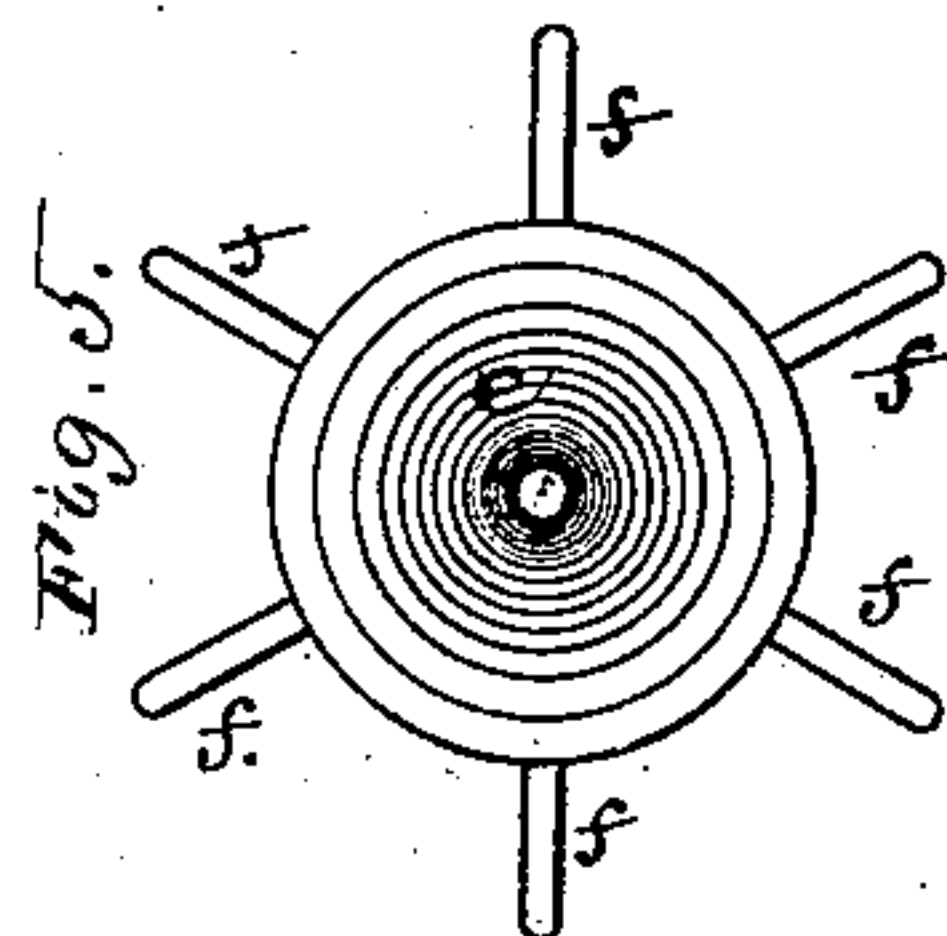
