

S. J. Seely.  
Leak Stopper.

N<sup>o</sup> 5,845.

Patented Oct. 10, 1848.

Fig. 1.

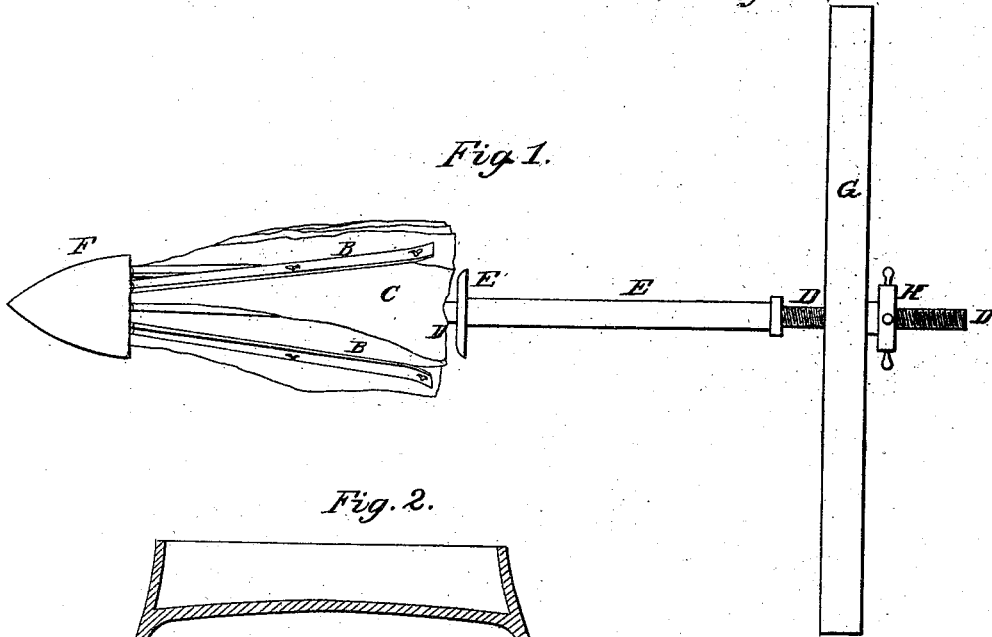


Fig. 2.

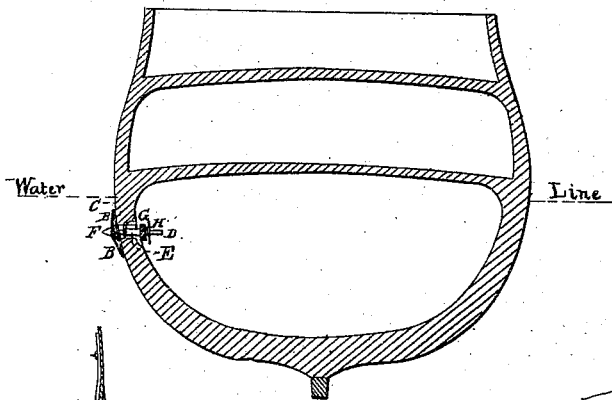


Fig. 4.

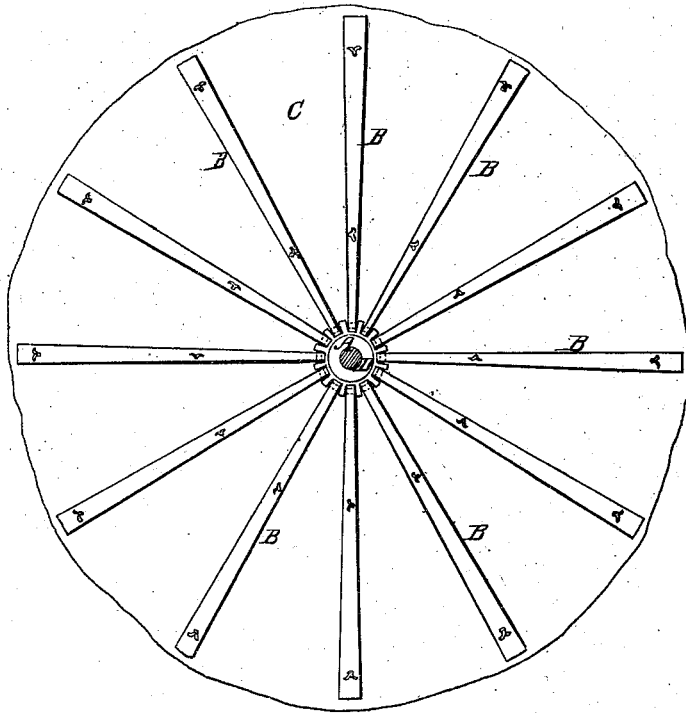


Fig. 3.

