(No Model.)

J. B. ATWATER.

CYCLONE DESTROYER.

No. 370,845. Patented Oct. 4, 1887.

Fig. 1.

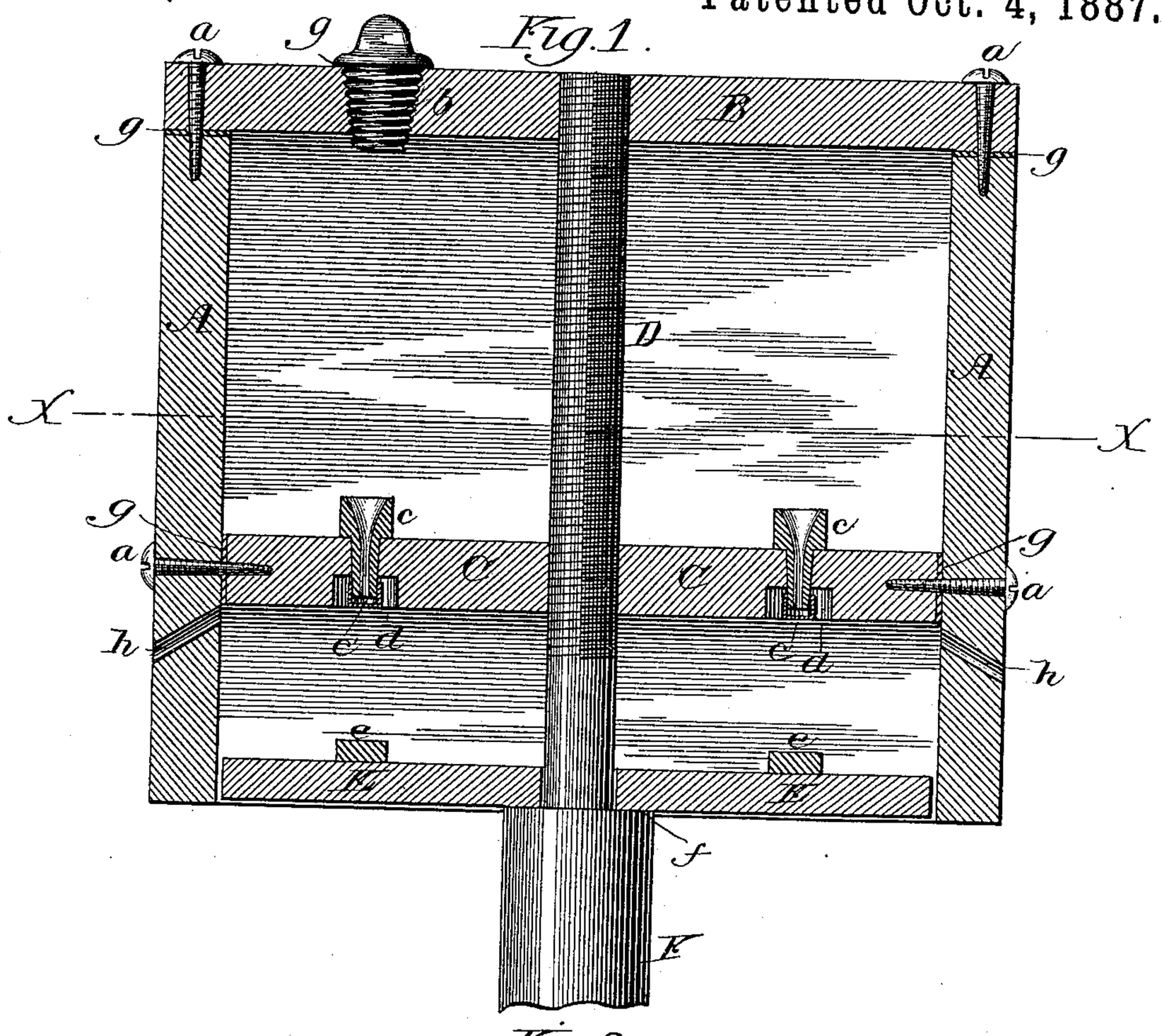


Fig. 2.