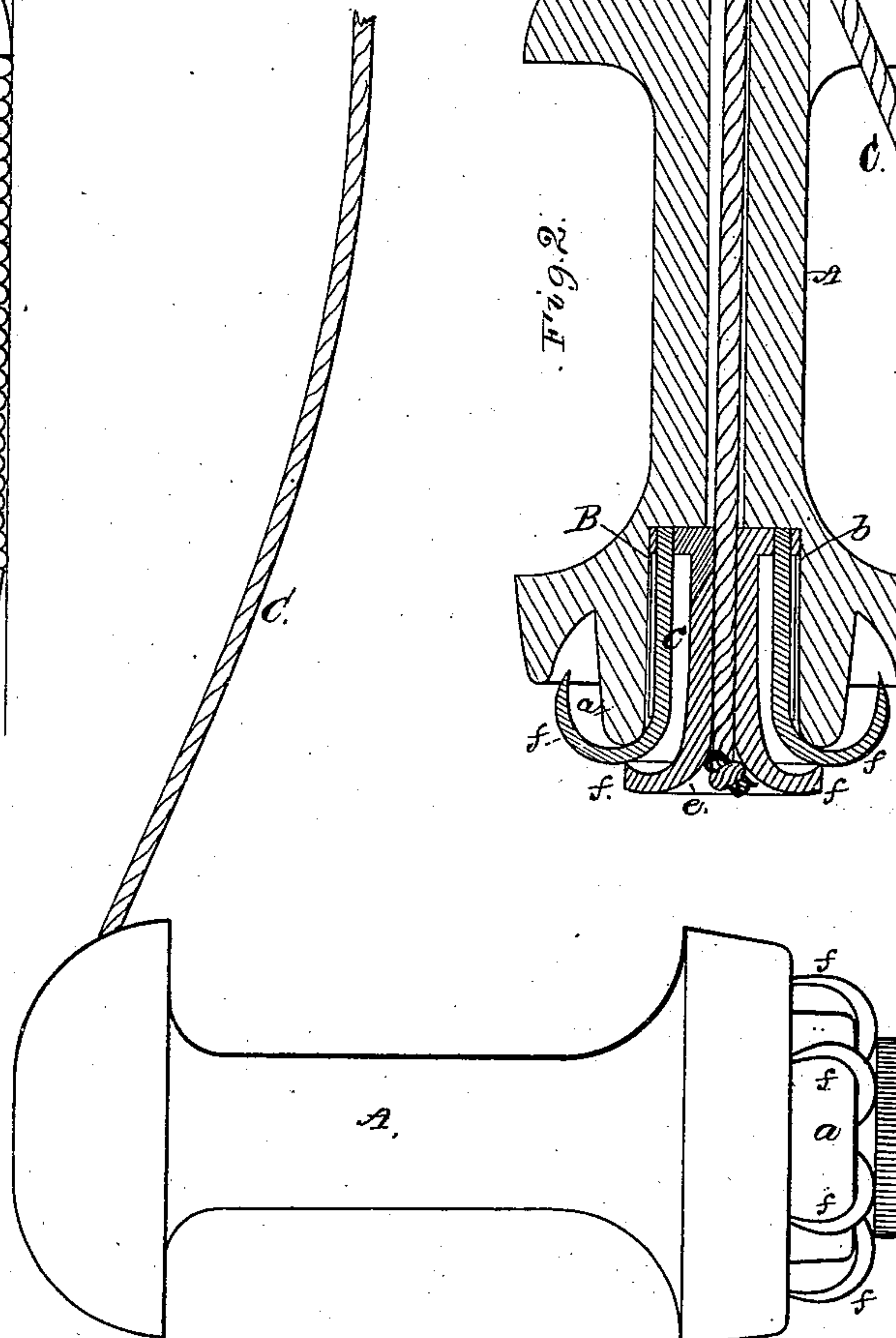
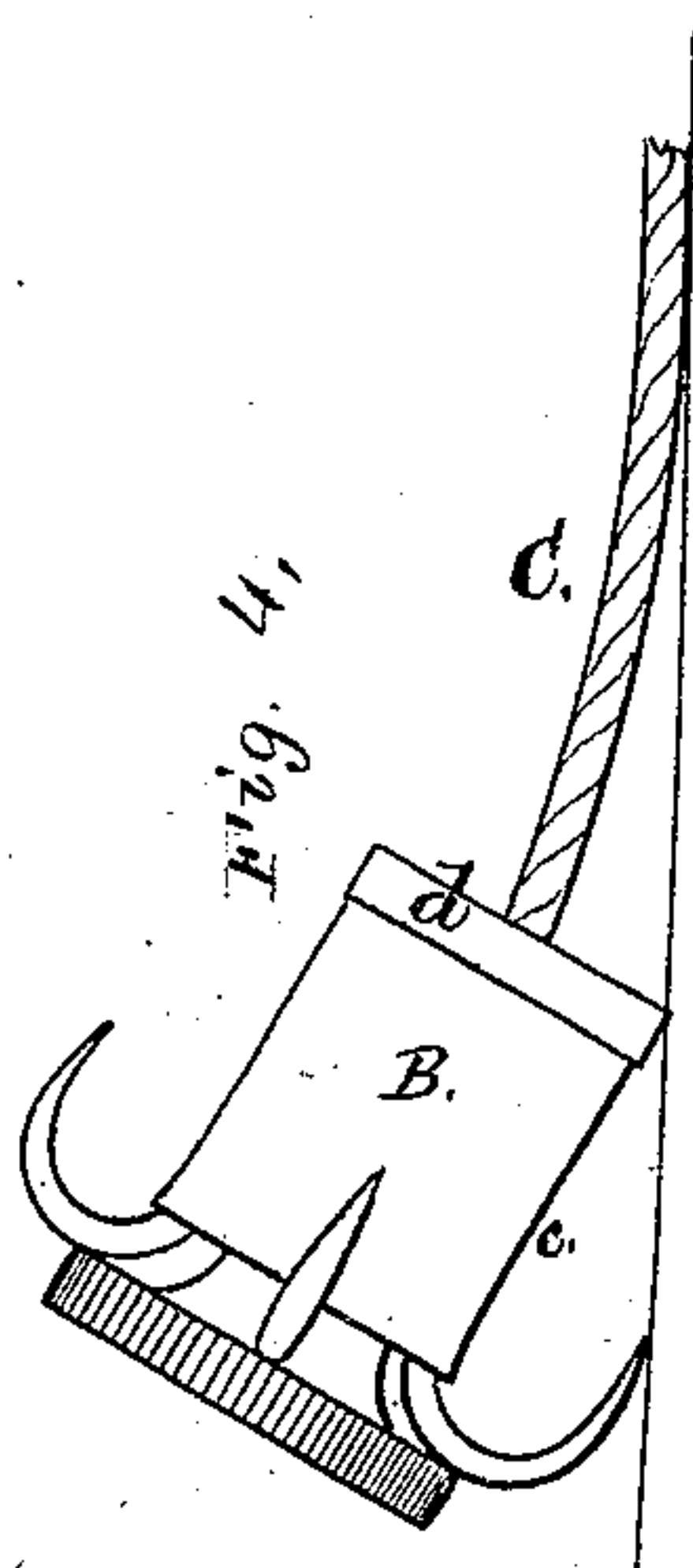
