P. PETERSON.

CLAM SHELL DREDGER BUCKET BUFFER.

APPLICATION FILED MAR. 24, 1915.

1,153,950. Patented Sept. 21, 1915.

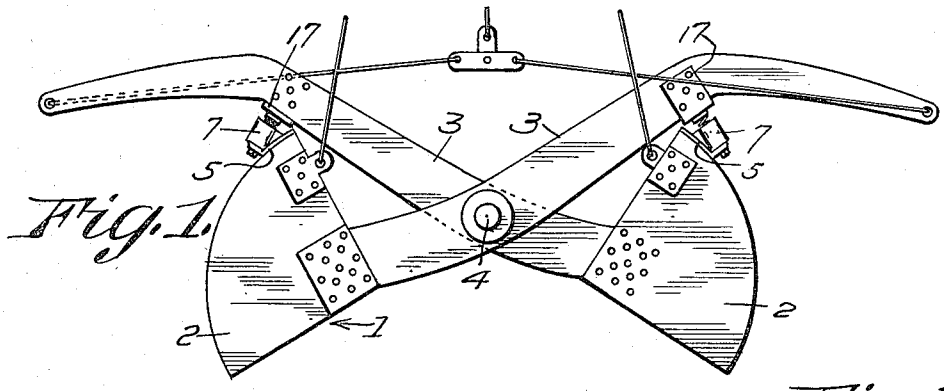


Fig. 1.

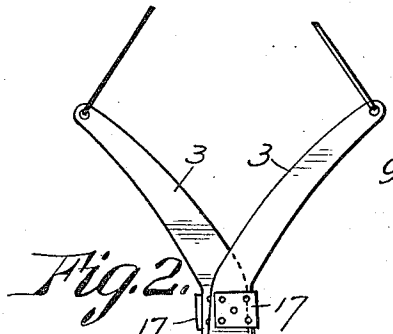


Fig. 2.

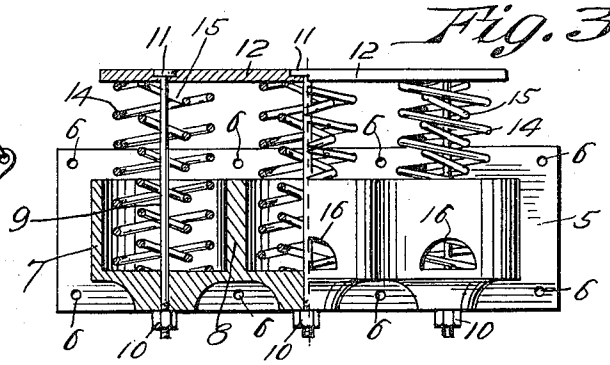


Fig. 3.

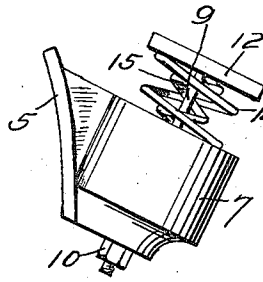


Fig. 4.

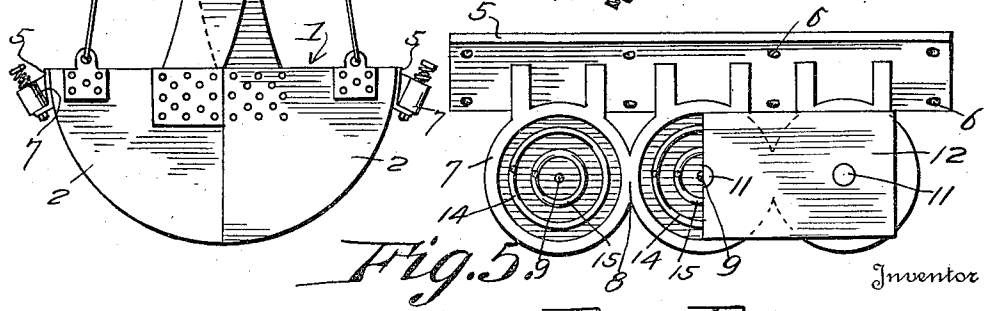


Fig. 5.

Witnesses

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CLAM-SHELL-DREDGER-BUCKET BUFFER.

1,153,950. Specification of Letters Patent. Patented Sept. 21, 1915.

Application filed March 24, 1915. Serial No. 16,582.

To all whom it may concern:

Be it known that I, PETER PETERSON, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Clam-Shell-Dredger-Bucket Buffers, of which the following is a specification.

