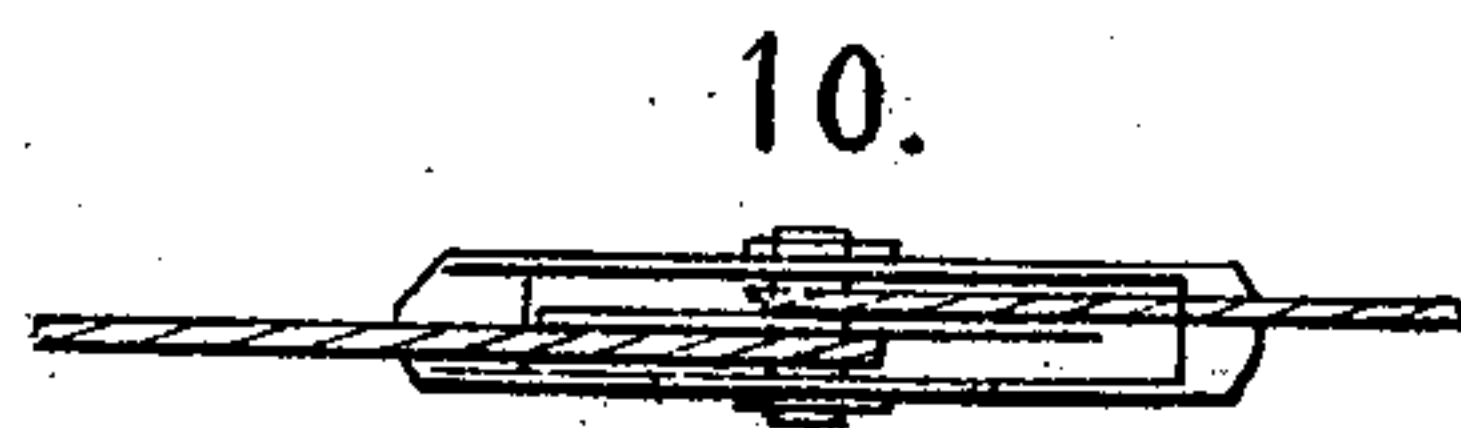
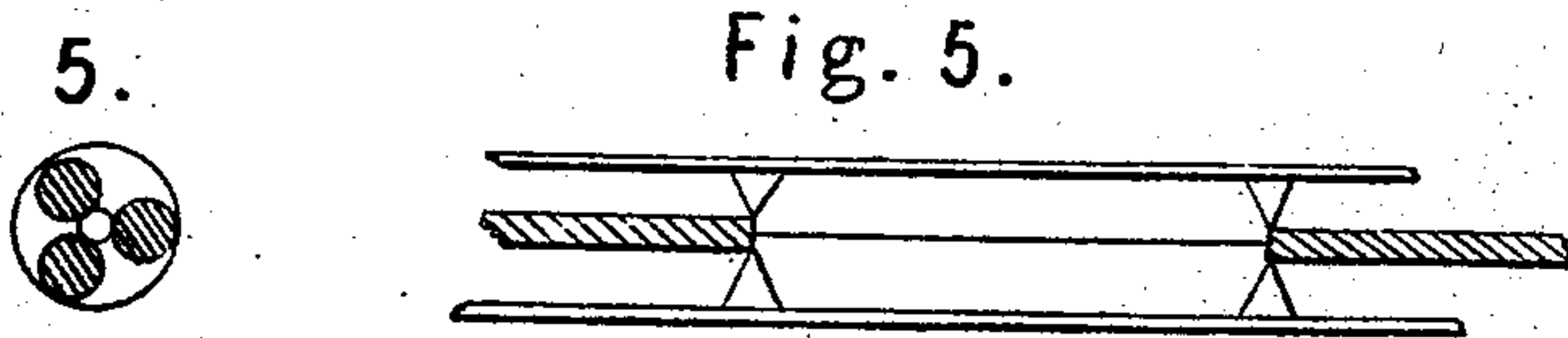
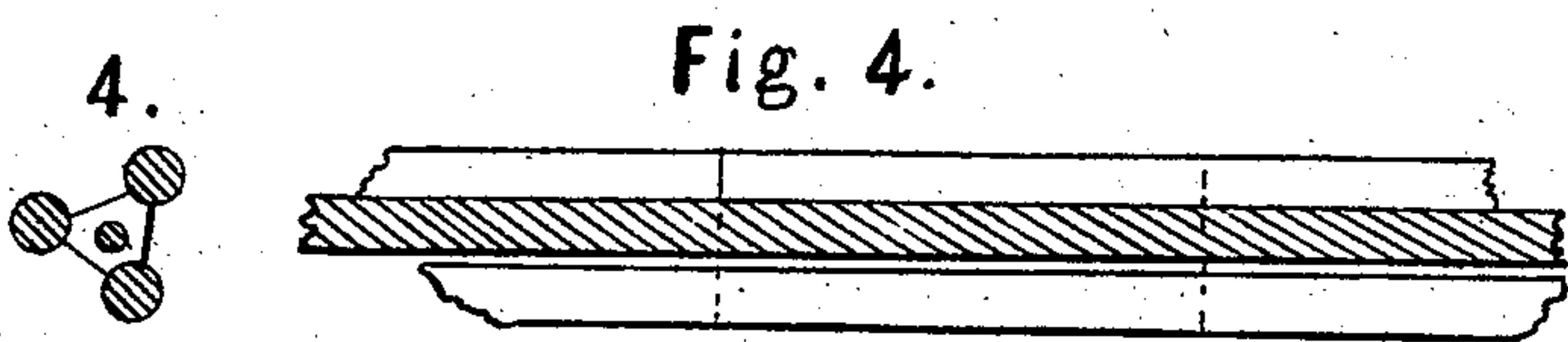