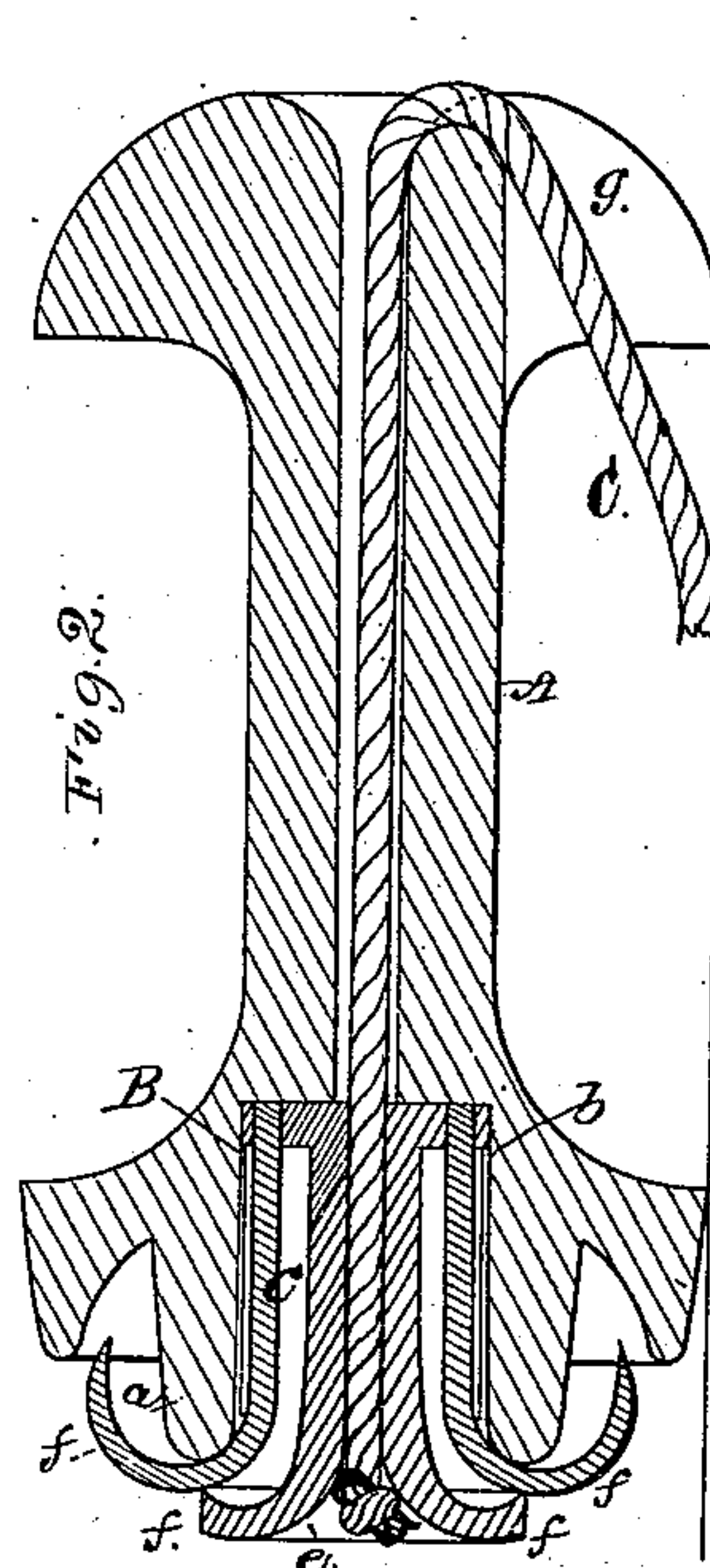
