

No. 630,637.

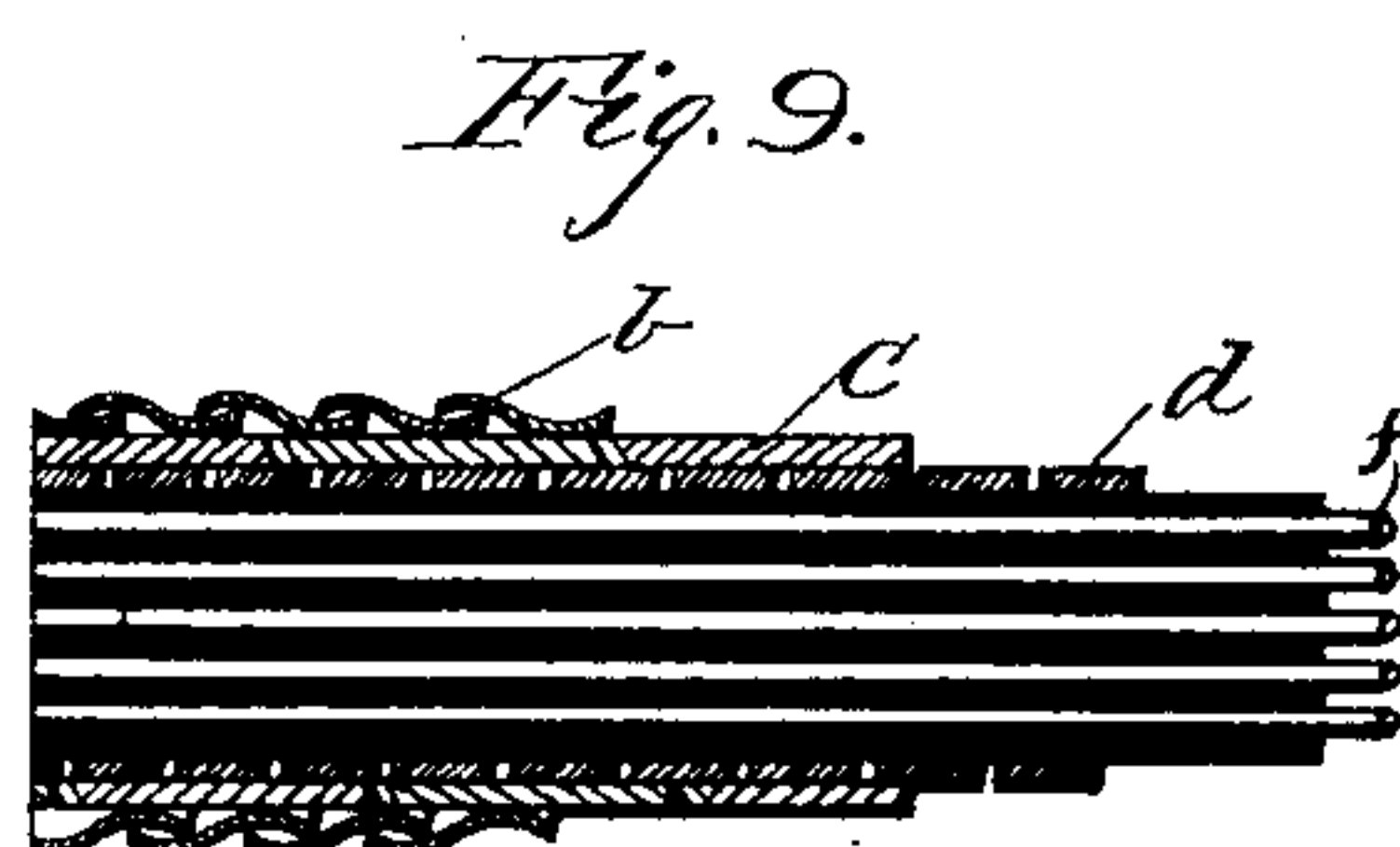
