

(No Model.)

J. C. TRULLINGER & U. B. SCOTT.

BUCKET FOR STEAMBOAT PADDLE WHEELS.

No. 342,768.

Patented May 25, 1886.

Fig. 1

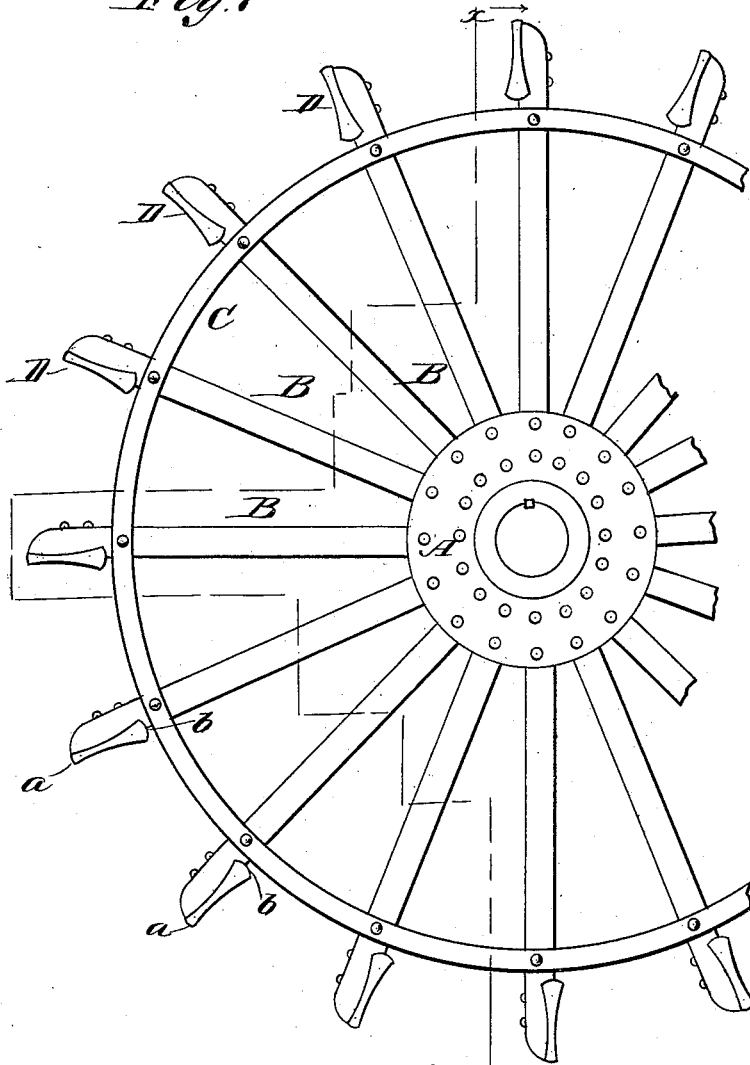


Fig. 2

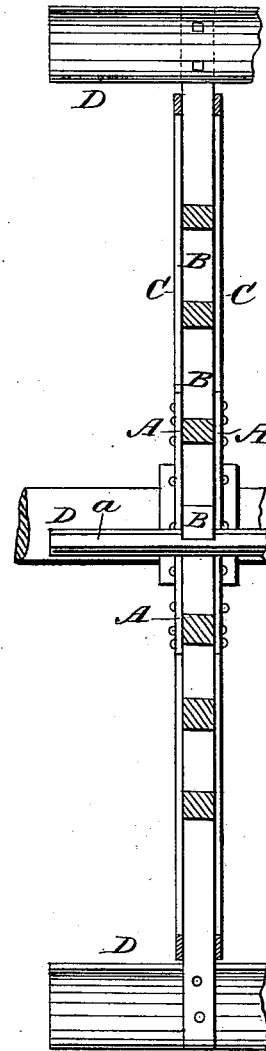


Fig. 3.

