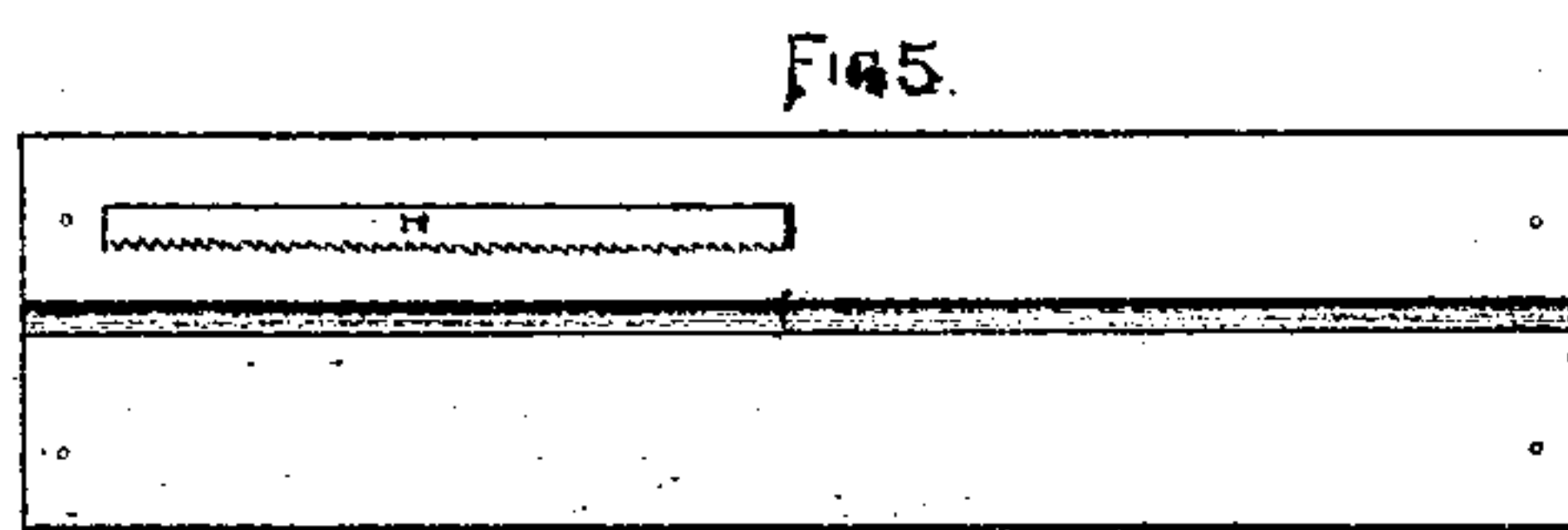
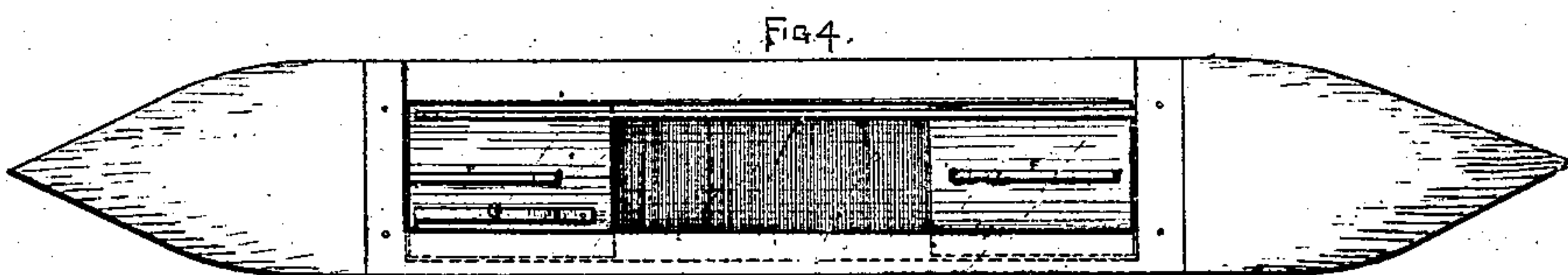
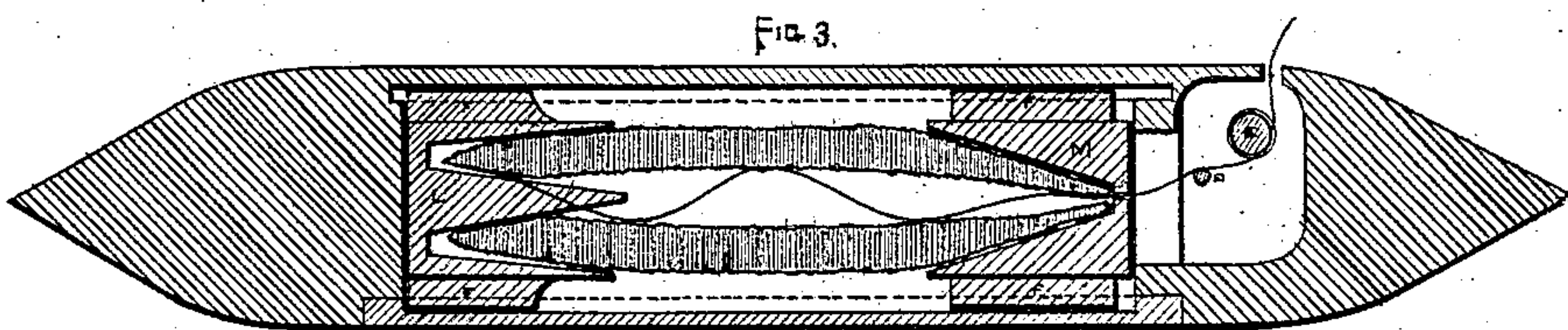