This invention relates to certain new and useful improvements in clam shell dredger buckets and more particularly to a shock absorber or bumper therefor to eliminate the jar or concussion when the bucket opens.

The present invention has for its objects among others to provide a simple and cheap, yet durable and efficient device of this character, readily applicable to clam shell dredgers of known form whereby they may be equipped with the improved bumper or shock absorber now to be described.

It has for a further object to provide an improved form of bumper or shock absorber having provision for the ready escape of the sand and water from the casing of the bumper.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation of a clam shell dredger bucket provided with my improvements, the bucket being shown open. Fig. 2 is a similar view showing the bucket closed. Fig. 3 is an enlarged detail partly in central longitudinal section through the bumper. Fig. 4 is an end view of the bumper. Fig. 5 is a top view of Fig. 3 with a portion of the cover plate removed.

Like numerals of reference indicate like parts throughout the several views.

Referring to the drawings:—1 designates a clam shell dredger bucket of any well-known or approved form of construction adapted to be connected and operated in the usual way, the present invention pertaining in no wise to the construction of the bucket *per se*. A detailed description thereof is not deemed necessary. It is sufficient to state that the halves 2, 2 of the bucket are carried by the usual arms 3, 3 crossed, as shown, and pivoted together, as at 4. As is well-known, when the bucket halves are thrown open, they strike against the arms and there is considerable shock or jar. My present improvement is aimed at the elimination or taking up of this jar or shock and while the point of application of the bumper is preferably substantially that herein shown, it is to be understood that the location may be changed as circumstances may require, dependent upon the shaft of the bucket, etc. It is to be understood also that while the preferred form of the invention is that herein illustrated, the same is subject to changes, variations and modifications in detail without departing from the spirit of the invention or sacrificing any of its advantages. I, therefore, do not intend to restrict myself to such particular form and proportion of parts, but reserve the right to make such changes, variations and modifications as come properly within the scope of the protection prayed.

In the form shown 5 is a plate having suitable openings 6 for the reception of bolts, rivets or the like by which the same is designed to be securely fixed to the outer face of the bucket. As shown, this plate is concave to conform to the curvature of the bucket, and upon this plate is the casing 7 which preferably is divided into a series of compartments by suitable partitions 8 which also add strength thereto. It is evident, however, that these partitions may sometimes be omitted. Axially through each arm there passes a rod 9, one end of which is provided with a nut 10 and the other end headed, as at 11, and secured to a cap plate 12. This cap plate may be in one or two pieces, as may be found most expedient, being shown in Fig. 5 as in two parts. Around each rod and bearing at one end against the bottom of the compartment and at the other end against the inner face of the cap plate is a spring 14 within which is another spring 15, the coils of the two springs being oppositely inclined, as seen in Fig. 3. In the present instance I have chosen to show three compartments and three sets of springs, but it is evident that this number may be varied as circumstances may require. The casing is provided, preferably at the bottom of each compartment, with an opening 16 for the escape of the water, sand, etc., that otherwise would be collected therein.

On the arms 3, 3 which carry the bucket I affix plates 17 in position for coöperation with the cap plates 12 of the bumpers.

The mode of use will be apparent from the foregoing description when taken in connection with the annexed drawings and further detailed description thereof does not seem necessary. It will be evident that when the bucket is opened, as shown in Fig. 1, the plates 17, or the under faces of the arms 3 in case the plates are not present, come in contact with the cap plates 12 of the bumpers and compress the springs, the bolts 9 being loosely mounted in the bottom of the casing and sliding freely therethrough, so that all jar is prevented, and as soon as the pressure is relieved the springs will force the bolts and the cap plates into their normal position, that in which they are shown in Fig. 3. As seen in Fig. 3, the heads 11 of the bolts are countersunk in the cap plates for an obvious purpose.

What is claimed as new is:—

A dredger bucket, a plate secured thereto and having a portion concaved to conform to the curvature of said bucket, said plate having rigid therewith a casing divided into compartments, a movably mounted cap common to all of said compartments, a rod for each compartment loosely mounted in the bottom thereof and springs around said rods and interposed between the inner face of the cap plate and the bottom walls of the compartments, the springs around each rod having their coils oppositely inclined, said casing being provided at the bottom of each compartment with an opening permitting access to the spring and allowing for the escape of water, etc.

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

PETER PETERSON.

Witnesses:

E. P. Thompson,

Henry Westhofer.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."