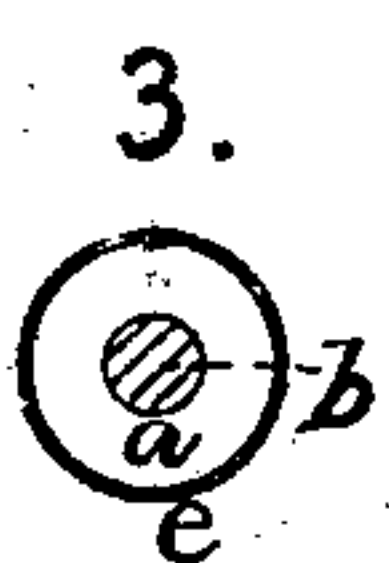
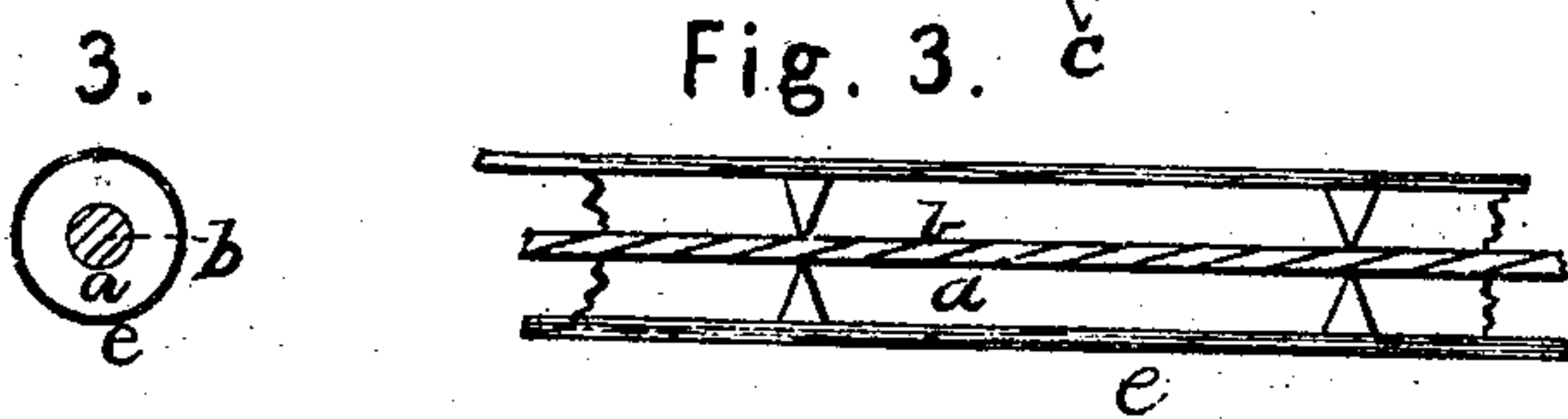
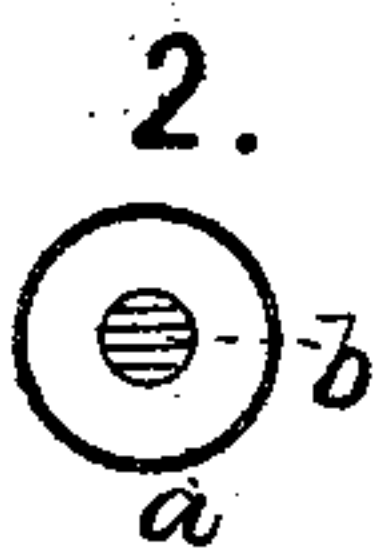