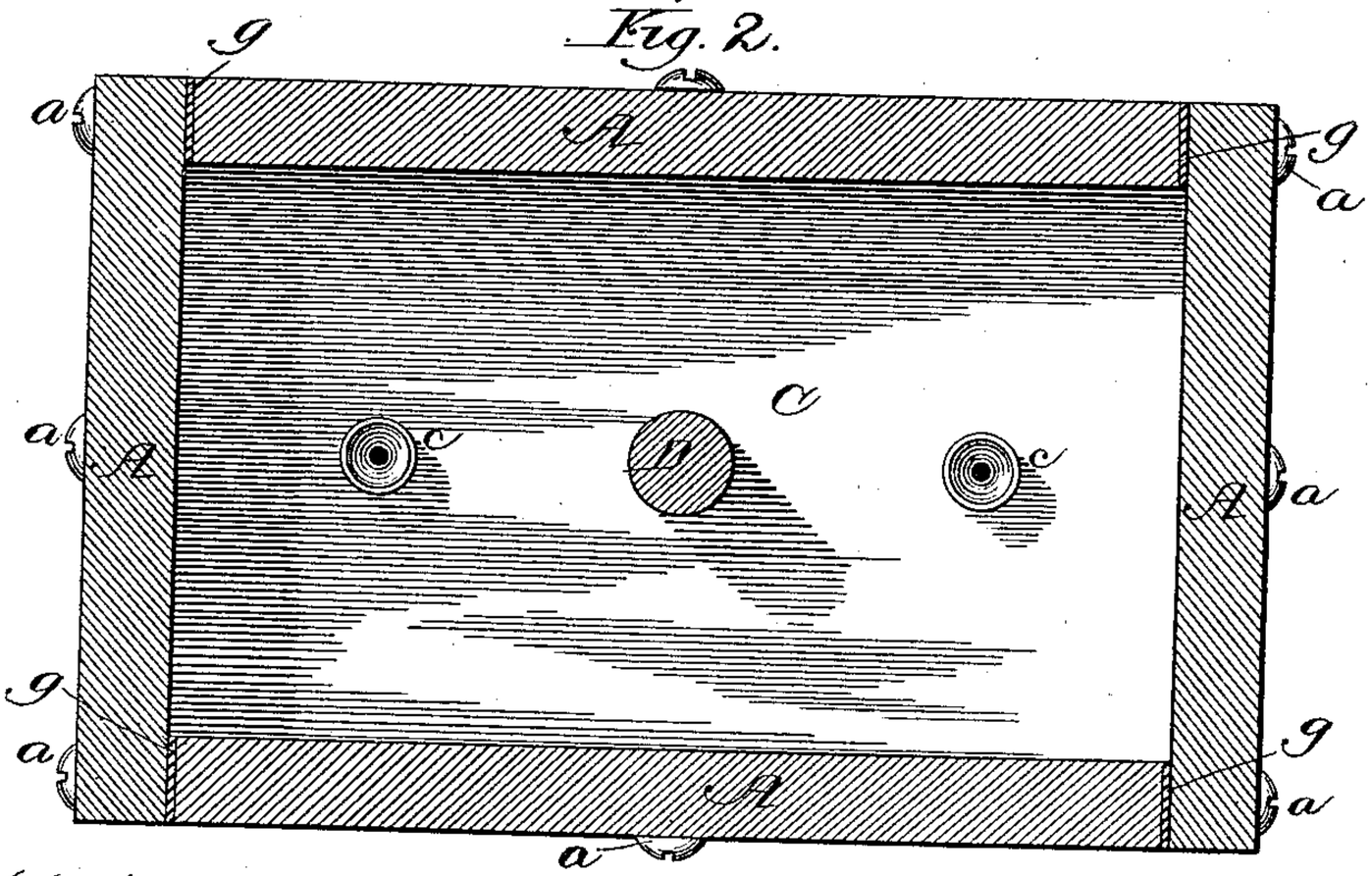
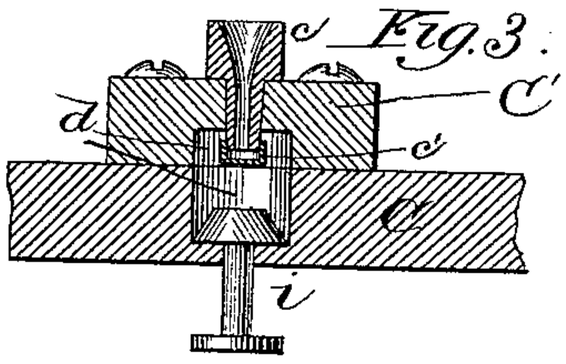


Fig. 3.



Witnesses:
C. W. Bond -
Albert H. Adams.

Inventor:
John B. Atwater

UNITED STATES PATENT OFFICE.

JOHN B. ATWATER, OF CHICAGO, ILLINOIS.

CYCLONE-DESTROYER.

SPECIFICATION forming part of Letters Patent No. 370,845, dated October 4, 1887.

Application filed May 22, 1886. Serial No. 203,023. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. ATWATER, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Cyclone-Destroyers, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional elevation. Fig. 2 is a horizontal section on the line *x x* of Fig. 1; Fig. 3, a detail showing a modification in the arrangement of the nipple and discharger.

Wind-storms of that character which have a rapid rotary motion around a center, producing a funnel-shaped appearance, and termed "cyclones" or "tornadoes," create great havoc and damage because the suction or vortex created by the revolving motion of the funnel carries with it whatever may be in the path of travel. The destructive force of winds of this character will continue until the force is spent or the rotary motion broken and divided; and it is the object of this invention to demolish or divide the current, and thereby render powerless the destructive force; and this object is accomplished by the employment of a counter-force acting to strike the funnel and break its continuity and change or destroy its rotary motion, in the manner and by the means hereinafter described, and pointed out in the claims as new.

