2 Sheets—Sheet 1.

E. PIERCE.

Combined Bomb-Gun and Harpoon.

No. 211,777. Patented Jan. 28, 1879.

Fig. 1.

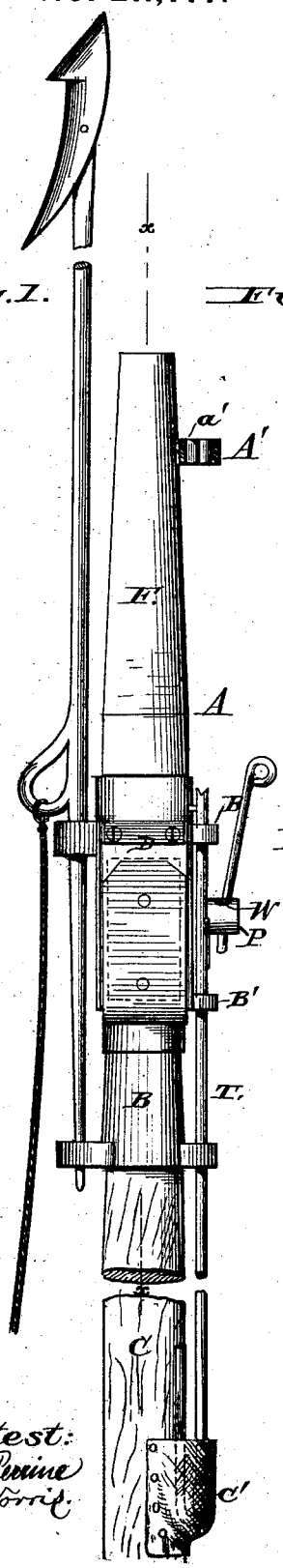


Fig. 2.

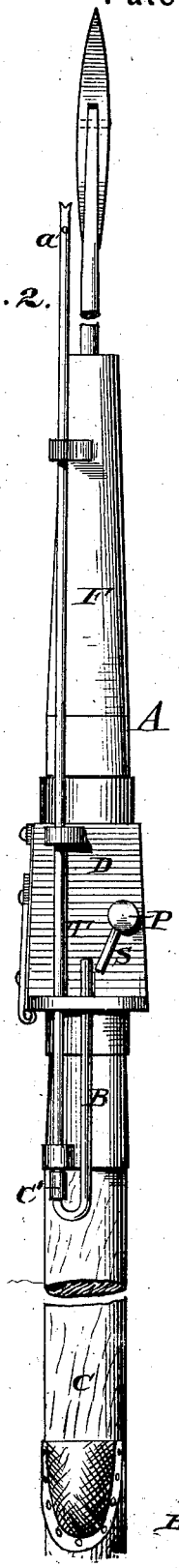
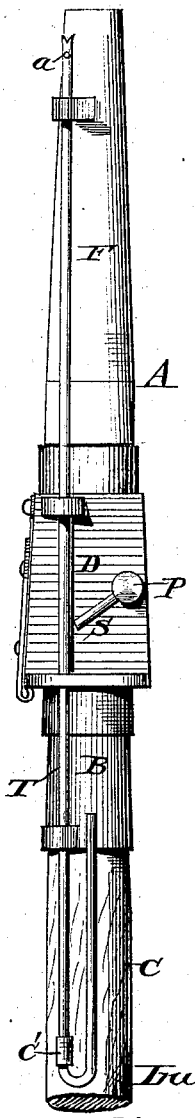


Fig. 3.



Attest:
H. L. Pierce
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Inventor.
Ebenezer Pierce.
By James L. Norris. Atty.

2 Sheets—Sheet 2.

E. PIERCE.

Combined Bomb-Gun and Harpoon.

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Fig. 4.