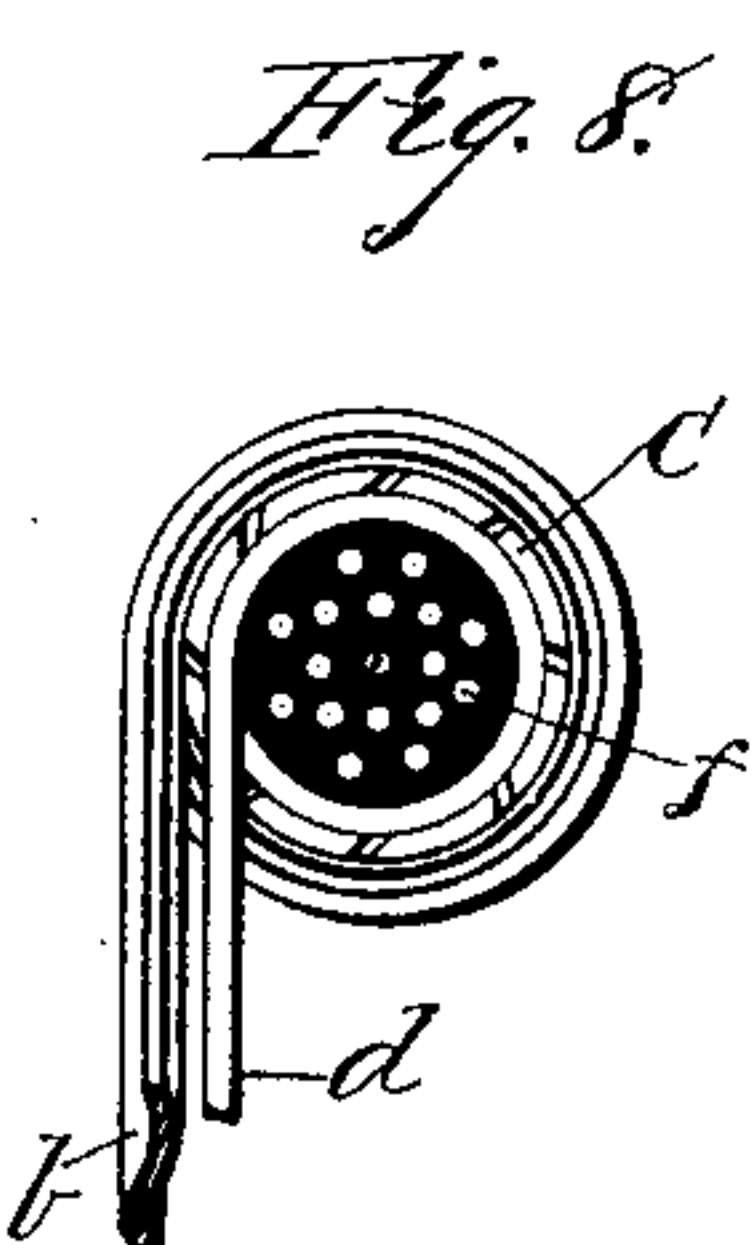