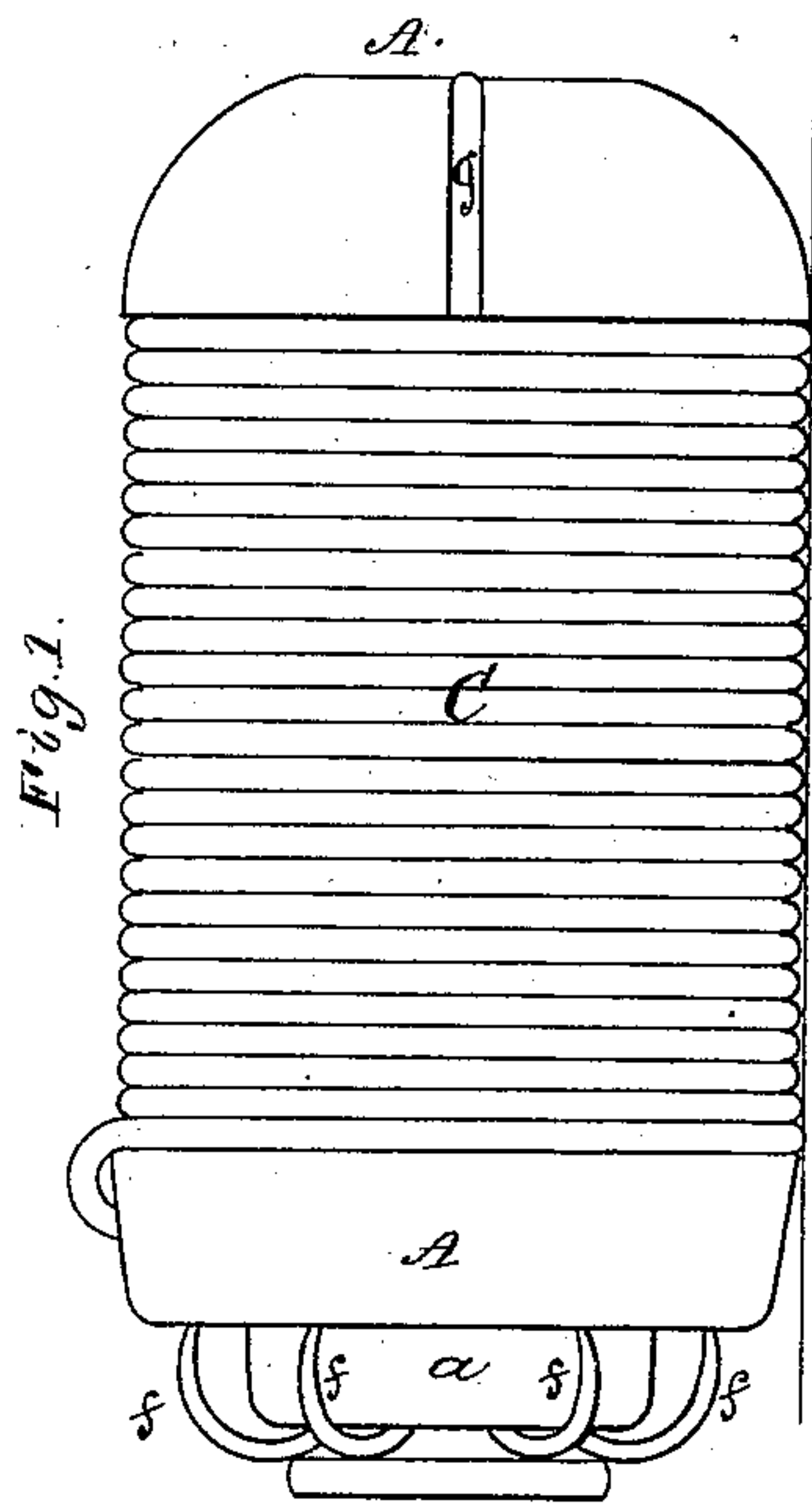


