

J. BURSON.
Charging and Tamping Platforms for Submarine
Blasting.
 No. 139,452.

Patented June 3, 1873.

Fig. 1.

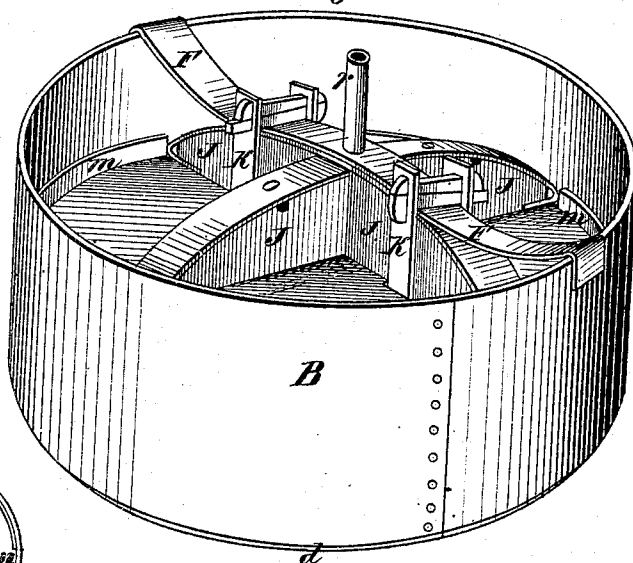


Fig. 3.

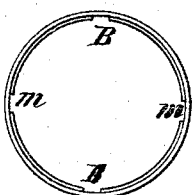


Fig. 2.

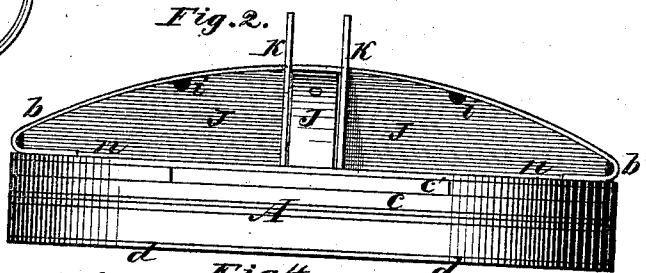


Fig. 4.

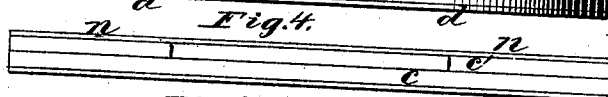


Fig. 5.

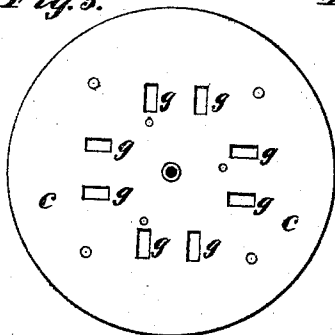


Fig. 6.

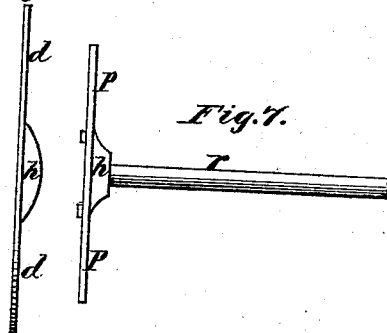
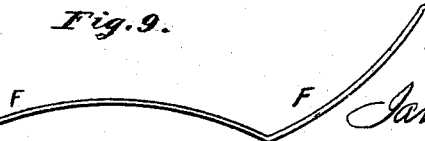


Fig. 7.

Fig. 8.



Fig. 9.



Witnesses.

John A. Hall
John P. Davis,

Inventor.

James Burson.

UNITED STATES PATENT OFFICE.

JAMES BURSON, OF YATES CITY, ILLINOIS, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO HENRY WHITALL, OF NEW YORK, N. Y.

IMPROVEMENT IN CHARGING AND TAMPING PLATFORMS FOR SUBMARINE BLASTING.

Specification forming part of Letters Patent No. **139,452**, dated June 3, 1873; application filed June 29, 1872.