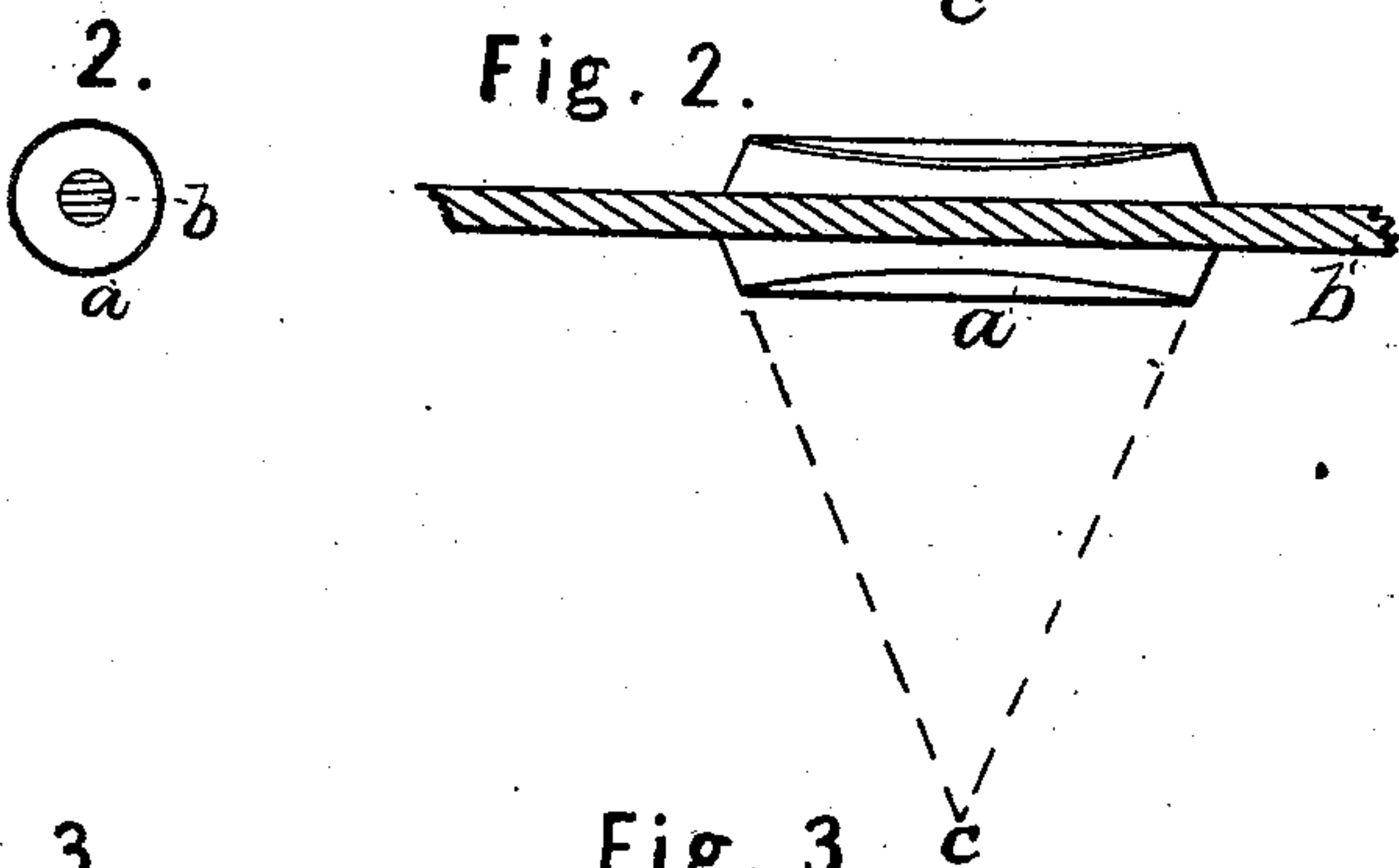
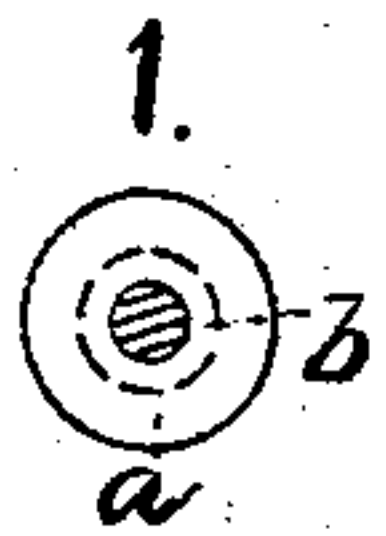
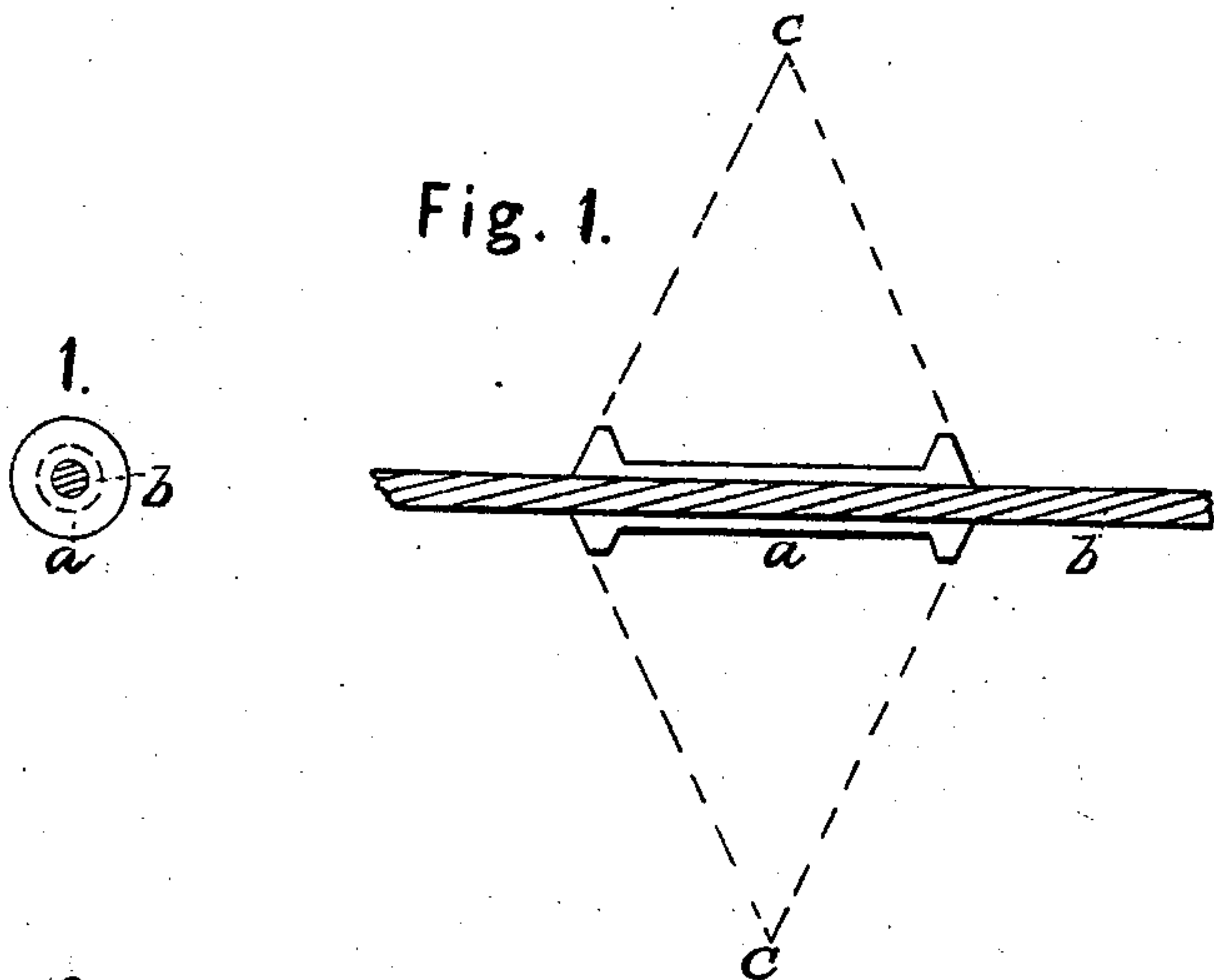


