

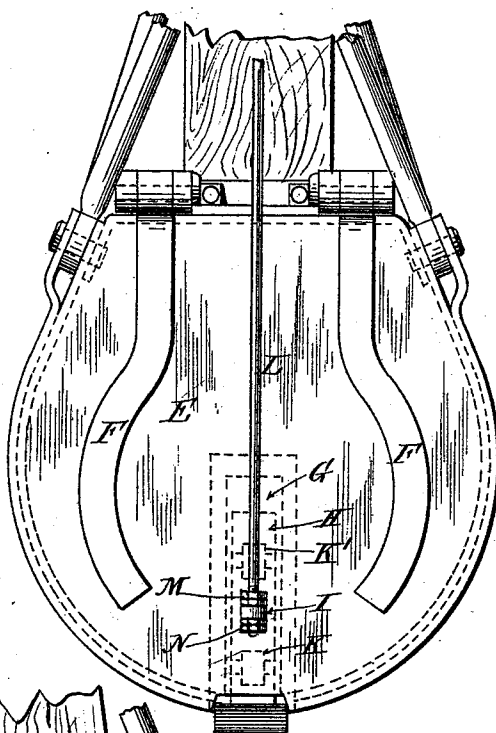
(No Model.)

W. A. COLLINS.  
DREDGING BUCKET.

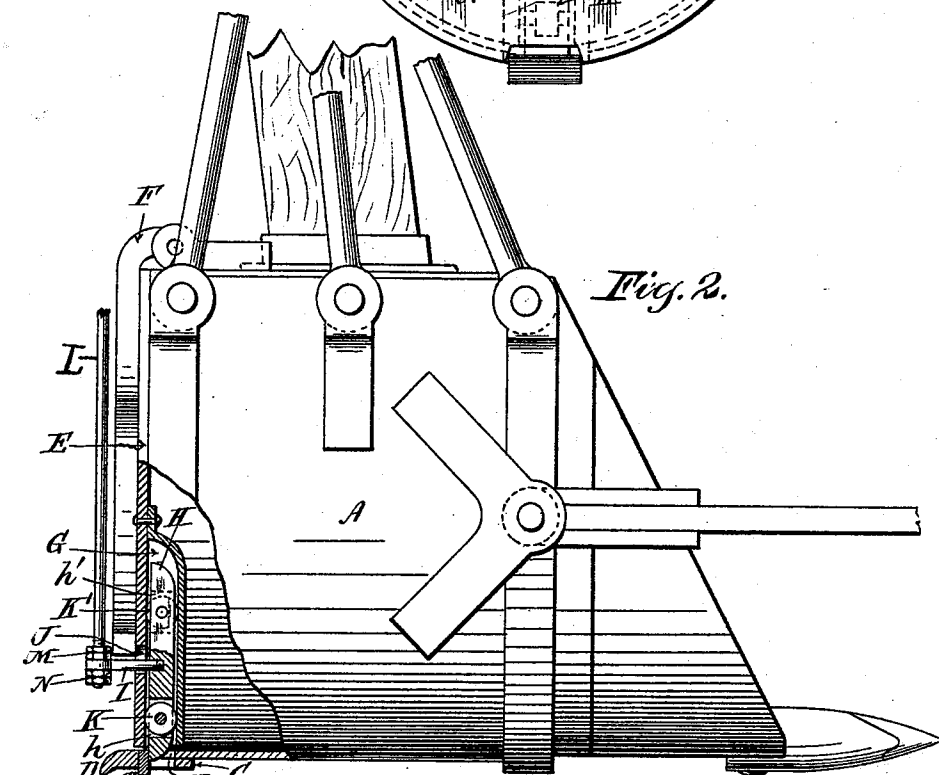
No. 499,451.

Patented June 13, 1893.

*Fig. 1.*



*Fig. 2.*



Witnesses:

D. W. Gardner.

William A. Collins

Inventor:

William A. Collins

by Ernest A. Deffe  
his Atty.

# UNITED STATES PATENT OFFICE.

WILLIAM A. COLLINS, OF BAYONNE, NEW JERSEY.

## DREDGING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 499,451, dated June 13, 1893.

Application filed January 11, 1893. Serial No. 457,985. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. COLLINS, a citizen of the United States, and a resident of Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Dredging Buckets, of which the following is a specification.