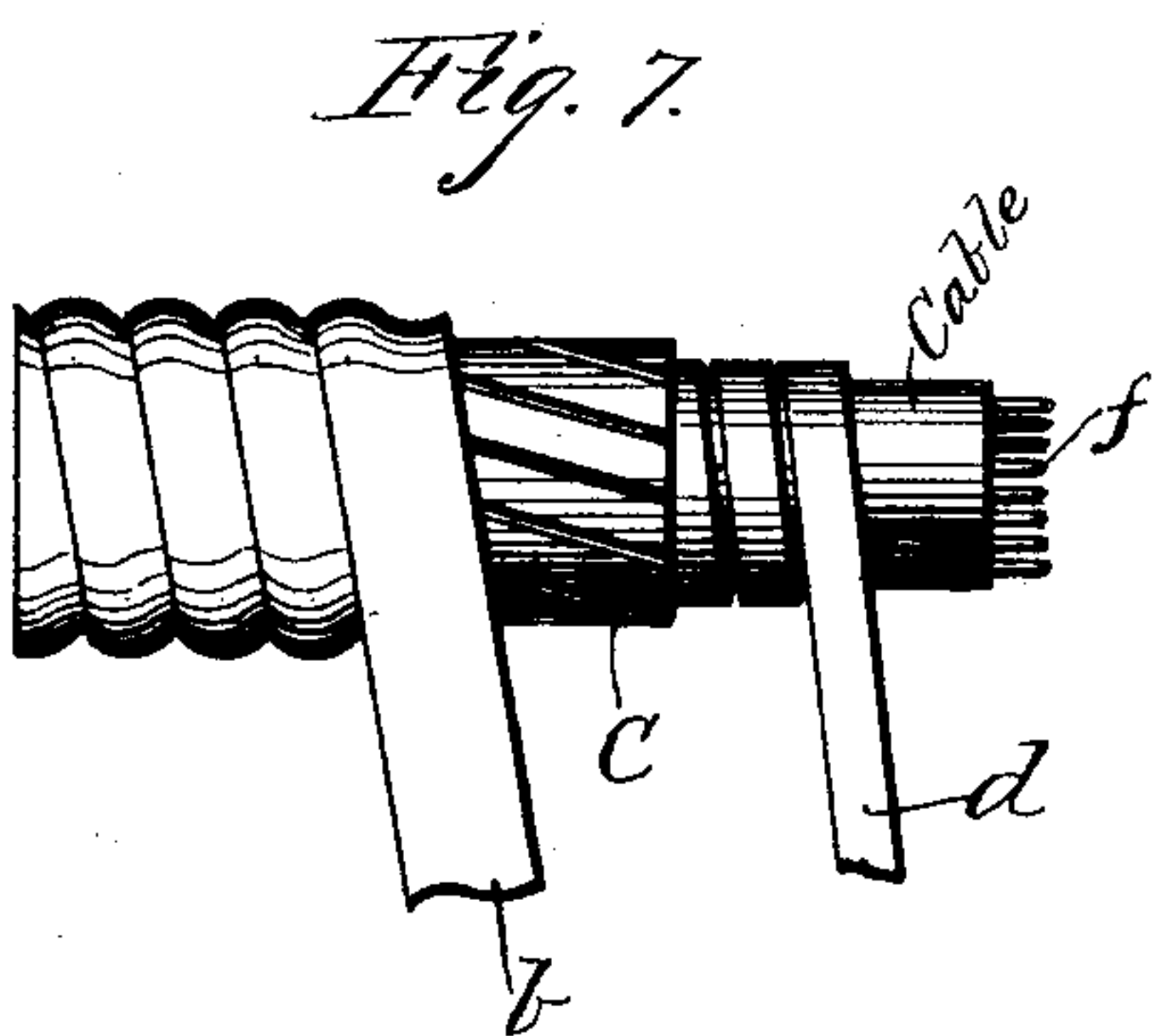
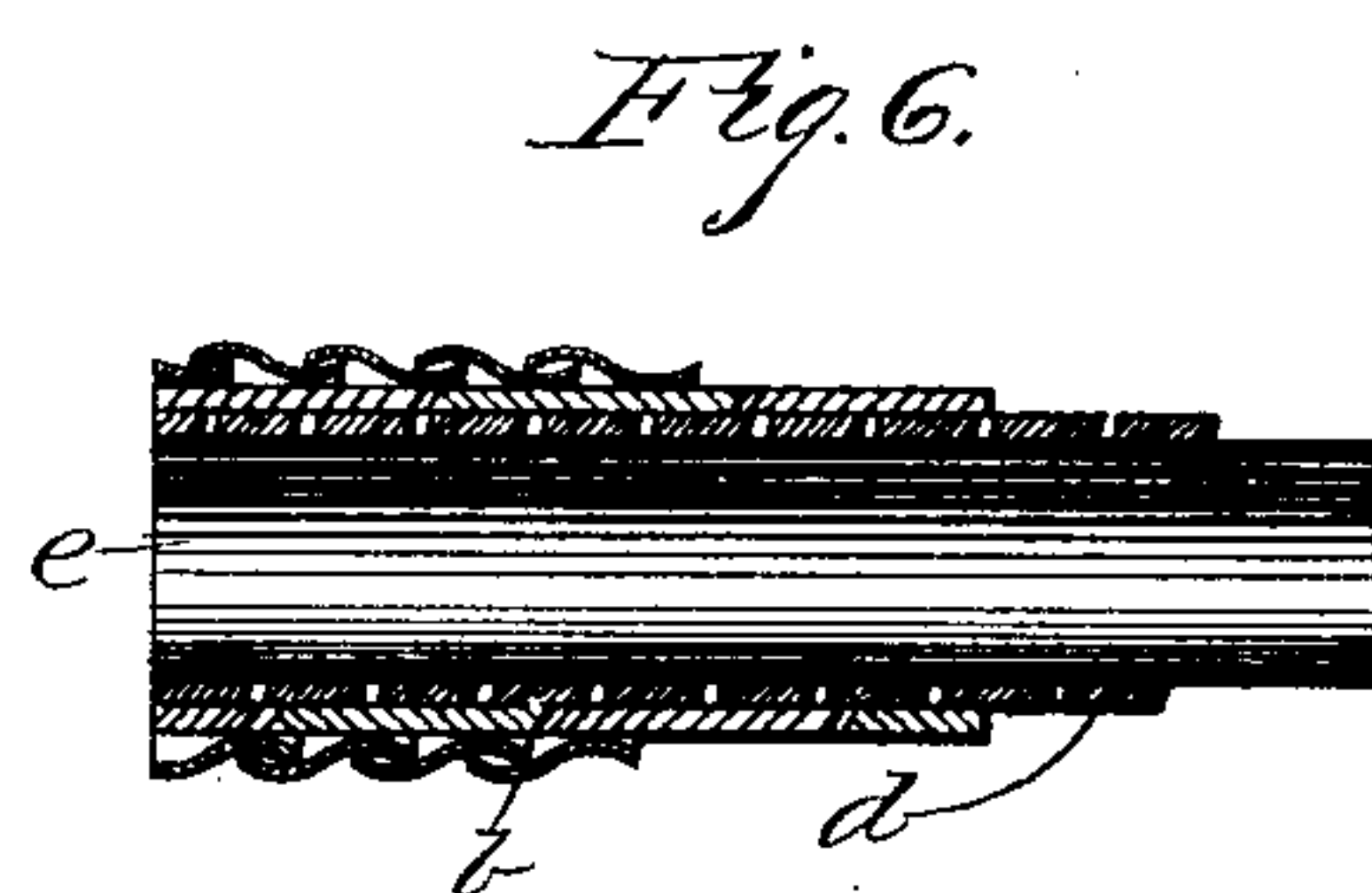