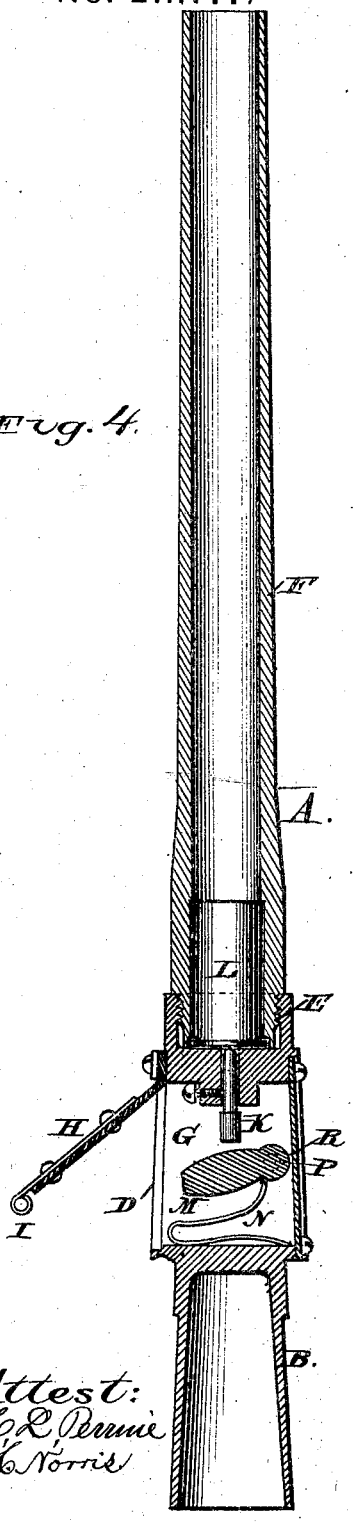


Fig. 5.

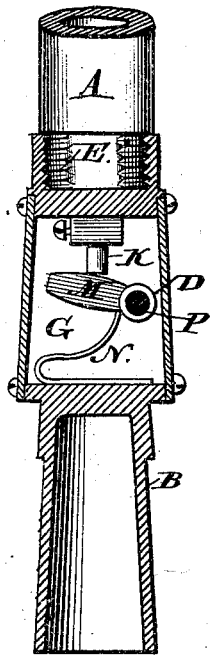


Fig. 6.

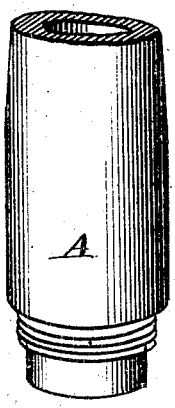
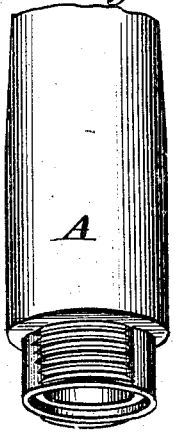


Fig. 7.



Attest:
H. R. Pennie
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UNITED STATES PATENT OFFICE

EBENEZER PIERCE, OF NEW BEDFORD, MASSACHUSETTS.

IMPROVEMENT IN COMBINED BOMB-GUN AND HARPOON.

Specification forming part of Letters Patent No. **211,777**, dated January 28, 1879; application filed December 24, 1878.

To all whom it may concern:

Be it known that I, EBENEZER PIERCE, of New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Combined Bomb-Gun and Harpoon, of which the following is a specification:

This invention has for its object to provide a combined bomb-gun and harpoon, in which the lock and mainspring, as well as the firing-pin and cap-nipple, will be protected from all action of the atmosphere and moisture, and thus insured against injury, and in which the gun will be automatically discharged, projecting a bomb into the body of the whale, such being caused by means of suitable mechanism operated by impact against said body after the harpoon has entered.

To this end my invention consists in the combination, with a bomb-gun, of a lock-case in which the hammer and mainspring are located, the hammer being mounted upon a shaft passing through an aperture in the side of the case, and having a pawl or dog on its outer end adapted to be engaged by suitable mechanism and automatically released to explode the cap, as more fully hereinafter specified.