C. S. Goodman.

Hoop Skirt.

N^o 18013

Patented Aug. 18, 1857.



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Fig. 6.

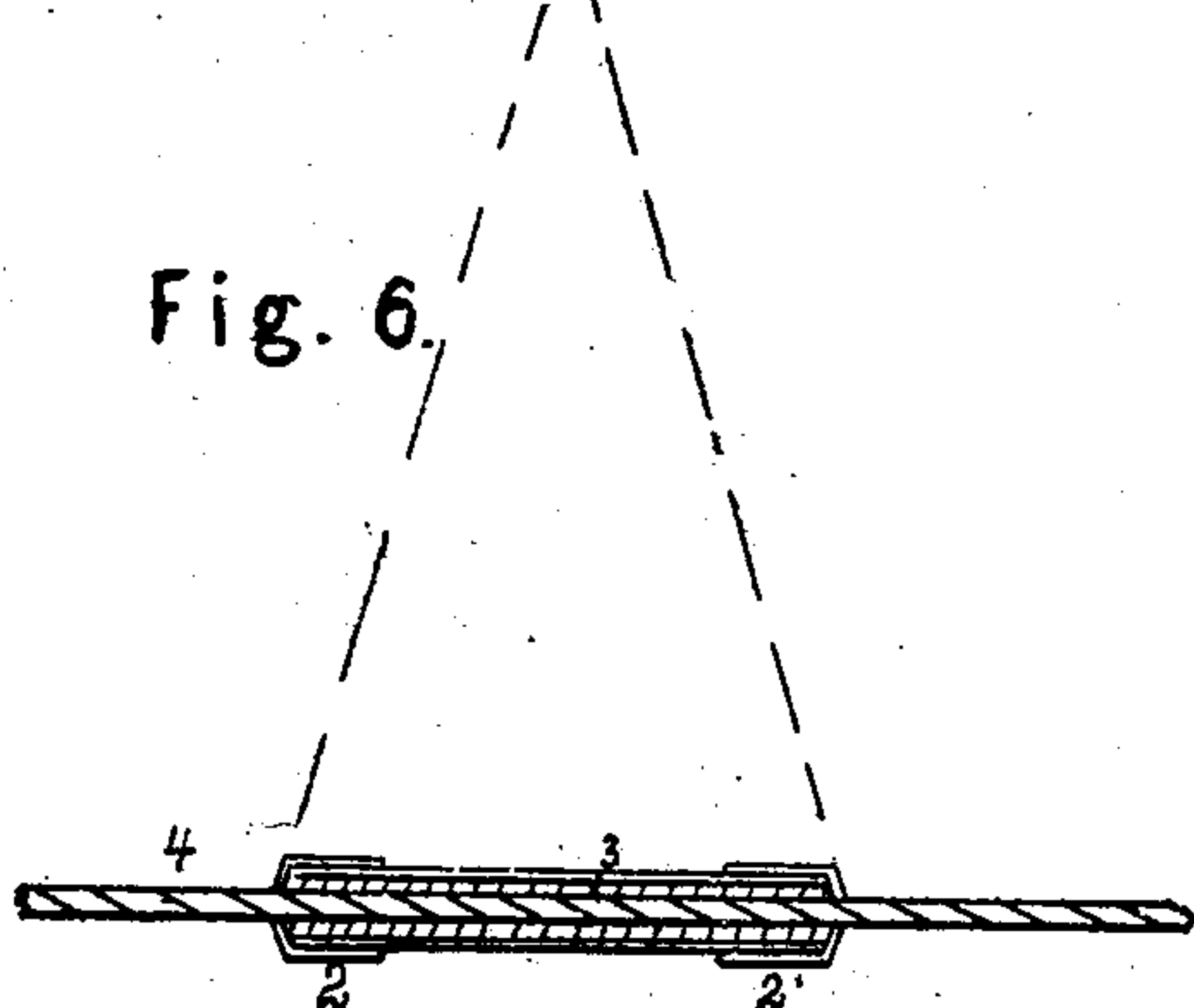


Fig. 15.