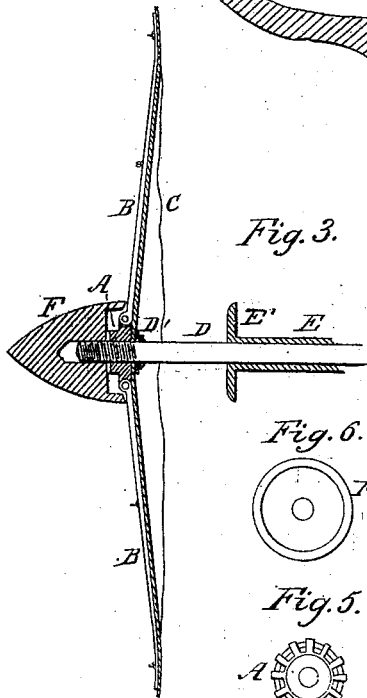


Fig. 6.

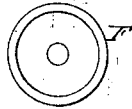
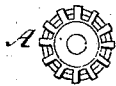


Fig. 5.



# UNITED STATES PATENT OFFICE.

SAMUEL J. SEELY, OF NEW YORK, N. Y.

## SHOT-PLUG.

Specification of Letters Patent No. 5,845, dated October 10, 1848.

*To all whom it may concern:*

Be it known that I, SAMUEL J. SEELY, of the city, county, and State of New York, have invented a Shot-Plug for Stopping Leaks in Ships Caused by Shot from the Enemy During an Engagement, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a view of the plug contracted and ready to be forced through the shot hole from the inside of the ship, to be then expanded and brought over the hole in the manner represented in Figs. 2, 3 and 4 to exclude the water. Fig. 2 is a vertical transverse section of a ship pierced with a shot below the water line and the leak stopped by my improved plug which is represented on a small scale as forced through from the inside, expanded, and made fast by a buckler screw and wrench. Fig. 3 is a vertical section of the shot plug as expanded ready to be forced back against the side of the vessel. Fig. 4 is a view of the outside of the shot plug in its expanded position the radial hinged springs to which the cloth is secured, being represented on the outside of the cloth, the conical head being removed from the center in order to show the manner of jointing the springs to the ring. Fig. 5 is a plan of the ring plate detached from the shaft. Fig. 6 is a plan of the under side of the conical head showing the recess in the same to receive circular plate and jointed ends of the springs.

Similar letters in the several figures refer to corresponding parts.

The nature of my invention consists in the formation of a "shot plug" by which a leak caused by a shot from an enemy at any depth below the water line can be effectually stopped in a few seconds from the inside of the vessel said improved "shot plug" being used as a substitute for the ordinary frustrum of a cone plug which is suspended over the side of the ship and applied to the stopping of a leak when near the water line by lowering a man into the sea who inserts the plug and drives it into the shot hole as well as he is able and as quick as possible being all the time exposed to the aim of the sharp shooters in the round top of the enemy's ship: or as a substitute for the common "jackass", or bag of oakum, which is forced into the shot hole from the outside of the ship. Both modes

are defective; and many a noble ship has gone to the bottom of the sea for want of an effectual substitute. The use of the conical plug is objectionable not only on account of the difficulty and danger of inserting it during an action, but when inserted it has been found insufficient to stop the leak on account of its conical form not being susceptible of closing an oval or splintered and irregularly formed hole made by a large shot striking the vessel obliquely and when inserted allowing the water to enter and retarding the motion of the ship by reason of its projecting several feet beyond the side thereof. When the shot hole is much below the surface of the water the conical plug cannot be inserted from the outside the hole being inaccessible to the carpenter who is lowered over the side of the ship. And when inserted from the inside will not stop the entrance of the water on account of the plug (which is conical) not fitting the irregularities of the shot hole which is always much splintered on the inside. The same objection applies to the use of the "jackass." My "shot plug" is not liable to any of the above named objections and stops the leak effectually in a few seconds and needs no alteration, or attention, and when the ship arrives in dock it can be removed in a few moments and during the sailing of the vessel does not retard her motion but very slightly, and the pressure of the water against the head, springs, the fearnaught serving to close the latter more effectually as a flap valve over the shot hole and most effectually to exclude the water and being held securely by a buckler and screw on the inside of the ship so that it can be tightened at pleasure, requiring only one man in each wing of the ship whereas by the use of the conical plug the whole force of the carpenter's crew is required to attend to the plugs and pumps, during an action.