In the drawings, A represents the side walls or inclosing sides of a case made of wood, metal, or other suitable material.

B is a top or cover, which can be secured to the sides A by means of screws *a*, or in some other firm manner. This cover can be provided with an opening closed by a tight plug, *b*, through which opening the case can be filled with powder or other explosive.

C is a bottom, located above the bottom edge of the case, in the form of construction shown, and secured in place by screws *a*, or in some other firm manner. The joints between the sides, cover, and bottom are to be made perfectly tight by suitable packing or filling, *g*. The bottom C is provided with nipples *c*, leading from the interior of the case, and having on their ends a cap or percussion-wafer, *c'*, that will explode when struck.

D is a stem, screw-threaded, as shown, and to which the case as a whole is attached by the stem passing through the bottom C and top B. This stem extends below the bottom C.

E is a plate, loose upon that part of the stem D below the bottom C and corresponding in shape to the shape of the case, and fitting loosely within the space inclosed by the sides or walls A below the bottom C, so as to be free to be forced toward the bottom under pressure. This plate E has mounted thereon projections *e*, which are in line with the nipples *c*, and, as shown, the bottom C around the nipples is cut away to form an opening, *d*, for the projections *e* to enter and strike the cap *c'* and explode the same.

F is a post or standard, on which the case as a whole is mounted or supported by the stem D, the top of the post forming a stop or rest, *f*, for the plate E when down, leaving nearly the full face of the plate exposed to the pressure by which it is raised or forced toward the bottom C.

The case is to be filled with powder or other explosive through the opening in the top B and the opening closed. The case being mounted or secured to the stem D and the nipples *c* capped, the plate E is placed on the stem D and the stem secured in the post F, when the device is ready for use. The devices, as many as desired, are to be placed around a building, town, village, city, or other place that it is desired to protect from the fury of the wind, and the protection is afforded by exploding the case, which is done by the force of the wind itself, as the wind striking the plate E will force the plate toward the bottom C, causing the projections *e* to strike the caps *c'* and explode the powder or other explosive in the case, bursting the case and producing a concussion in the center of the wind, by which the rotary motion will be destroyed. The explosion in the midst of the funnel produces a vacuum, into which counter-currents will rush, causing a counter whirling to the rotation of the funnel and breaking the continuity of the rotation and creating a disruption of the funnel by the action of the cross-waves and cross-currents from the explosion, so that the power of the wind will be effectually broken and disrupted and be rendered harmless.

The modification of Fig. 3 shows the nipple located in a piece, C', attached to the bottom

C, with the hole *d* around the cap *c'*, and extending into the bottom C, and in this hole plays a plug or plunger, *i*, which is struck by the plate E and forced against the cap *c'*. As shown, two nipples *c* are provided; but more than two or a single nipple can be used, so long as the construction is one that will explode the powder or other explosive in the case by the inward forcing of the plate E from the force of the wind, which constitutes the essential feature of the invention in producing a counter-force to break the force of the wind. As shown, the air back of the plate is relieved by side passages, *h*, in case the opening around the edges of the plate is not sufficient to relieve the back-pressure.

The cases can be charged and primed and secured to the stem D, and be shipped to the places where used; and such cases can be located in place by securing the stems in the top of posts, the posts being planted firmly, and being of a sufficient height to locate the case out of reach of horses and cattle, and so as not to be accidentally discharged by raising the plate E.

The bottom C and movable plate E should be of such size that the latter will present an extended flat surface to the wind and render it certain that the plate will be thrown against the bottom of the box with sufficient force to explode its contents. It is also necessary that the box of explosives should be securely attached to the fixed stem D, and thereby supported above the movable flat plate E, while the latter must be freely movable on the stem in order to be thrown upward against the box-bottom.

I am aware that torpedoes for use in oil-wells have comprised a shell mounted loosely on a rod and adapted to be dropped upon a conical anvil attached to the lower end of the rod; but this I do not claim, and my invention differs therefrom in embracing a box of explosives firmly secured to a fixed stem, and a broad flat plate mounted loosely on said stem beneath the said box and adapted to be thrown into contact with the box-bottom by the force of the wind exerted on the extended surface of said plate.

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

1. The combination, with a case for containing an explosive, of a stem extended through said case and fixed thereto, and a flat movable plate mounted loosely on the outer end of said stem and having an extended surface, whereby it is adapted to be forced by the wind against the end of the case to explode its contents, substantially as described.

2. The combination, with a case for containing an explosive, said case being provided with a bottom, C, having cap-nipples *c*, of a fixed stem, D, secured to and extending through said case, and a flat movable plate, E, mounted loosely on said stem beneath the case-bottom and having an extended surface, whereby it is adapted to be thrown in contact with the case-bottom by the force of the wind, substantially as described.

JOHN B. ATWATER.

Witnesses:
O. W. BOND,
ALBERT H. ADAMS.