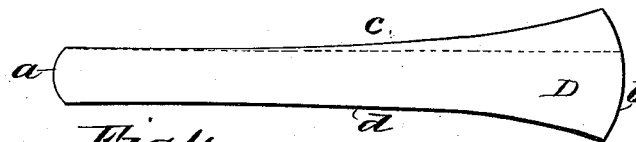


Fig. 4

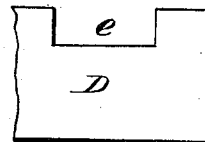
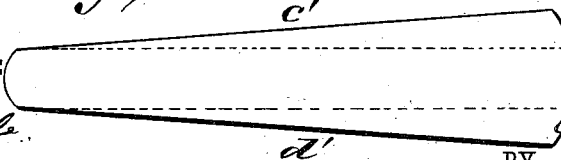


Fig. 5

WITNESSES:

F. M. Auld
E. Sedgwick

INVENTOR:

J. C. Trullinger
U. B. Scott
Munn & Co.

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN CORSE TRULLINGER AND URIAH B. SCOTT, OF ASTORIA, OREGON.

BUCKET FOR STEAMBOAT PADDLE-WHEELS.

SPECIFICATION forming part of Letters Patent No. 342,768, dated May 25, 1886.

Application filed January 6, 1886. Serial No. 187,782. (No model.)

To all whom it may concern:

Be it known that we, JOHN CORSE TRULLINGER and URIAH B. SCOTT, of Astoria, in the county of Clatsop and State of Oregon, have invented a new and useful Bucket for Steamboat Paddle-Wheels, of which the following is a full, clear, and exact description.

The object of our invention is to provide a bucket, paddle, or float by the use of which an increased speed may be obtained without a corresponding increase in the consumption of fuel.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a view of a portion of a paddle-wheel provided with our improved form of bucket, paddle, or float. Fig. 2 is a sectional view of the same, taken on line *x x* of Fig. 1. Fig. 3 is an end view of our preferred form of bucket. Fig. 4 is a view of a modified form of bucket, and Fig. 5 is a view of a portion of the inner edge of the bucket.

Referring now to the general construction illustrated in the drawings, A represents the hub; B B B, the arms of a paddle-wheel, braced, as usual, by a hoop, C, beyond which the arms extend to act as supports for the buckets D D D. These buckets, which are best shown in Figs. 3, 4, and 5, are formed so that their outer edge, *a*, is much narrower than their inner edge, *b*, the side faces, *c* and *d*, being preferably concave, as shown in Figs. 1, 2, and 3. Each bucket is formed with slots *e*, within which the arms B B are fixed, the said slots extending across the face of the bucket, as indicated by dotted lines in Figs. 3 and 4. The side faces of the buckets D D are so arranged that the planes of the radii of the wheel pass intermediately of the same, thus presenting a side face thereof in each direction, whereby the bucket is adapted to act in the same manner when backing as when moving forward.

In Fig. 4 we have shown a bucket in which the side faces, *c' d'*, are straight, so that the

bucket more closely approaches a wedge-shape.

Buckets constructed as described are secured to the arms B B so that their faces *b b* are toward the hub A.

With such buckets as we have described the revolution of the wheel to which they are fixed will cause them to act upon the water in such a way as to slightly raise the vessel and thereby increase the speed, whereas a bucket rectangular in cross-section would tend to depress or sink the vessel lower in the water. Moreover, buckets constructed as described will enter and leave the water with the least possible disturbance of its particles, thereby enabling us to obtain a greater amount of work from a given amount of power, as the friction on the wheels is reduced.

Another great advantage arising from the use of the wedge-shaped bucket, wherein the face of the bucket is at an angle with the radii of the wheel, is that the "slip" is reduced to a minimum.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the wheel-arms, of the buckets connected to said arms and having their front and rear sides or faces each inclined or curved, with planes of the radii of the wheel passing intermediately of each such face of bucket, substantially as shown and described, and for the purpose set forth.

2. The combination, with the wheel-arms, of the buckets connected to said arms and each having both of its side faces curved or inclined, whereby one side face acts in like manner when backing as does the other side face in moving forward, substantially as and for the purpose set forth.

JOHN CORSE TRULLINGER.
URIAH B. SCOTT.

Witnesses:

J. H. MANSELL,
E. C. HOLDEN.