P. MIHAN.
GRAPNEL FLOAT.

No. 184,792.

Patented Nov. 28, 1876.



witnesses.
Geo Gray
J. C. Hale

Patrick Mihan
by his attorney
J. P. Hale

UNITED STATES PATENT OFFICE.

PATRICK MIHAN, OF CAMBRIDGEPORT, MASSACHUSETTS.

IMPROVEMENT IN GRAPNEL-FLOATS.

Specification forming part of Letters Patent No. 184,792, dated November 28, 1876; application filed May 22, 1876.

To all whom it may concern:

Be it known that I, PATRICK MIHAN, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Life-Saving Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

In said drawing, Figure 1 denotes a side view of my device in a folded state, and adapted to be carried in the pocket of a person. Fig. 2 is a longitudinal and central section of the same, showing the line as unwound. Fig. 3 represents the same as it appears when floating on the water. Fig. 4 is a side of the grapnel, as detached from the float; and Fig. 5 an end view of the same.

My invention is designed for rescuing persons, who have fallen into the water, from drowning, whether such persons may be floating on the water, or may have sunk in the water, my invention being termed by me the "grapnel-float;" and consists in the peculiar construction, combination, and arrangement of parts, as hereinafter described and claimed.

In carrying out my invention I employ a float, A, made of wood, and preferably of the form of a large bobbin or spool. On one end or head of the float I form a supplemental head, *a*, having a chamber, *b*, made therein to receive the body of a grapnel, B, which consists of a metallic cylinder, having its lower end terminating in a disk, *d*, and its upper end in a trumpet-shaped head, *e*, and having arranged around its body, and extending longitudinally thereof, a series of hooks or flukes *f f*, they being firmly secured thereto in any suitable manner, the points of the hooks or grapplers, entering an annular chamber, *g*, formed in the end of the float, as shown in Fig. 2. The line C extends axially through the float and the grapnel, and has one end secured to the outer end of the head of the latter, as shown in said figure, the other end of the line extending from the opposite end of the float, and passing through a kerf made transversely through the adjacent head of the float, and thus serving to gripe and hold the grapnel in firm connection with the float, as shown in Figs. 1, 2, and 3.

Having described the construction of my device, its operation is as follows: If we suppose an individual to have fallen into the water, and a person on the shore or other place of safety to be provided with one of my improved devices, such person first fastens the outer end of the line to his wrist, and next uncoils the line and throws the float as near as he can to the person in the water, such float floating in the water in a vertical position, as shown in Fig. 3, and when in reach of the person in the water enables him to readily grasp the shank of the float, when, by the person on the shore pulling on the line, the person in the water may be readily drawn to the shore or to a place of safety. In case a person may have sunk in the water the grapnel is to be drawn out of the chamber in the head or bar of the float (which may be readily effected by drawing the line out of its confining-kerf in the opposite head, or end of the float) the float is to be drawn down near the opposite end of the line, when the grapnel is to be thrown beyond the spot where the person is sinking, or is supposed to have sunk, when by drawing on the line the flukes or hooked ends of the grapnel will be brought in contact with a person or body in the range of the line, whereby such person or body may be brought to the surface or to the shore or place of safety. By arranging the grapnel within one end or head of the float, such not only enables the latter to be projected into the water with greater facility, but causes the float to assume a vertical position, or one most convenient to be grasped by the person in the water.

Having described my invention, what I claim is—

1. The grapnel-float, as described, the same consisting of the float A, the grapnel B, and line C, arranged and combined substantially as shown and described.

2. The float A, formed with the chamber *b* and the annular chamber *g*, as and for the purpose set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

P. MIHAN.

Witnesses:

F. P. HALE,
F. C. HALE.