My invention also consists in providing the breech-piece of the gun with one or more sockets constructed to receive or support a harpoon, which projects forward beyond the barrel of the gun, so that when thrown it will enter the body of the whale, the sockets being thus arranged upon the breech-piece of the gun, so as to relieve the barrel from any weight and strain of the harpoon.

My invention further consists in the combination, with the gun, of certain improved mechanism for supporting the harpoon and mechanism for guiding the rod for releasing the hammer, as more fully hereinafter specified.

In the accompanying drawings, Figure 1 represents a top view of my improved combined bomb-gun and harpoon. Fig. 2 represents a side elevation of my improved combined bomb-gun and harpoon with the hammer in a cocked position, ready for use. Fig. 3 represents a similar view, showing the parts in the position they assume after the harpoon has entered the body of the whale. Fig. 4 represents a longitudinal section of Fig. 2 with the cover of the lock-case thrown open. Fig. 5 represents a sectional view, showing a modification of a cover for the lock, a portion of the barrel and socket being broken away. Fig. 6 represents a detached view of the barrel as represented in Figs. 1 and 2, and Fig. 7 a modification of the same.

The letter A indicates the gun proper of my combined bomb-gun and harpoon, which is provided with a socket, B, at its rear, by means of which it can be secured to the staff C. The letter D indicates the breech-piece of the gun, which, as shown in Figs. 1 and 2, is formed with a screw-threaded socket, E, in front, for the reception of the gun-barrel F, which is screw-threaded externally in order to fit into said recess. The thread may extend from the shoulder at the rear of the breech to the breech of the barrel; but it preferably extends but a short distance, so that the barrel may be quickly detached and attached for charging.

The letter G indicates the lock-case, which forms part of the breech-piece of the gun, and which is of rectangular form, although it may be made of other shape, if desired. Said casing is provided with a closely-fitting cover, H, which, in the present instance, is lined with leather or other suitable material to make a tight joint when closed to exclude moisture and prevent the entrance of water to the interior of said casing.

The cover is shown as hinged to the lock-case and provided with a spring-catch, I, by means of which it is locked when closed; but other means of attaching it to the lock-case may be employed, if desired, and other means besides the leather lining may be employed to pack the cover against its seat without departing from my invention.

The letter K represents a firing-pin passing through the front wall of the fire-chamber, directly in line with the nipple of the cartridge L when in place in the gun, so as to strike against it when forwardly projected by the hammer. The hammer is indicated by the letter M, and is located within the lock-case, immediately at the rear of the firing-pin, so as to strike it and project it forward by the action

of the mainspring N, which is also located in the lock-case, immediately behind the hammer.

The hammer is mounted upon a transverse shaft, P, one end of which passes through an aperture, R, in one side of the lock-case, and is provided with a pawl or dog, S, on the outside, which is adapted to engage the end of a bent rod, T, adapted to slide in guides on the breech-piece and gun-barrel and hold the hammer back in a cocked position when said bent rod is properly set. The forward end of said rod, when set as shown in Figs. 1 and 2, projects beyond the end of the gun, but not so far as the harpoon, so that when the harpoon has entered the body of the whale a suitable distance the end of the rod will come in contact with said body and throw the rod back, releasing the hammer and automatically discharging the gun. The outer end of the shaft is provided with an aperture, W, for the insertion of a lever, Y, by means of which the hammer may be drawn back for the purpose of cocking it; but it may be of angular form and operated by a suitable key.

The letter A′ represents a guide on the barrel of the gun, through which the forward end is adapted to pass. Said guide consists of a lug or projection formed on or attached to the gun-barrel, and provided with a cylindrical aperture, through which the bent rod passes. The said lug should be provided with a slot, *a′*, for the passage of a pin, *a*, secured to the forward end of the rod. The office of said pin is to prevent the bent rod from being accidentally retracted through the guide, and to permit it to be withdrawn for the purpose of detaching the barrel for charging when necessary, which is effected by turning the rod so as to bring the pin in line with the slot, so as to pass through the same as the rod is drawn back.