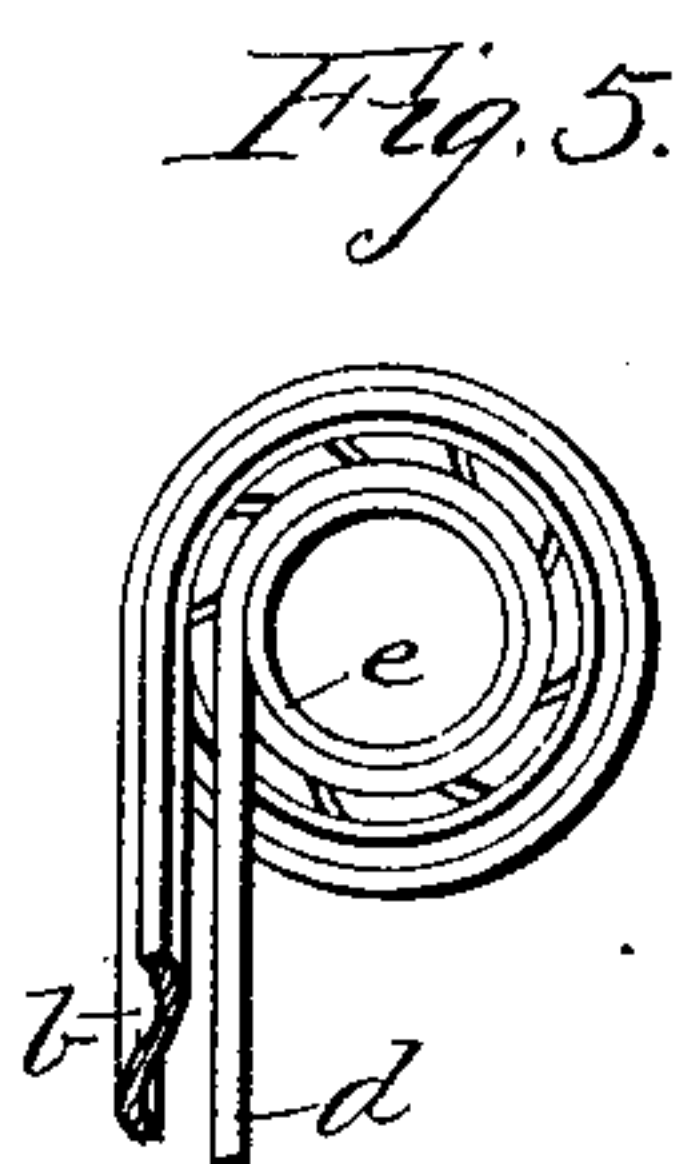