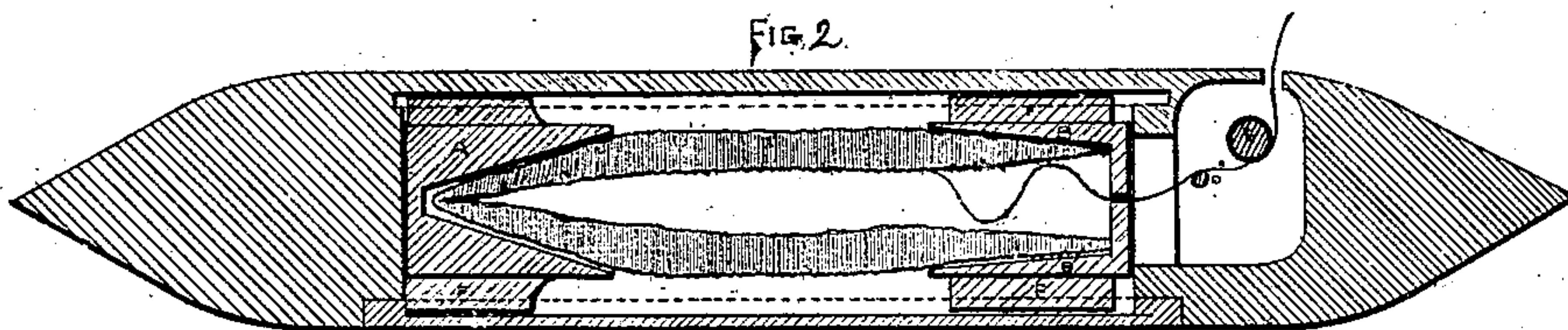
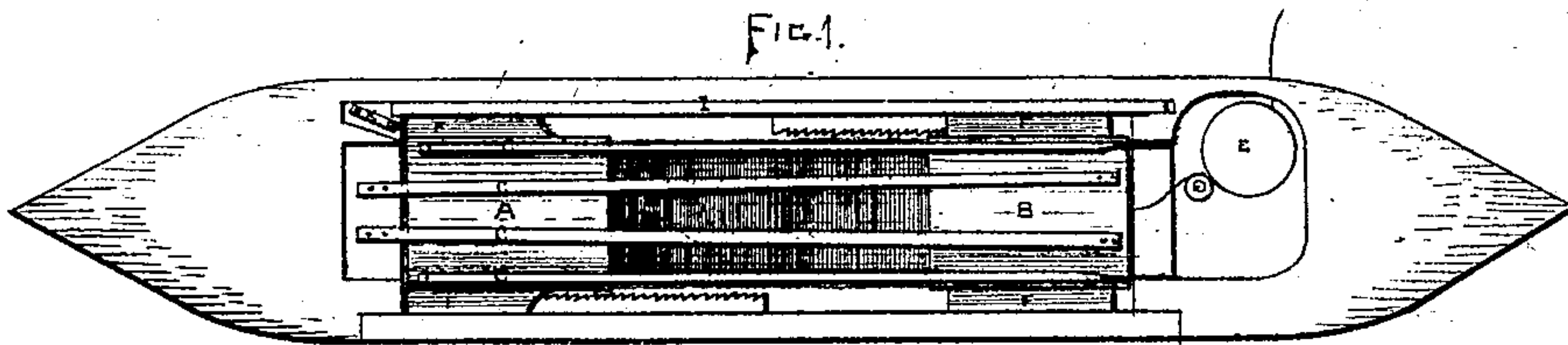