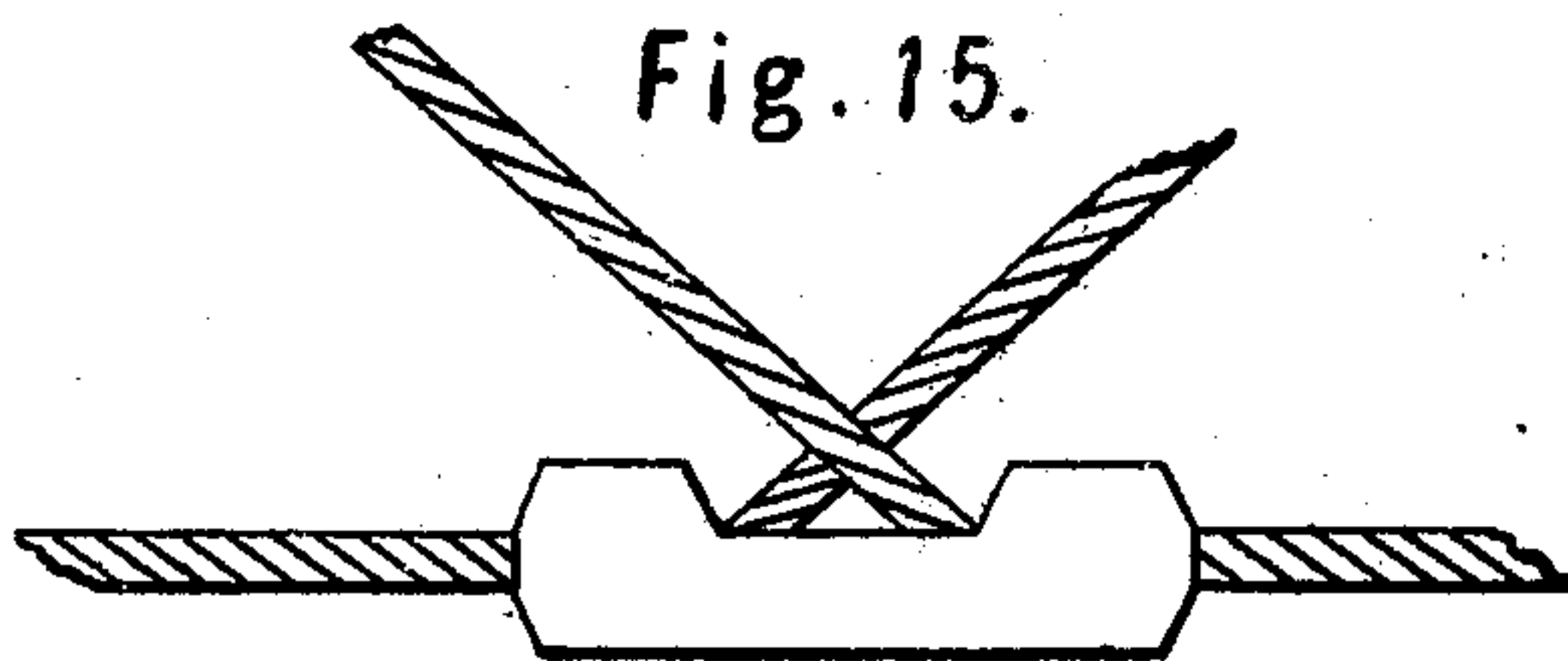
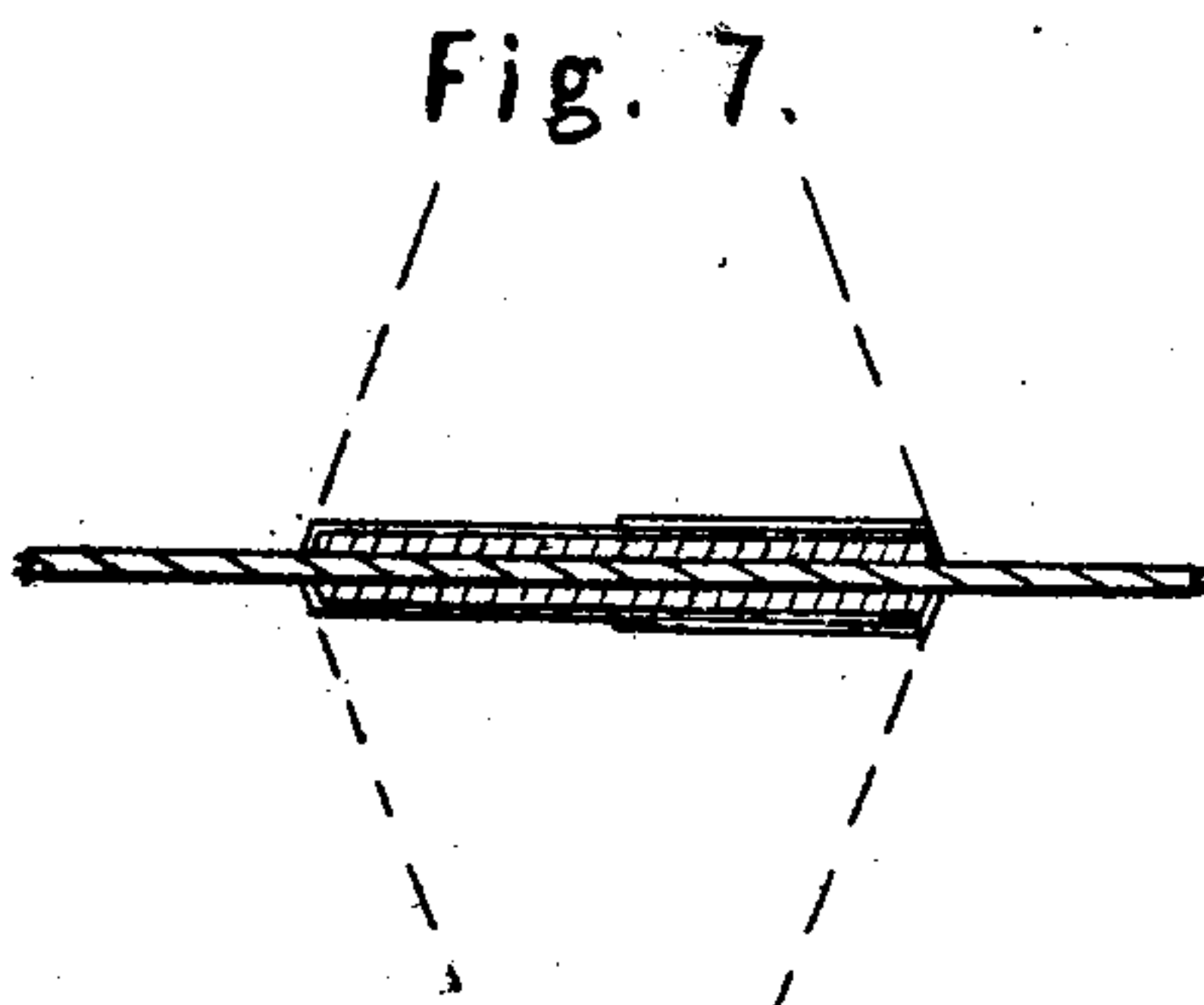


Fig. 7.



