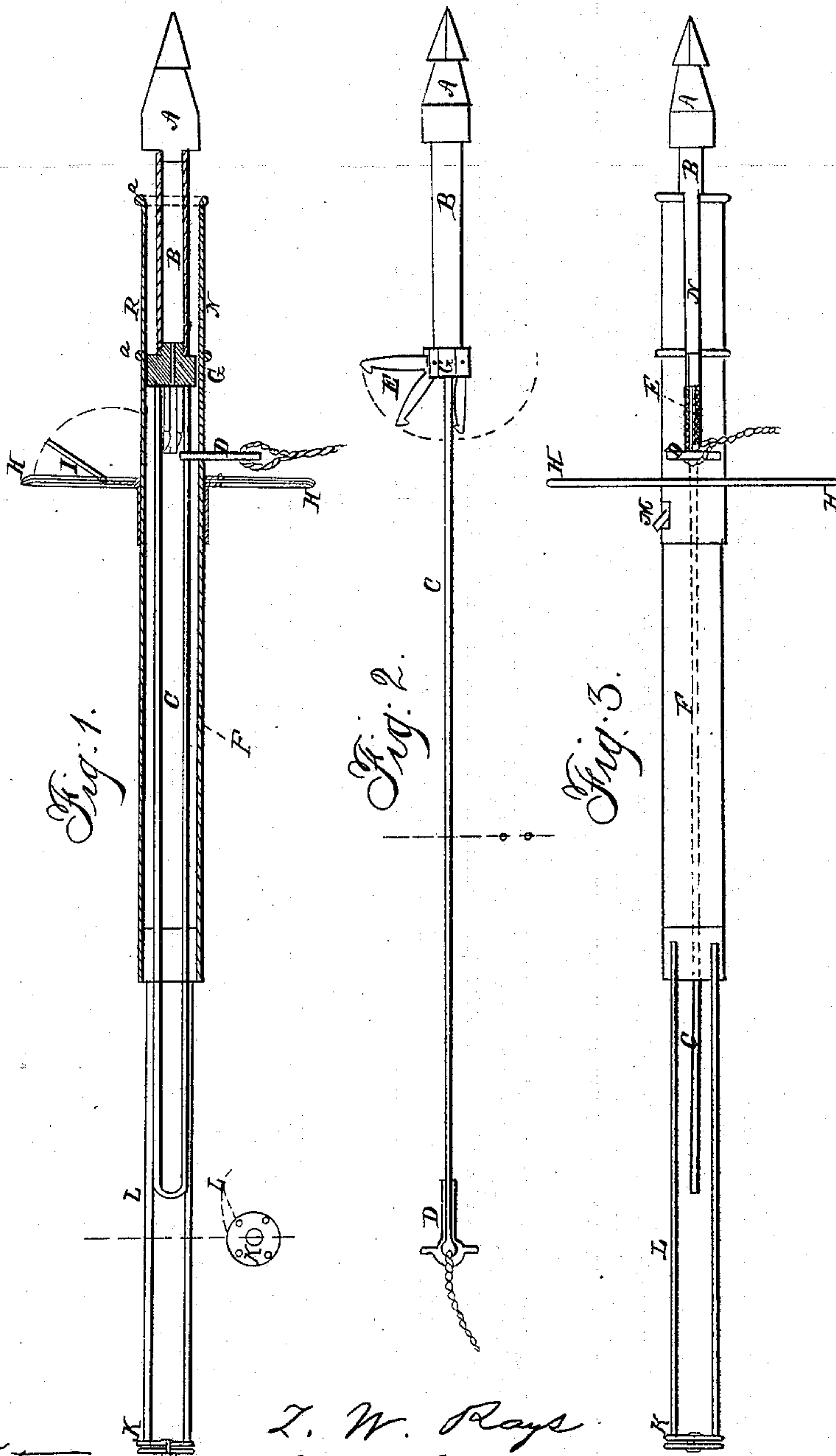


ROYS & LILLIENDAHL.

Bomb Lance.

No. 54,211.

Patented Apr. 24, 1866.



Witnesses
 Ch Bartlett
 Smooty Brown

I. W. Roys
 G. A. Lillendahl
 By their atty
 Amos Brown

UNITED STATES PATENT OFFICE.

THOMAS W. ROYS AND G. A. LILLIENDAHL, OF NEW YORK, N. Y.

IMPROVEMENT IN ROCKET-HARPOONS.

Specification forming part of Letters Patent No. 54,211, dated April 24, 1866.

To all whom it may concern:

Be it known that we, THOMAS W. ROYS and G. A. LILLIENDAHL, of the city and county and State of New York, have invented a certain new and Improved Rocket-Harpoon; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 shows a longitudinal section through said harpoon and through the barrel or gun out of which it is shot. Fig 2 is an exterior view of the harpoon itself; and Fig. 3 shows the exterior of the barrel or gun bottom side up with the harpoon in it.

In Figs. 1 and 2 the harpoon is shown drawn slightly out of the barrel or gun.

To enable others skilled in the art to which our invention appertains to make and use the same, we will proceed to describe the fabrication and operation thereof.

Our invention is intended for and is believed to be an improvement upon the rocket-harpoon for which a patent was granted to one of these applicants—viz., Thomas W. Roys—on the 3d day of June, 1862, and also shown and referred to in a certain patent granted to the said Roys for his improved harpoon-gun on the 22d day of January, 1861.

The drawings making part of the patents above referred to and the schedule annexed thereto will show the nature and extent of the invention then patented; and the following description, together with the annexed drawings, will show the nature of this improvement.

In the drawings, B represents the rocket; A, a pointed harpoon-bomb, screwed or otherwise secured into the end of the rocket in the manner shown; G, the stock of the harpoon, in which the rocket, the barbs E, and the shank C of the harpoon are all secured.

The shank C of the harpoon is made in the form of a bow or loop, the ends whereof are riveted or otherwise firmly secured in the stock G. It should be made to reach well back through the barrel, and about of the same diameter as the stock, and so as to loosely fit the barrel, thus giving direction to the rocket without impeding its departure from the gun.

In the shank C a loose link, D, is arranged so as to slide freely to and fro on the bars forming the shank. This link slips into a slit, N, cut in the under side of the barrel F, and to said link is fastened the harpoon-line in the manner substantially as shown.

When the gun is loaded the barbs E close upon the shank and slip in the barrel and the link D hangs loosely upon the shank, so that when the harpoon leaves the gun the loop forming the shank catches the link D and carries it, and the end of the line with it, out of the slit N made in the front end of the barrel, by which a connection is formed between the whale and the vessel from which the harpoon is shot.

Through the center of the stock G a hole is made to communicate with the explosive material composing the rocket, and this hole in the stock, when the gun is loaded, is brought into juxtaposition with the muzzle of a pistol-barrel introduced through the socket M made on the barrel F to secure it, and the rocket is exploded by firing the pistol loaded with powder into the hole made through the center of the stock into the rocket.

The harpoon is of course prevented from being drawn out of the whale by the opening of the barbs E, as shown in the drawings.

Having now described the nature of our invention and the manner of making and using the same, what we claim as our improvement, and for which we desire Letters Patent, is—

1. In combination with the stock G, the rocket B, the shank C, and barbs E, substantially as shown and described.

2. In combination with the breech or stock of the rocket, the bow or loop-shank, substantially as described.

3. In combination with the stock or breech of the rocket, the barbs to secure the harpoon in the whale, without regard to the number thereof.

THOMAS W. ROYS.
G. A. LILLIENDAHL.

Witnesses:

CHARLES BAUR,
AMOS BROADNAX.