In order to enable my combined bomb-gun and harpoon to be more conveniently balanced or poised when being handled and thrown, the harpoon is supported at or near the breech-piece through the medium of one or more sockets, B′. By this construction, also, the barrel is relieved of all weight and strain of the harpoon and its rope, and is left free to be readily detached from the breech-piece in order to insert the cartridge.

In the modification shown in Fig. 7 of the drawings, the screw-thread at the breech of the barrel is cut away on opposite sides, and the threads in the female screw in the breech-piece are likewise cut away on opposite sides, so that the barrel may be inserted in said breech-piece by a simple backward movement, the screw-threaded portion of the barrel entering the plain portion of the socket, and the threads caused to engage each other and confine the barrel in place by a partial turn in the proper direction, and unlocked for the insertion of the cartridge by two movements in a reverse direction. A suitable bolt, screw, or catch may be provided for securing the barrel in each case, to prevent any accidental turning of the same.

The letter C′ represents an abutment or shoulder on the bent rod, forming a stop which abuts against one of the guides and prevents the rod from being projected forwardly against the hammer-shaft at the recoil of the gun, thereby preventing injury of the said shaft, which might otherwise occur.

The operation of my combined bomb-gun and harpoon will be readily understood in connection with the foregoing description. The parts are placed in position, as shown in Figs. 1 and 2. The operator then grasps the staff in the same manner as an ordinary harpoon, and throws it at the whale. The harpoon proper first enters the body of the whale, and after it has entered a sufficient distance the end of the bent rod is brought in contact with the body, shifting said rod in its guides and releasing the hammer, which strikes the firing-pin and explodes the cap, discharging the gun and projecting a bomb in the whale.

When the whale has been struck and wounded, and after one harpoon has already entered its body and taken hold, and the bomb discharged, the gun can be recharged, reset, and used without the harpoon to kill the whale, all that is necessary to operate it for the purpose being to thrust the gun at the whale so as to impact the bent rod against its body, the gun being discharged as before mentioned.

An important advantage of my improved gun is, that by its use it is impossible to waste a shot, as the gun is not discharged until its muzzle is nearly in contact with the body of the whale, in which position the bomb cannot fail to enter.

What I claim is—

1. A bomb-gun provided with a closed lock-case at its breech containing a hammer and its operating-spring, said hammer being mounted on a shaft passing through the aperture at the side of the gun, and having a pawl or dog at its outer end, by means of which it can be held in a cocked position by suitable mechanism and released to explode the cap through the medium of a firing-pin passing through the front of the lock-case, substantially as specified.

2. A bomb-gun having a closed lock-case containing a hammer and its operating-spring, said hammer being mounted on a shaft passing through one side of the lock-case, and having a pawl or dog on its outer end adapted to engage with one end of a rod arranged to move in suitable guides, and adapted to engage with a pawl or dog, so as to hold the hammer in a cocked position and to release the same when shifted by impact against the body of the animal, substantially as specified.

3. In combination with the rod adapted to move in guides on the breech-piece and gun-barrel of the bomb-gun, a stop on the rear end

of said rod for limiting its forward movement, substantially as and for the purposes herein specified.

4. In combination with the breech-piece of a bomb-gun having a screw-threaded recess at its front, a detachable barrel, screw-threaded at its breech, and adapted to fit in the screw-threaded recess, whereby said barrel may be conveniently detached for the insertion of the cartridge and replaced after the cartridge is fitted therein, as more fully hereinbefore specified.

5. The breech-piece of a bomb-gun provided with one or more sockets for receiving and supporting the harpoon, whereby the barrel is relieved of all strain and the weight of the harpoon more equally balanced, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

EBENEZER PIERCE.

Witnesses:
JAMES L. NORRIS,
JAS. A. RUTHERFORD.