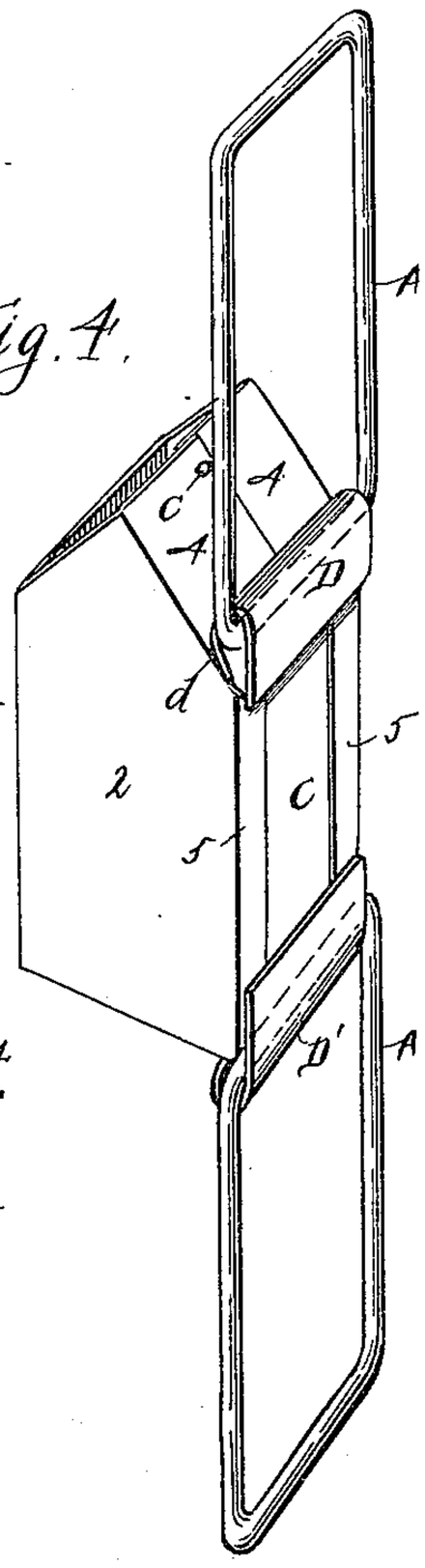
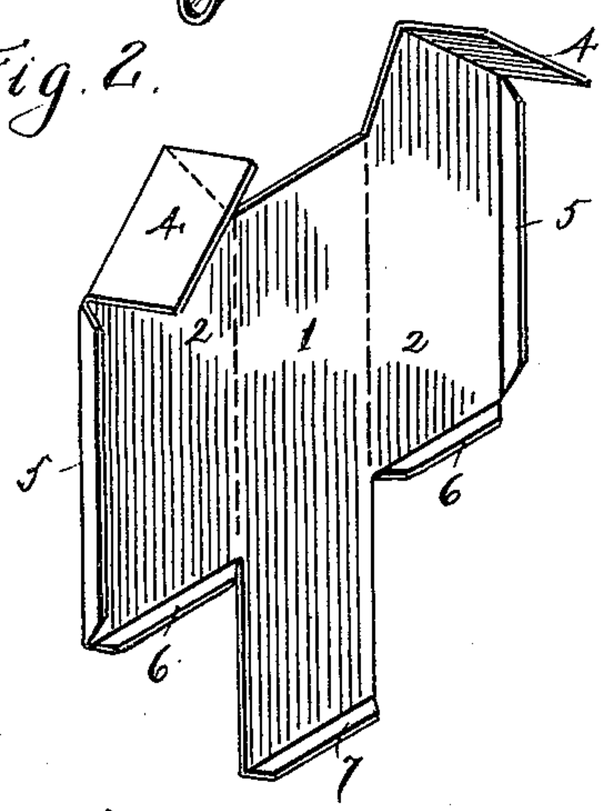


Fig. 2.



Witnesses.
G. M. Anderson
Philip Colasi.

Inventor.
C. A. Bartliff
by E. W. Anderson
his Attorney.

UNITED STATES PATENT OFFICE.

CHARLES A. BARTLIFF, OF ST. LOUIS, MISSOURI.

PUMP-BUCKET.

SPECIFICATION forming part of Letters Patent No. 583,020, dated May 25, 1897.

Application filed June 8, 1896. Serial No. 594,760. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. BARTLIFF, a subject of the Queen of England, and a resident of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Pump-Buckets; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a plan view of blank. Fig. 2 is a perspective view of blank after being acted upon by first set of dies. Fig. 3 is a similar view of blank after being acted upon by second set of dies. Fig. 4 is a view of completed bucket. Fig. 5 is a perspective view of one of flat links.

This invention has for an object the provision of a strong and durable pump-bucket wherein the amount of material employed in its construction is reduced to a minimum, as is also the waste, both of which features are of great importance from the economical and commercial point of view.

A further object is the provision of a bucket of this character which can be readily detached from or connected into the chain with very little labor and without in any way injuring it.

The invention also provides a bucket possessing certain other features of advantage, all of which will presently appear.