To all whom it may concern:

Be it known that I, JAMES BURSON, of Yates City, Knox county, Illinois, have invented certain new and useful Improvements in the Construction of Apparatus for Submarine Rock-Blasting, of which the following is a specification:

The object of this invention is to provide a temporary cap or cover of large dimensions for the charge to be exploded, which will confine the force of the explosion to the rock. My invention refers to blasting rocks and other material under the water, and consists of a strong cap or cover for the purpose of maintaining and directing the charge of powder or other explosive substance against the rock, or other material to be blasted, said cap to be submerged by its weight and raised again by a derrick or other approved methods.

Figure 1 is a perspective view of my charging and tamping platform. Fig. 2 is a side elevation of the platform or bottom A, the rim B being removed. Fig. 3 is a top view of the rim B. Fig. 4 is a side elevation or view of one section of the platform detached. Fig. 5 is a top view of the platform. Fig. 6 is an edge view of the outside plate *d*. Fig. 7 is an edge view of supplementary plate P and charge-tube *r* detached. Fig. 8 is a view of clevis K'. Fig. 9 is a detached view of stay F.

I construct, in sections, the platform of oak or other durable lumber, *c*, plank or boards laid across planks *c'*, or boards having the grain of the wood at right angle to the platform next to it for the purpose of binding the same together and preventing splitting, assisted by metallic plating *n* firmly riveted together. The parts of sections are fastened together by screws or bolts. Each section is complete of itself. For additional support, ribs J J are used, being constructed of strong plank, plated and securely held to the top of the platform by clevises K secured by keys. The drawing shows openings *g* for four clevises, of which only two are used. In addition to strength, the ribs J prevent the lateral slip of the platform when used alone. For the purpose of inclosing a larger body of water, and giving addi-

tional strength, rim B is added. It may be constructed of boiler-iron provided with cleats *m* on the inside to prevent it from slipping down, or to prevent the platform from being forced up into the rim. The rim is further strengthened and bound to the platform by stays F, and further secured by clevises K K'. The rim B is especially designed, in connection with the platform, for vertical blasting down into a rock, being applied in the same cavity until the requisite depth has been attained, the object being to confine the blast by weight to increase the effectiveness of the charge. The longer and higher the rim B the smaller the platform A may be made. When a level surface is required, or when it is desired to blast against the side of a rock or wall of a shipwreck, the rim B should be removed, and the platform A, after the charge has been properly adjusted in cavity *h*, is suspended by one of the loops *b*, Fig. 2. The cavities *h*, in plates *d* and P, are for the purpose of holding the charge in its place by cross-bars or otherwise, and are to be of sufficient depth to prevent the platform from resting on the charge and crushing the same. For general purposes the cavity *h* should be oval, as shown. When used for blasting the wall of a wreck it should be made long and narrow, and suspended in a horizontal, vertical, or inclined position, as the work may require. Duplicate parts of the rock-blaster should be always on hand, so if any part should be injured it may be easily removed and its place supplied with a new part, and thus the work may go on rapidly. The supplementary plate P and discharge-tube *r*, which are attached to plate *n* for the purpose of containing the fuse, and for the firing the charge direct through the center of the platform, will require frequent renewal. The construction of the platform in sections, and fastening the same together by strips or clevises, is for the purpose of convenient disengagement and repair of injured parts. Two or more platforms should be used, in order that one may be repaired and the charge adjusted while the other is being lowered to its destined work.

I claim—

1. In combination with platform A, rim B, substantially as described and shown, and for the purposes intended.
2. In combination with platform A, ribs or braces J J, substantially as described and shown, and for the purposes specified.
3. In combination with platform A and rim B, stay F, substantially as shown, and for the purpose specified.
4. In combination with platform A, plate P, and tube r, substantially for the purpose set forth.
5. In combination with platform A and braces or stays F, stirrups K K, substantially for the purpose set forth.

JAMES BURSON.

Witnesses:

JOHN H. SCHOLL,
JOHN F. LOUIS.