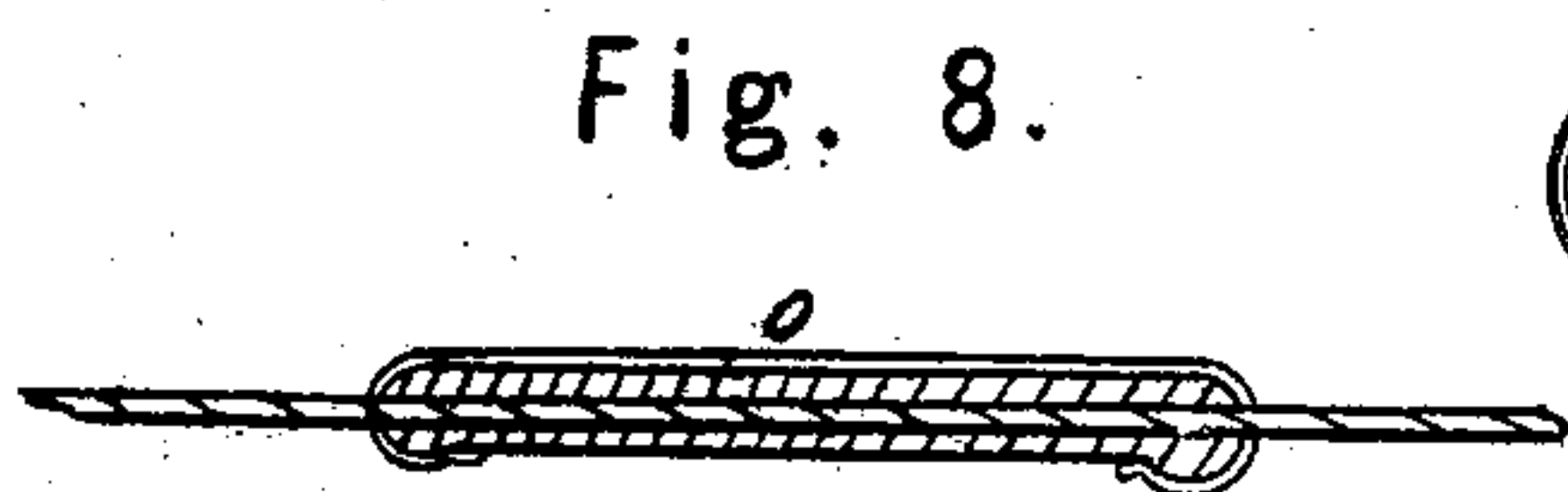
14.



Fig. 14.



Fig. 8.



13.



Fig. 13.