With these objects in view the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, the letter A designates the wire links of the chain, upon which my improved buckets (designated by the letter B) are carried. These links are of the usual rectangular form, known to the trade as the "standard" link.

C designates the flat links, which connect the wire links and which according to this invention also form the backs of the buckets.

The body portion of each bucket is shaped up from a blank whose initial form when cut from a sheet of metal is shown in Fig. 1. Said blanks have the central portion 1, which forms the front of the finished bucket, the end extension 1^a, which forms the bottom of the bucket, and the wing portions 2 2, which form the respective sides of the bucket. Each of said wing portions has at one end the oblique endwise and lateral extension 2^a. The outer angles of the blanks are slightly cut off, as indicated at 3. By reference to Fig. 1 it will be seen that there is but little waste of metal in cutting these blanks from the sheet, inasmuch as the extension 1^a of one blank is formed by the material which is cut out between the extensions 2^a of the next blank. This blank is next subjected to the action of suitable dies, which give it the form shown in Fig. 2, the extensions 2^a being each bent up at right angles on the lines $x\,x$ to form the flaps 4, the outer edges of the wings 2 being turned up to form the lips or flanges 5 and their lower edges to form similar lips or flanges 6. The end portion of the extension 1^a is also bent up to form the lip or flange 7.

By means of other suitable dies the blank is next shaped into the finished form shown in Fig. 3, the two flaps 4 lapping upon each other to form the pouring or lip portion of the bucket. These flaps are secured to each other preferably by a rivet *c*. The extension 1^a is bent back between the lower edge portions of the sides 2 2 of the bucket and upon the flanges 6 thereof, to which it may be soldered. The flanges 5 extend inwardly toward each other partially across the otherwise open back of the cup in position to embrace the flat link C, which is now applied. The said link consists in a plate of about the same width as the bucket, but somewhat longer, its end portions being bent forwardly with respect to the bucket and shaped to form the hooks D D′. This link is slipped in under the flanges 5, which are soldered or partially soldered thereto, and the bent or offset portions at d' d' are also soldered, respectively, to the upper and lower rear edges of the bucket. The hooks at D D′ form the bearings for the links A, and owing to the fact that the flat links C are bent or offset forwardly these bearings are brought into the vertical plane of the back of the bucket and of the chain.

Heretofore it has been customary in some

buckets to provide them with integral backs and to secure the flat links thereto, the hooks of said links being turned inwardly or forwardly instead of outwardly or backwardly, as at present. In this old construction in order to remove one of the buckets or links it was necessary to first remove the flat links from the bucket. In the present construction all that is required is to bend up the hooks of the flat links, as will be readily seen. I also, by making the flat links form the back of the bucket, effect a saving of the material before employed and also simplify the operation of shaping up the bucket. The flat links are of somewhat thicker material than the blanks from which the bodies of the buckets are formed. Buckets of this kind are most likely to become bent or injured at their pouring or lip portions, either by contact with the receiver of the pump into which they empty or otherwise. I have provided against injury at these points by overlapping the flaps 4 upon each other and securing them by a rivet, whereby this portion of the bucket is greatly stiffened. I desire also to call attention to the fact that any tendency of the hooks D D′ to bend up is prevented by the fact that they have a direct bearing against the upper and lower chain-wheels of the pump as they pass over them and are thereby kept bent in place.

Inasmuch as I employ the standard links A and so construct the buckets that their backs do not project beyond the plane of the chain no special fixtures are required, but a chain fitted with these buckets can be used with any chain-wheel and fixtures on the market which are capable of carrying the ordinary standard steel-wire-link elevator-chains. In all other chains of this character with which I am familiar great difficulty has been experienced in keeping the buckets fixed—that is to say, they have become loose upon the flat links which connect the wire links. In the present construction no difficulty of this kind can arise, since the buckets are securely fixed to these flat links which form the back thereof.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, the herein-described blank for the body portions of pump-buckets, said blank having the central front-forming portion 1 and the bottom-forming end extension 1^a, and the lateral or wing portions 2, having at one end the oblique and lateral extensions 2^a which form the pouring or lip portion of the finished bucket, substantially as specified.

2. As a new article of manufacture, the herein-described pump-bucket having its front, side and bottom portions, together with its pouring-lip, shaped up from sheet metal, and its back formed entirely by a flat link of the carrying-chain, said link having the forwardly-offset and rearwardly-turned end hooks adapted to detachably engage the wire links of the chain and to form the bearings therefor.

3. The combination with the buckets open at the back, of the chain having the wire links and the intermediate flat links secured to and forming the backs of the buckets, the end portions of said flat links being forwardly offset, and bent to form rearwardly-turned hooks in the plane of the chain, substantially as specified.

4. The combination with the bucket having its front, bottom, and lateral portions, and its pouring-lip, formed from a single piece of metal, and without a back portion, of a flat link secured to said bucket and forming the back thereof, said link having its end portions extended beyond the ends of the bucket, such extensions being offset forwardly and bent to form hooks which open from the rear and whose rear portions are secured to the bottom and pouring-lip of the bucket, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES A. BARTLIFF.

Witnesses:

PHILIP C. MASI,

GEORGE H. PARMELEE.