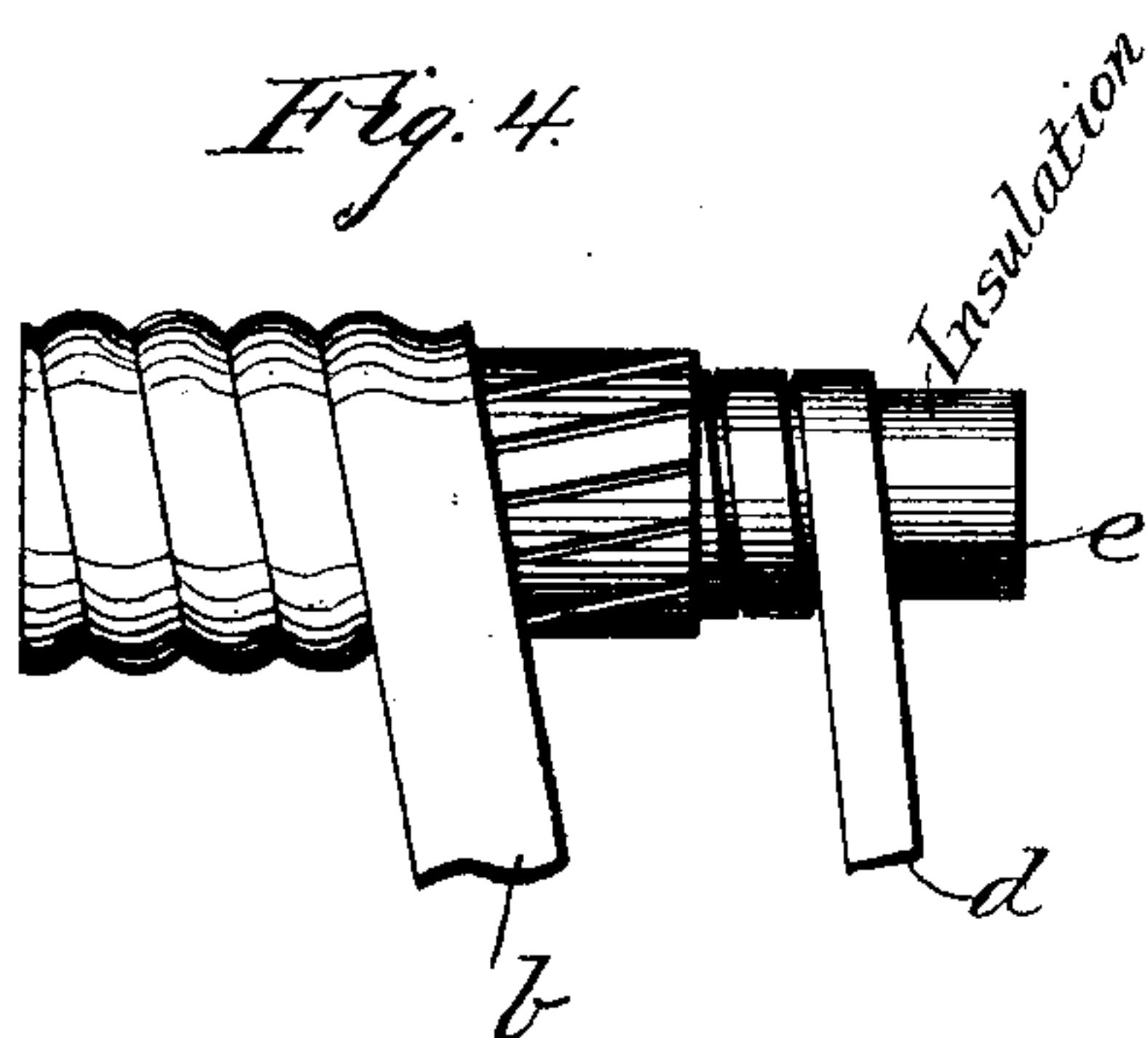
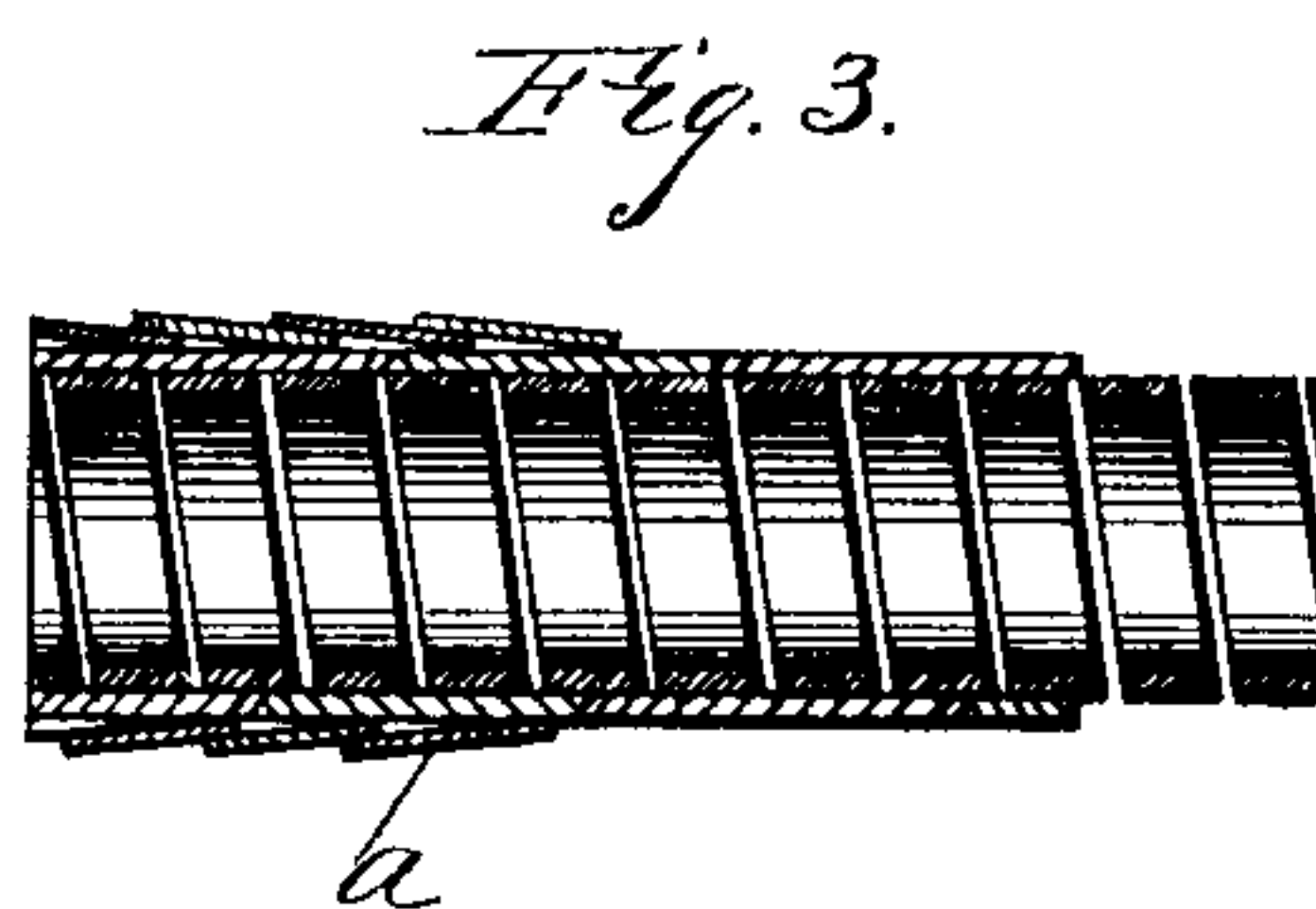