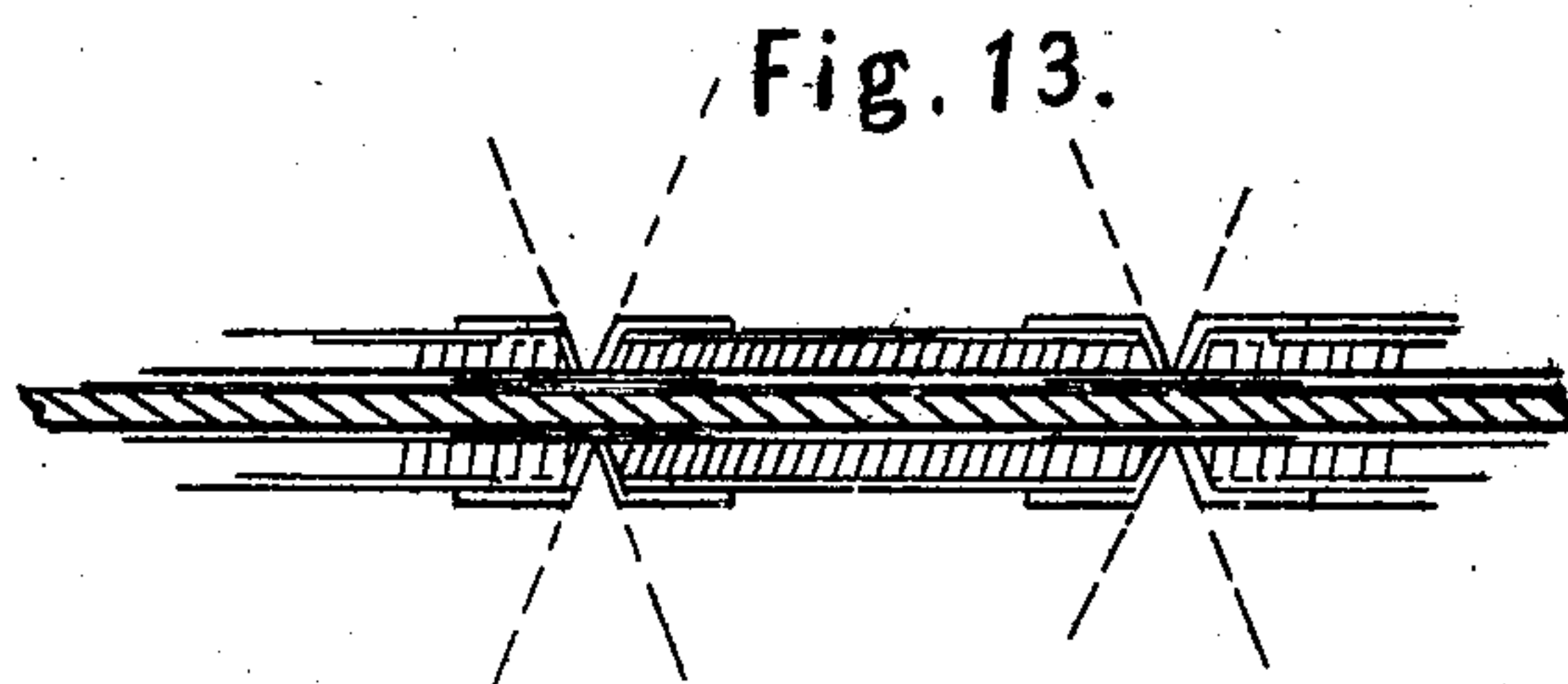
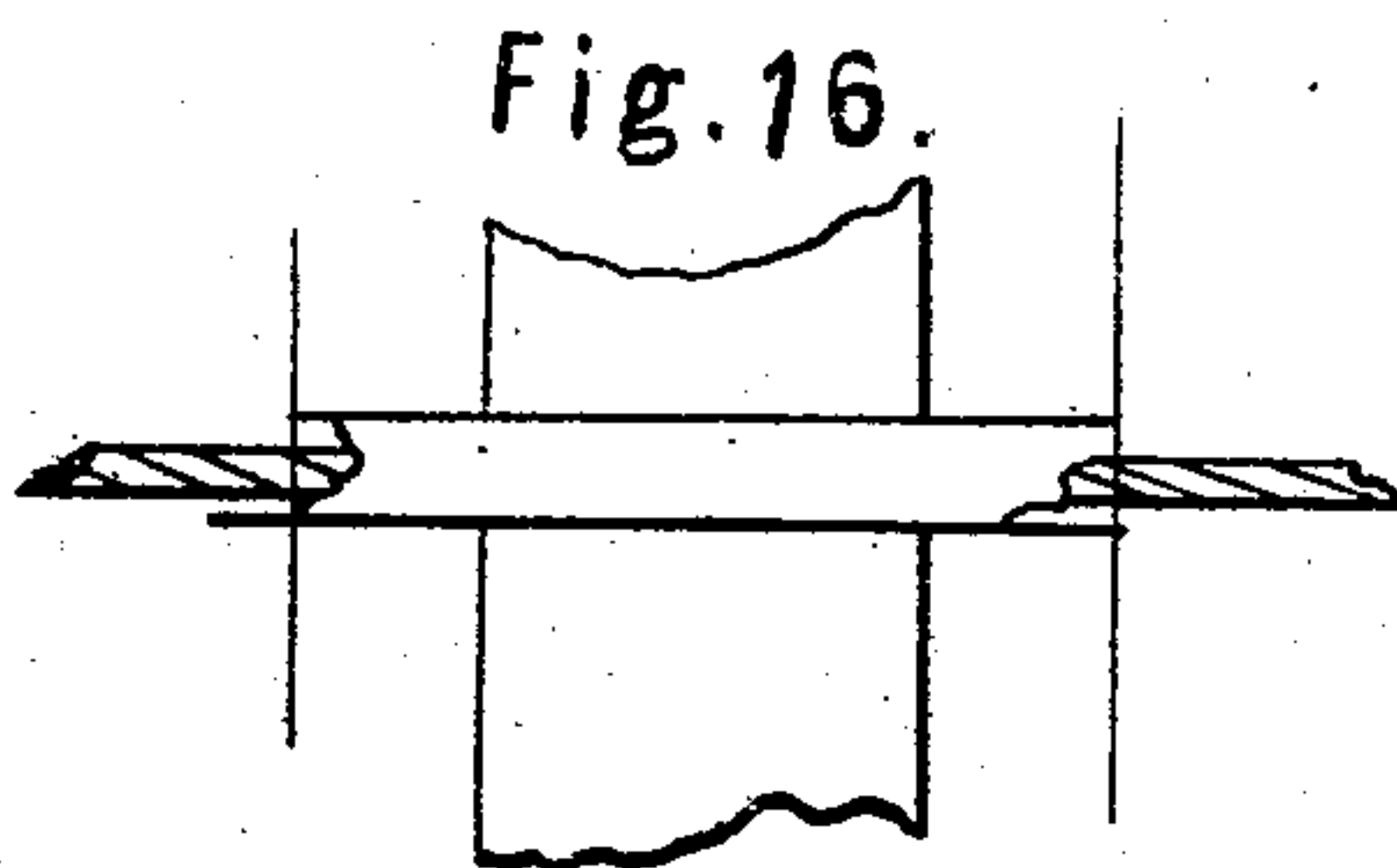


Fig. 16.



12.



Fig. 12.