This invention relates to certain new and useful improvements in dredging buckets, and has for its object the production of such a bucket in which the swinging door, forming the back of the bucket during the dredging operation, and the bottom of the bucket when the latter is raised, and tilted to its unloading or dumping position, may be positively and securely caught and held in its closed position, and which may be readily and easily unlocked and left free to swing away from the bucket, when the latter is in its position for unloading or dumping.

To these ends my invention consists in a dredging bucket having a swinging door held in its closed position by a latch mounted upon anti-friction rollers, and means for moving said latch out of engagement with said bucket, all as hereinafter more fully described and pointed out in the claims.

In the accompanying drawings illustrating my invention, in both the figures of which like parts are similarly designated, Figure 1, is a rear elevation, and Fig. 2, is a fragmentary side elevation, partly in section, of a bucket embodying my invention.

A, represents the bucket, the bottom of which at its rear, is provided with the bolt or latch hold B, preferably reinforced by the keeper C, in which is dovetailed the steel piece C', and provided with the curved projecting tongue D.

E, is the swinging side or door, hinged to bucket A, by the hinge strips F, and provided upon its inner face with the open ended latch chamber G, within which the lock or latch H, is located and retained by the eye, or perforated lug I, passing through a slot or elongated opening J, in door E, and screwed into the latch H, which is properly tapped and screw-threaded to receive it. The latch H, as shown, is beveled or curved inwardly, preferably at both ends, and as illustrated in Fig. 2, is provided with the elongated slots h, h', within which are mounted the anti-fric-

tion wheels or rollers K, K', of a diameter greater than the latch and slightly less than the width of the latch chamber G. If desired, the rollers K, K', may be mounted upon the fixed axes as shown, or the latch G, may be provided with lateral elongated slots, within which the respective ends of the axes may be held, and be free to move as the latch is operated in the one direction or the other, in a manner well known.

L, is the usual latch-operating rod passing through the eye I, and secured in position by nuts M, N. The upper end of this rod is connected to a toggle lever, to which is attached a rope or chain leading under the boom to the dredging boat in the usual and well known manner.

The operation of my improved device is as follows, assuming the parts to be in the position shown in the drawings: The bucket is lowered and scoops up the mud, rock or other substance and is then raised and tilted in the usual way until the swinging door E, forms the bottom of the bucket. The rod L, is then manipulated through the toggle lever and rope (not shown) drawing inboard the eye I, and with it the latch H, which without regard to the weight of the material in the bucket runs easily upon its anti-friction rollers K, K', releasing latch H, from the slot or bolt hole B, keeper C, and piece C', and the door E by gravity and the weight of the material it is sustaining swings upon its hinges downwardly and away from the bucket A, dropping or dumping the load. As the bucket A, assumes its dredging position, the latch H will drop by gravity and project beyond the door E, and as said door assumes its closed position, the beveled or rounded end of latch H is engaged by the projecting tongue D, lifting the latch into its chamber G, until the door E, has reached its most inward position, when said latch again drops, and engages in the latch hole B, securely holding and retaining the door E, in closed relation to the bucket. As before described, I prefer to round off or bevel both ends of latch H, so that when one end becomes worn, the latch may be removed from its chamber and reversed.

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

1. A dredging bucket having a swinging

side or door carrying a latch chamber, a latch mounted upon anti-friction rollers working in said chamber and adapted to engage with an appropriate latch hole in said bucket; and  
5 means, substantially as described for manipulating said latch and retaining the same within its chamber, substantially as described for the purposes set forth.

2. A latch for the swinging doors of dredg-  
10 ing buckets comprising a solid bar, the ends of which are oppositely beveled or chamfered, provided with longitudinal openings of a size to admit anti-friction rollers, and anti-friction rollers mounted to said latch, and within  
15 said openings, substantially as described for the purposes set forth.

3. A latch for the swinging doors of dredg-

ing buckets working within a chamber upon said door, said latch comprising a solid bar, the ends of which are oppositely beveled or  
20 chamfered, provided with longitudinal openings of a size to admit anti-friction rollers, and anti-friction rollers greater in diameter than the latch and less than the width of the latch chamber, mounted to said latch within  
25 said openings substantially as described for the purposes set forth.

Signed at New York, in the county of New York and State of New York, this 10th day of January, A. D. 1893.

WILLIAM A. COLLINS.

Witnesses:

FREDERIC CARRAGAN,  
EUGENE V. MYERS.