

No. 866,783.

PATENTED SEPT. 24, 1907.

P. E. GETZ.  
WELL BUCKET.

APPLICATION FILED MAR. 30, 1907.

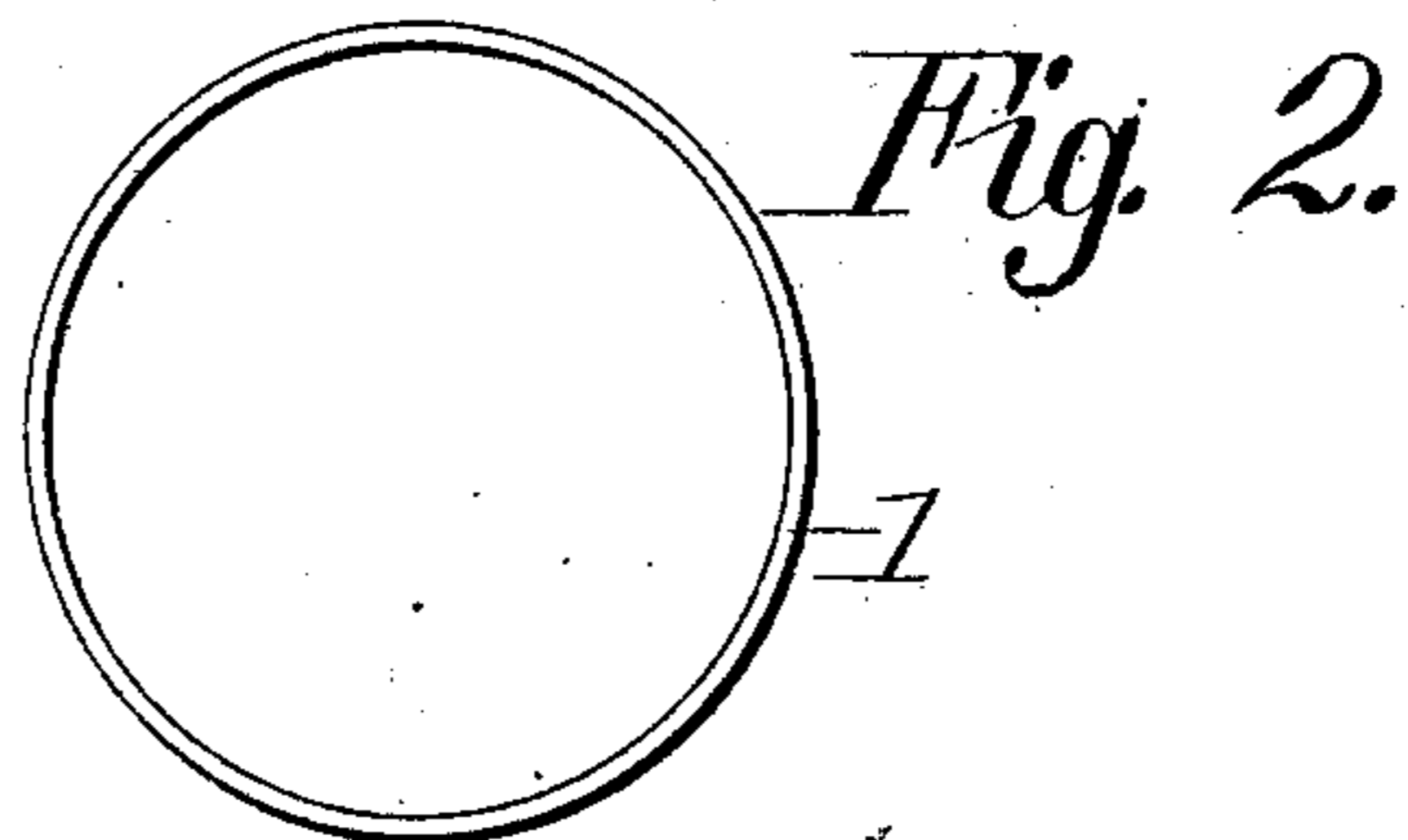
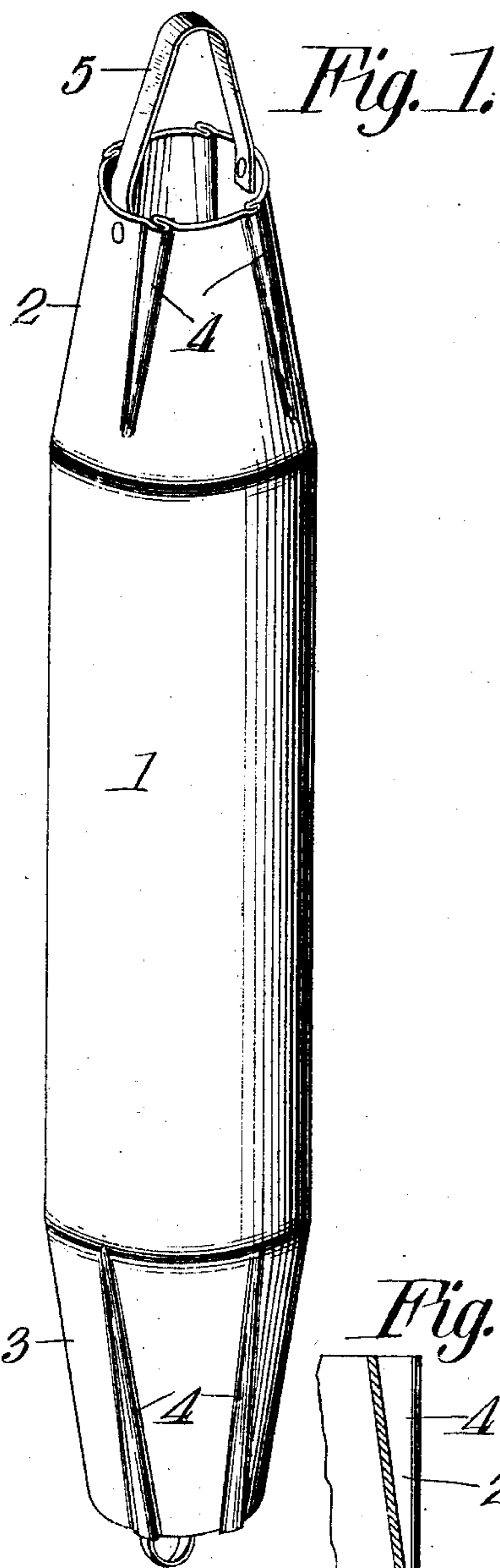