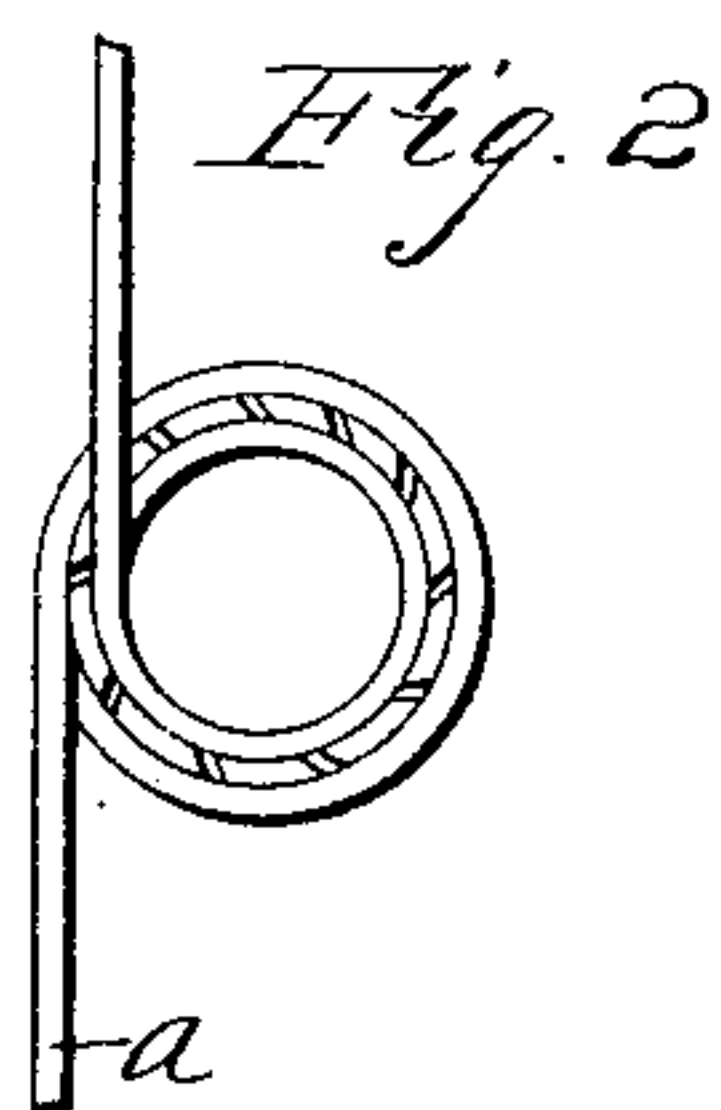