C. K. SAWYER.
Loom-Shuttles.

No. 152,419.

Patented June 23, 1874.



WITNESSES.
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UNITED STATES PATENT OFFICE.

CALEB K. SAWYER, OF CLINTON, MASSACHUSETTS.

IMPROVEMENT IN LOOM-SHUTTLES.

Specification forming part of Letters Patent No. **152,419**, dated June 23, 1874; application filed July 7, 1873.

To all whom it may concern:

Be it known that I, CALEB K. SAWYER, of Clinton, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Shuttles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to shuttles used for weaving wire.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view of my improved shuttle. Fig. 2 is a longitudinal section, showing the method of unwinding the wire from the base of the concavity out. Fig. 3 is a similar section, showing the method of unwinding the wire from the base end and passing through the whole length of the cop. Fig. 4 is a side view of the shuttle with the cover taken off, and Fig. 5 is a view of the inside of the cover.

A and B represent the caps or cups placed upon the ends of the wire cop. The conical end of the cop is placed in the cap A, the inner side of which is made smaller at the end than at the base. The other end of the wire cop is placed in the cap B, the inner side of which is also made slanting from the base to the end, but not as much as the cap A—only enough to get a sufficient pressure upon the wire. Both caps press against the wire so as to hold it perfectly upright, and this pressure is accomplished by springs C C, of rubber or other suitable material, which are attached to the caps and to the opposite ends of the shuttle, as shown in Fig. 1. The caps A and B are used for unwinding the wire from the base of the concavity out, and in the end of the cap B is a hole, through which the wire passes, rubbing against a pin, D; thence once

or twice around a grooved pulley, E, which effectually straightens it out for weaving, after which the wire passes out of the shuttle. F F represent slats or tongues, attached to the sides of the caps, which, when passed into a groove in the cover and laid on a projection on the opposite side from the cover, keep the whole perfectly free from rolling. When the shuttle passes quickly into a shuttle-box and stops suddenly, or as the wire weaves out, the caps are pressed together nearer as the wire unwinds, and springs G, attached to the caps, catch in ratchets H, to hold the caps in the position to which they are drawn. I represents a hinged piece, which can be lifted to remove the cop and caps, and is fastened down by a button, K. For unwinding the wire from the base end through the entire length of the cop, the base end of the cop is placed in a cap, L, which, with the exception of a conical-shaped piece extending from the end to a little beyond the base of the cap, is the same as cap B. The use of this piece is to keep the wire in an upright position; otherwise it would be liable to tip over. The conical end of the cop is placed in a cap, M, which is the same as the cap A, with the exception of a hole made in the end for the wire to pass through. These two caps, L and M, are shown in Fig. 3.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The springs G and ratchets H, arranged with the caps A B, as and for the purposes herein set forth.

2. In a shuttle for weaving wire-cloth, the combination of springs C C, caps A B, ratchet H, and spring G, all arranged as set forth.

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

CALEB K. SAWYER.

Witnesses:

J. THISSELL,
ABRAM WRIGHT.