Fig. 3.

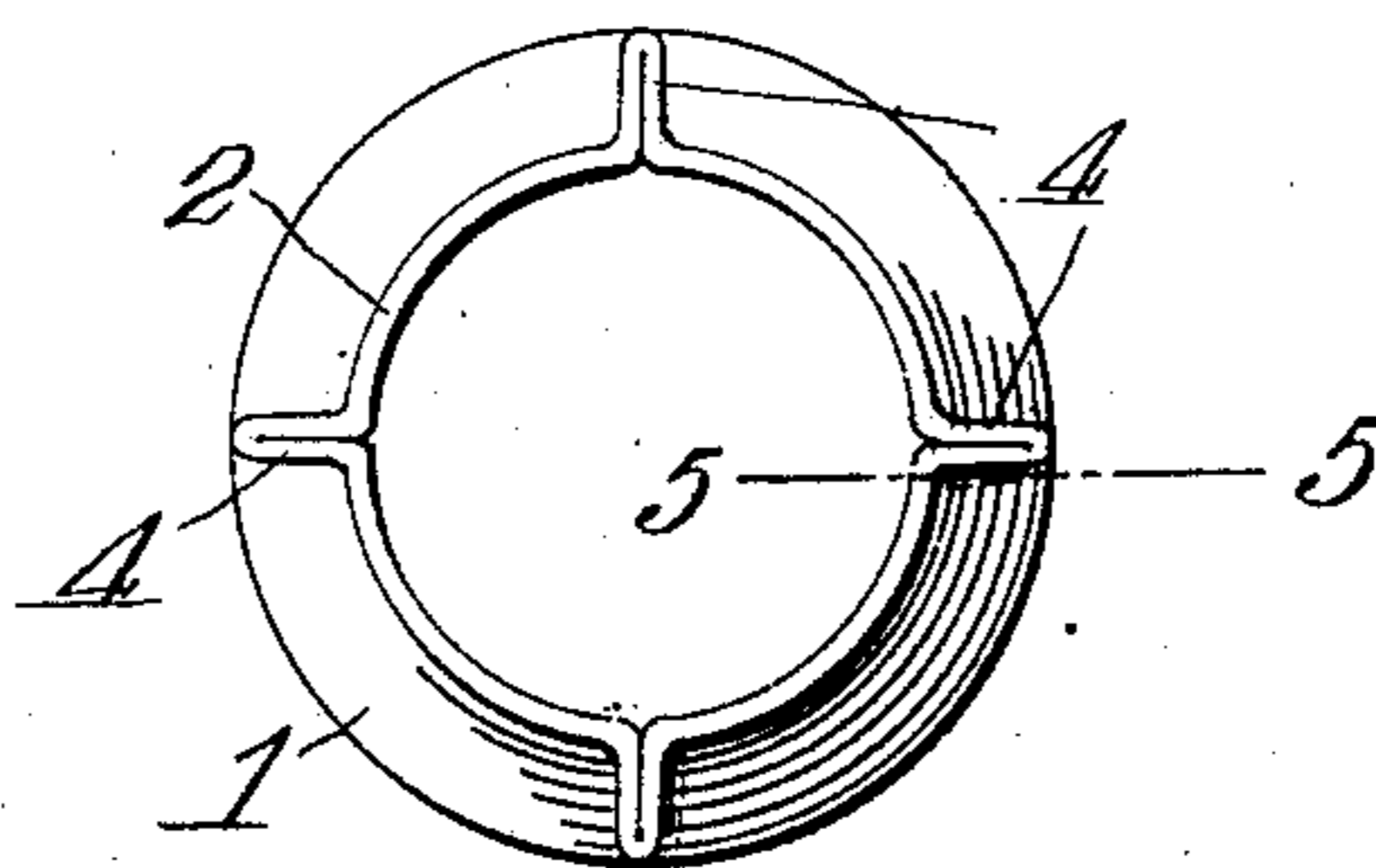


Fig. 5.