A is the center plate or ring made circular or many sided, of iron or any suitable material to which a number of springs are attached having an opening in its center to admit a shaft over which said plate or ring is slipped and secured by a head and shoulder on said shaft.

B are ten or more slightly curved radial springs about seven or eight inches in length hinged to the central plate made flat and slightly tapered and widened out-

wardly toward their extremities which are slightly curved outwardly for the purpose of preventing their catching in the ship's sides, and may be made of any required size, number and length to answer the intended purpose. The fearnaught, water proof cloth, or flexible valve is attached to these springs by wire loops or thread stitches or other suitable means.

C is a circular sheet of fearnaught, cloth, india rubber, or other suitable material for excluding water about eighteen inches diameter, or any suitable size to cover the shot hole perforated in the center for the shaft to pass through and secured to the springs in any suitable and effectual way.

D is the central cylindrical shaft which is passed through the center of the fearnaught valve and circular plate, to which the springs are hinged and screwed into the conical head. This shaft is made of iron about two feet long and about  $\frac{3}{8}$  or  $\frac{3}{4}$  inch in diameter having a screw cut on each end—one of the screws being designed to be screwed into the head and the other to receive the wrench by which the shaft is drawn inward through the buckler. It is reduced in diameter forming a shoulder or collar D' for the plate to rest on that carries the springs. This collar may be of greater diameter than the main body of the shaft as represented at D' in Fig. 3. The fearnaught and washer being placed between the plate A and collar D'.

E is a sliding tube with a beveled flange E' for expanding the fearnaught valve. This tube is made of copper or other material about 8 or 9 inches in length and a little larger in diameter than the shaft over which it slides back and forth between the fearnaught and buckler. The flange or circular plate E' for expanding the fearnaught and springs is formed around the end of the tube next the fearnaught and is made of a diameter sufficient to accomplish the intended purpose.

F is the conical head into which the outer end of the shaft is screwed. It is made of cast iron in the shape of a cone or other figure, and of sufficient size say about 3 inches diameter and  $3\frac{1}{2}$  inches in length having a circular cavity in its large end about  $\frac{3}{4}$  inches deep by  $2\frac{1}{2}$  inches diameter forming a circular curb or ring for the purpose of receiving and protecting the joints of the springs and forming a shoulder or stop against which the springs strike when ex-

panded as represented in Fig. 3 said shoulder being made slightly beveling on the outer edge.

G is the buckler made of a piece of cord wood, broken bar, studding sail yard or other article of the like nature which may be conveniently at hand pierced with an inch auger hole through the center for the insertion of the shaft.

H is the wrench or nut screwed on the inner end of the shaft and against the buckler for drawing the fearnaught when expanded against the side of the vessel. It has one or more handles by which it is turned by the carpenter, or other person.

The plate to which the springs are hinged or jointed may be made octagonal or polygonal let into a recess in a plate or head of any required form having a square or polygonal shaped piece of fearnaught attached to the springs for closing the lower gun deck ports of a line of battle ships when shot away by the enemy or rendered useless from any cause or for covering any large sized hole made in the vessel.

The conical head should be pointed and made heavy enough to open a way through the splinters for the passage of the springs and fearnaught when the particles or fibers of wood close in toward the center of the opening after the passage of the ball through the planking.

A joint may be formed in the shaft near the shoulder, or in any suitable place, so that it will accommodate itself to an oblique hole and at the same time draw the fearnaught valve flatwise against the surface of the ship. This plug will effectually close the air ports when stove in by shot from the enemy or by the sea in a gale of wind.

What I claim as my invention and desire to secure by Letters Patent is—

The before described plug for stopping leaks in vessels caused by the shot of the enemy during an engagement, or by a snag or from any cause whatever, whether the plug be made precisely in the manner above described or in any other mode or manner which shall be substantially the same.

In testimony whereof I have hereunto signed my name before two subscribing witnesses this eleventh day of March 1848.

SAML. J. SEELY.

Witnesses:

W. M. P. ELLIOT,  
A. E. H. JOHNSON.