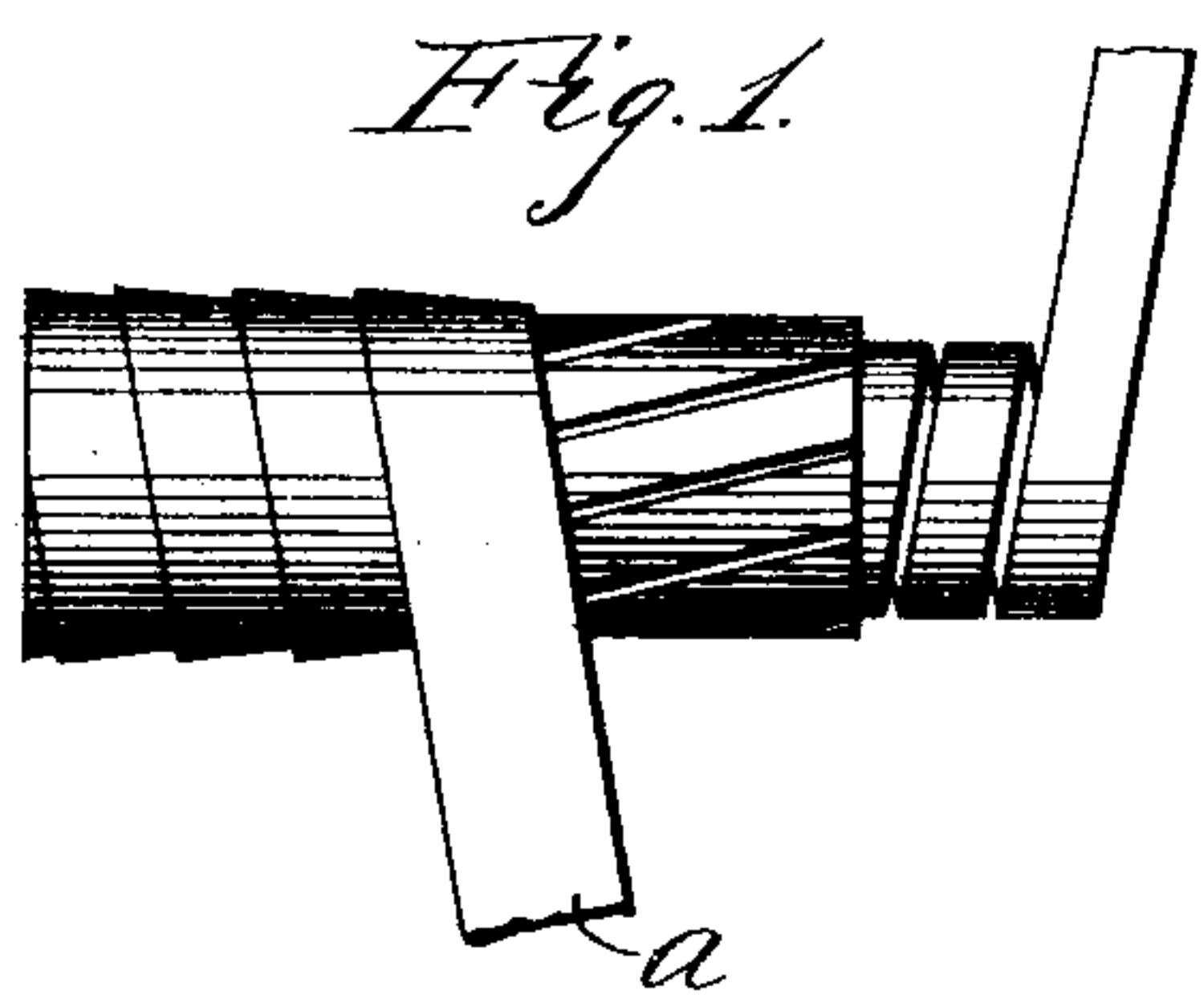
Patented Aug. 8, 1899.