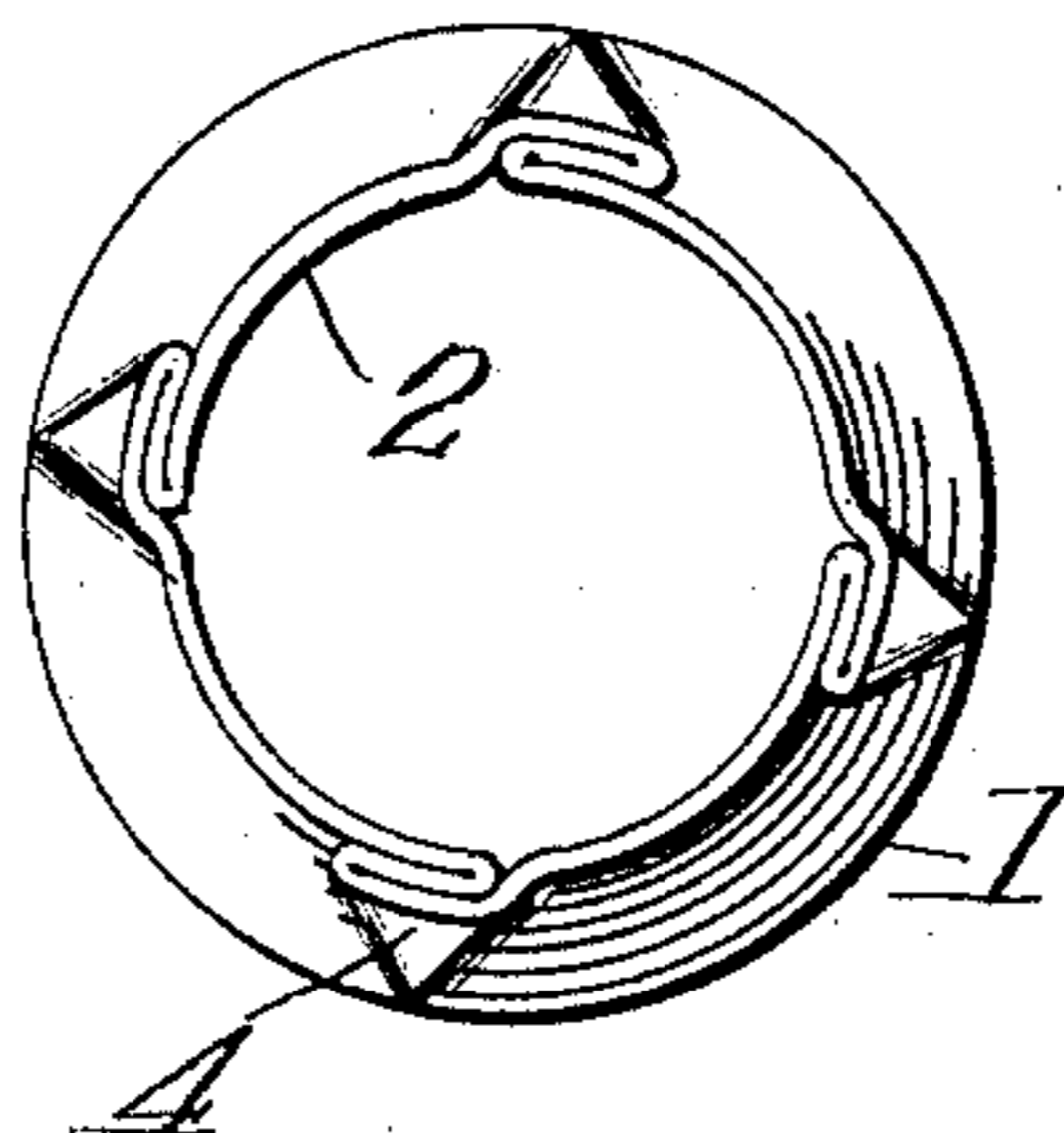
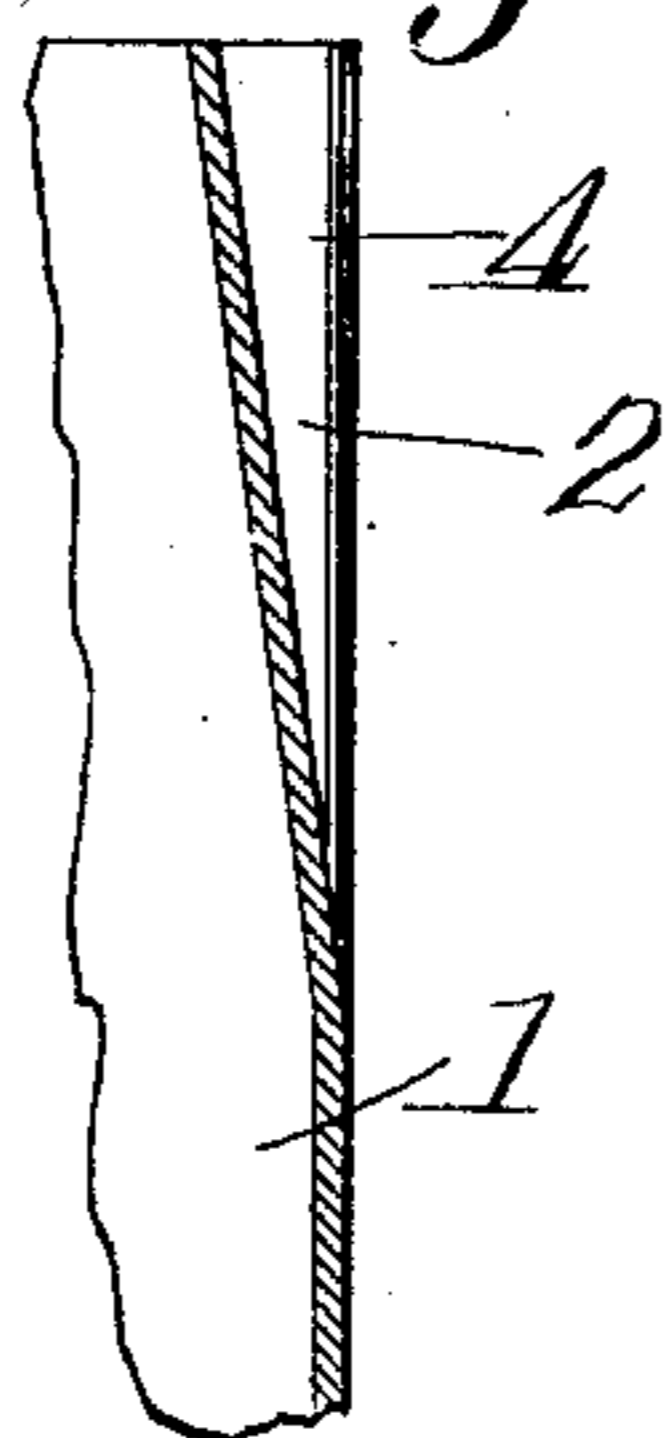


Fig. 4.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

PHARES E. GETZ, OF NEOSHO, MISSOURI, ASSIGNOR OF ONE-HALF TO WARREN HEATON, OF NEOSHO, MISSOURI.

