L. Kelley,

Harpoon.

No. 71,763. Patented Dec. 3, 1867.

Fig. 1.

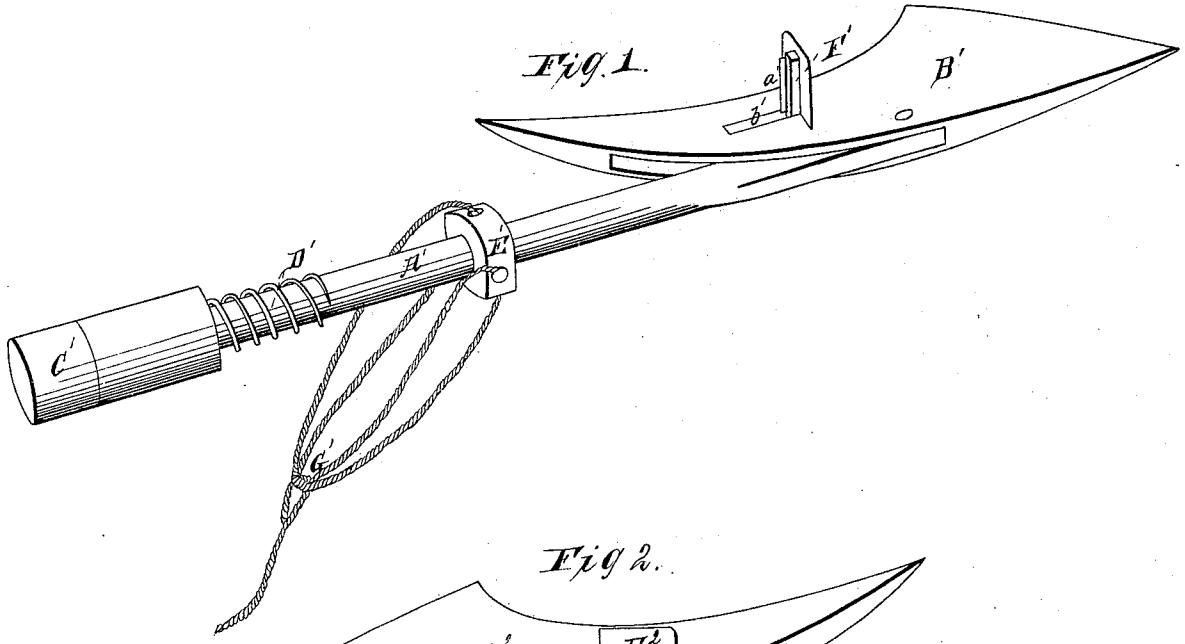
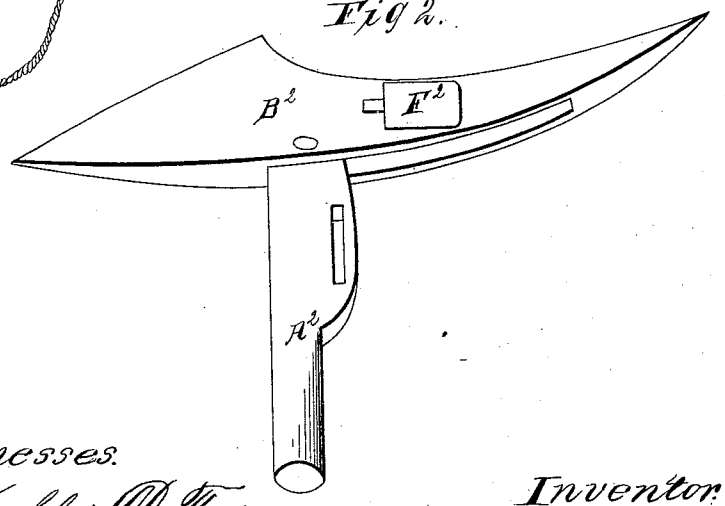


Fig 2.



Witnesses.

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ZENO KELLEY, OF NEW BEDFORD, MASSACHUSETTS.

Letters Patent No. 71,763, *dated December* 3, 1867.

IMPROVEMENT IN HARPOONS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ZENO KELLEY, of New Bedford, in the county of Bristol, in the State of Massachusetts, have invented an Improvement in Harpoons for Whaling-Guns; and I do hereby declare the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists in the application of a rubber spring on the end of the shaft of the harpoon to prevent the recoiling of the gun, a spiral spring around the shaft to prevent the line from stopping the harpoon too suddenly, and a stop in the blade to secure it parallel to the shaft until released by said stop being forced down by the entrance of the blade into the object at which it is projected.

Figure 1 is a perspective view of a harpoon, having my invention attached, with blade closed and secured by stop.

Figure 2 is a view of the blade and a portion of the shaft, with the stop down, and the blade open, or at right angles to the shaft.

Fig. 1. A′ is the shaft of harpoon; B′, blade; C′, rubber spring on the end of shaft, which enters the gun; D′, spiral spring for easing the strain on the line; E′, slide, to which is attached the line; F′, stop to secure the blade when closed; G′, line; *a′*, knife on inside of stop; *b′*, slot in blade, in which the stop plays.

Fig. 2. A′, shaft; B′, blade; F′, stop.

Operation.

The within-described harpoon, with rubber spring on the end of the shaft, spiral spring on the shaft, and stop in the blade, the harpoon being placed in a whaling-gun, its operation may be noted:

When the powder is ignited, the rubber on the end of the shaft of the harpoon, resting on the wad, "gives," and thereby causes the inertia of the harpoon to be gradually overcome, which prevents the recoiling of the gun. The slide on the shaft, being secured to the line, is brought against the spiral spring, when the harpoon is projected, thereby preventing the sudden jar consequent upon the line being attached firmly to the shaft.

The stop on the blade is turned up, when the latter is parallel to the shaft, and a projection on the lower end of the stop enters a slot in the shaft, and secures the blade thereto. As a further preventive, a line may be tied around both blade and shaft, just back of the stop, which will be cut by the knife, on the inside of the stop, when forced down by the blade entering the object at which it is projected.

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

The harpoon herein described, with rubber spring C′ on the end of the shaft, spiral spring D′ on the shaft, and stop F′ on the blade, and slide E′ on the shaft, or their equivalents, constructed and operating substantially as herein set forth and described.

ZENO KELLEY.

Witnesses:

FRANKLIN D. FORD,

TH. E. M. WHITE.