A. SUNDH.

PROTECTIVE CASING FOR ELECTRIC CABLES OR WIRES.

(Application filed Mar. 28, 1899.)

(No Model.)



WITNESSES

L. Almqvist.
C. Sedgwick

INVENTOR

August Sundh
BY
A. O. Thayer
ATTORNEY

UNITED STATES PATENT OFFICE.

AUGUST SUNDH, OF YONKERS, NEW YORK.

PROTECTIVE CASING FOR ELECTRIC CABLES OR WIRES.

SPECIFICATION forming part of Letters Patent No. 630,637, dated August 8, 1899.

Application filed March 28, 1899. Serial No. 710,769. (No model.)

To all whom it may concern:

Be it known that I, AUGUST SUNDH, a citizen of the United States of America, and a resident of Yonkers, county of Westchester, and State of New York, have invented certain new and useful Improvements in Protective Casings for Electric Cables or Wires, of which the following is a specification.

My invention relates to the exterior metallic protective part of the cable; and it consists of the said part constructed of metallic strips in the manner hereinafter described, so as to be flexible and at the same time capable of tensile strength to resist being pulled apart in handling, placing, and in other ways in which it may be exposed to such stresses which ordinary coils will not withstand, also so as to be nail-proof to protect the cable from nails when placed in the walls of buildings, as follows, reference being made to the accompanying drawings, in which—

Figure 1 is a side view of a short section of protective casing constructed in accordance with my invention. Fig. 2 is an end view, and Fig. 3 is a longitudinal section, of the structure of Fig. 1. Fig. 4 is a side view, Fig. 5 an end view, and Fig. 6 a longitudinal section, of a like structure somewhat modified as to the shape of the outer metallic strip and with an insulating-lining; and Fig. 7 is a side view, Fig. 8 an end view, and Fig. 9 a longitudinal section, of the casing constructed practically the same as in Figs. 4, 5, and 6 with a piece of electric cable inserted.

The essential feature of the invention consists of a casing made in a series of three coiled strips, one within the other, whereof the outer strip is coiled with overlapping margins for effective prevention of punctures. The intermediate coils are made of a series of strips placed edge to edge in long pitch for tensile strength to prevent pulling apart, and the inner coils are of a strip coiled edge to edge for reinforcing the power, for resisting

crushing force, and for more uniform inner surface to facilitate drawing the cable in and out.

In Figs. 1, 2, and 3 a plain flat strip *a* is coiled with overlapping margins, and in the other figures the corresponding strip *b* is produced in an ogee cross-section, whereby the coils have interlocking relation, affording considerable resistance to tensile stresses. The cross-section of this strip may be any form not obstructive to the overlapping of the margins of the coils and not materially interfering with the required flexibility of the cable. Two or more strips *a* or *b* may be coiled together, if desired, being arranged to overlap at the beginning.

The intermediate long-pitch coils are made of a series of plain flat strips *c*, placed edge to edge. They may be coiled in the same direction as the outer strips or reversely, as desired. These strips have great tensile strength, owing to their length of pitch, and do not materially interfere with the required flexibility of the casing.

The inner coils are formed of a single plain strip *d*; but two or more strips may be used, said strips being placed edge to edge.

The casing may be provided with an insulating-lining *e*, being formed on it, and the cable-wires *f* may be included at the same time, or the cable may be subsequently drawn into the casing.

What I claim as my invention is—

A flexible metallic casing for electric cables or wires, consisting of an exterior coiled and overlapped strip, intermediate coiled metallic strips of long pitch, and an interior coiled strip.

Signed by me, at New York, N. Y., this 25th day of March, 1899.

AUGUST SUNDH.

Witnesses:

C. SEDGWICK,
J. HOWARD.