## WELL-BUCKET.

No. 866,783.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed March 30, 1907. Serial No. 365,519.

*To all whom it may concern:*

Be it known that I, PHARES E. GETZ, a citizen of the United States, residing at Neosho, in the county of Newton and State of Missouri, have invented a new and useful Well-Bucket, of which the following is a specification.

This invention relates to well buckets such as are used in driven and pipe wells and are known as cone top buckets.

10 The object of the invention is to produce a cheap and strong bucket having one or both ends coned, the entire bucket being formed of one piece of tubular metal which may be weldless or without side seams. As is well known, buckets of this character are made  
15 of substantially the same diameter as the well pipe in which they move and, therefore, in buckets having a uniform diameter from end to end, there is great danger of the edge of the bucket striking the joints in the pipe or any projections therein, and injuring the  
20 top or bottom of the bucket, sometimes to such an extent as to cause the bucket to stick in the well; and even with cone shaped buckets heretofore used the body or cylindrical portion of the bucket and the cone top and bottom were made of separate pieces  
25 and joined by riveting, soldering or other fastening means, which increases the cost of manufacture and produces a bucket less strong and smooth than one made of a single piece of material.

In the accompanying drawings: Figure 1 is a perspective view of the well bucket complete. Fig. 2 is an end view of the piece of tubing from which the well bucket is made. Fig. 3 is a similar view showing the first operation for coning the ends of the bucket. Fig. 4 is a top view of the well bucket complete. Fig.  
35 5 is a detail sectional view on the line 5—5 Fig. 3.

Similar numerals of reference indicate corresponding parts throughout the several figures of the drawings.

The well bucket 1 is made by preference of a single piece of seamed galvanized iron or steel tubing having  
40 a diameter substantially the same exteriorly as the well pipe bore and a length sufficient to form the cone shaped ends 2 and 3 on the body of the bucket. As these conical ends are similar in all respects, a description of one will suffice for both.

45 In order to form the conical end on the tubular well bucket, the stock, at certain points on the circumference of the part to be coned, is folded outwardly or doubled upon itself to form tapering ribs 4, which

extend the length of the conical end 2. These ribs are widest at the mouth of the bucket, as shown in 50 Fig. 4, and gradually decrease in width and disappear at the base of the conical end. By means of these tapering ribs 4 the diameter of the well bucket is reduced at its mouth more than at any other point, and as the ribs decrease uniformly in width as they 55 recede from the mouth of the bucket, it follows as a natural consequence that the end of the bucket will assume a conical form, the angle of the sides depending on the number and width of the ribs 4. At this stage of manufacture the ribs 4 which radiate from the 60 conical end 2, as represented in Fig. 3, would, if left to remain in this position, form an impediment to the movement of the bucket and sufficient strength would be lacking to hold the cone end in shape. To provide against these defects the ribs 4 are folded 65 closely against the outer surface of the conical end 2 in the manner represented in Fig. 4, and pressed tightly in place. In this way a conical end both strong and cheap may be formed on one or both ends of a well bucket. To provide for the movement of the 70 well bucket a bail 5 is attached to the mouth of its upper end as shown.

Having thus described the invention what is claimed is:—

1. A well bucket comprising a tubular cylindrical body 75 having a conical end, said conical formation being produced by folding or doubling the metal upon itself to form flat tapering, radial ribs at a limited number of places in the circumference of the portion to be coned, said ribs being wider at the frustum end of the cone and disappearing at the junction of the cylindrical body with the conical end of the bucket. 80

2. A well bucket comprising a tubular metal body having a conical end, said end being formed by folding or doubling upon itself the metal of the body to form a plurality of tapering ribs, said ribs being folded against the side of the conical end. 85

3. A well bucket having conical ends consisting of a single piece of tubing, the conical ends being formed by folding or doubling upon itself the tubing to form a plurality of tapering ribs at each end of said tubing and then folding the ribs flat against the surface of the conical ends of the bucket. 90

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two 95 witnesses.

PHARES E. GETZ.

Witnesses:

W. B. KELLER,  
S. H. KELLER.