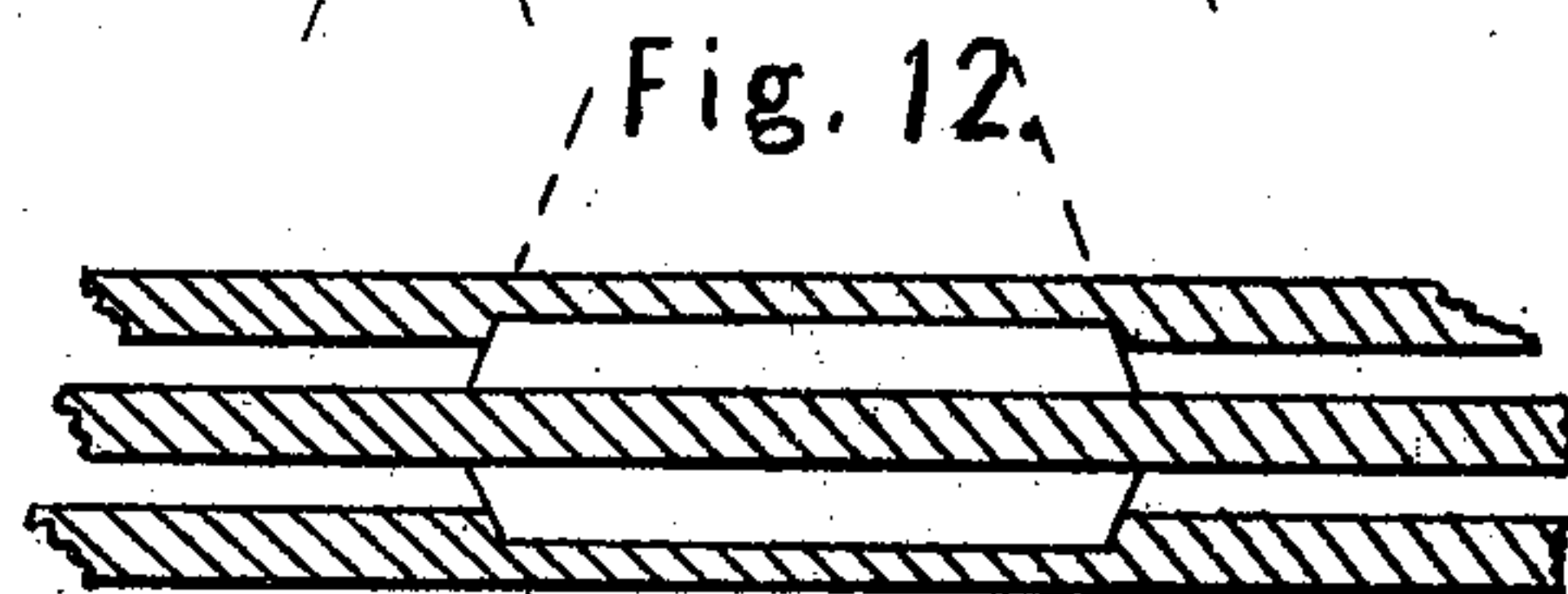
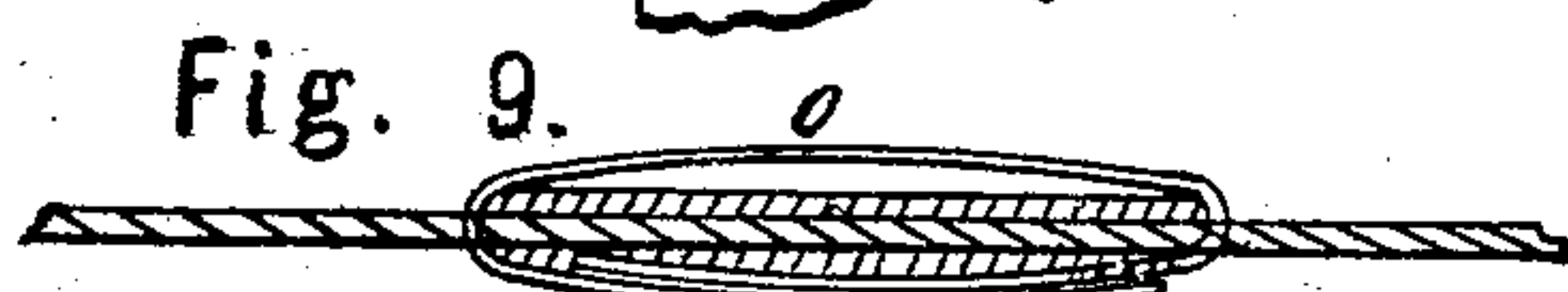


Fig. 9.



11.

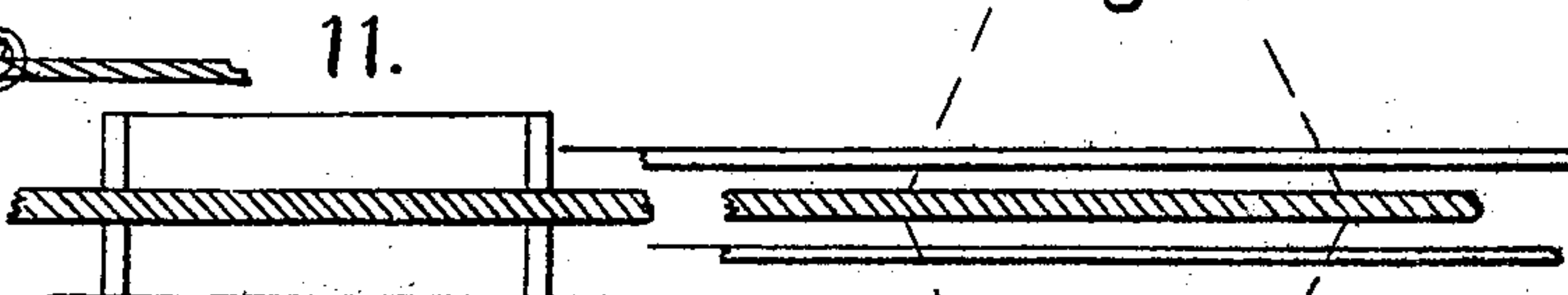


Fig. 10.

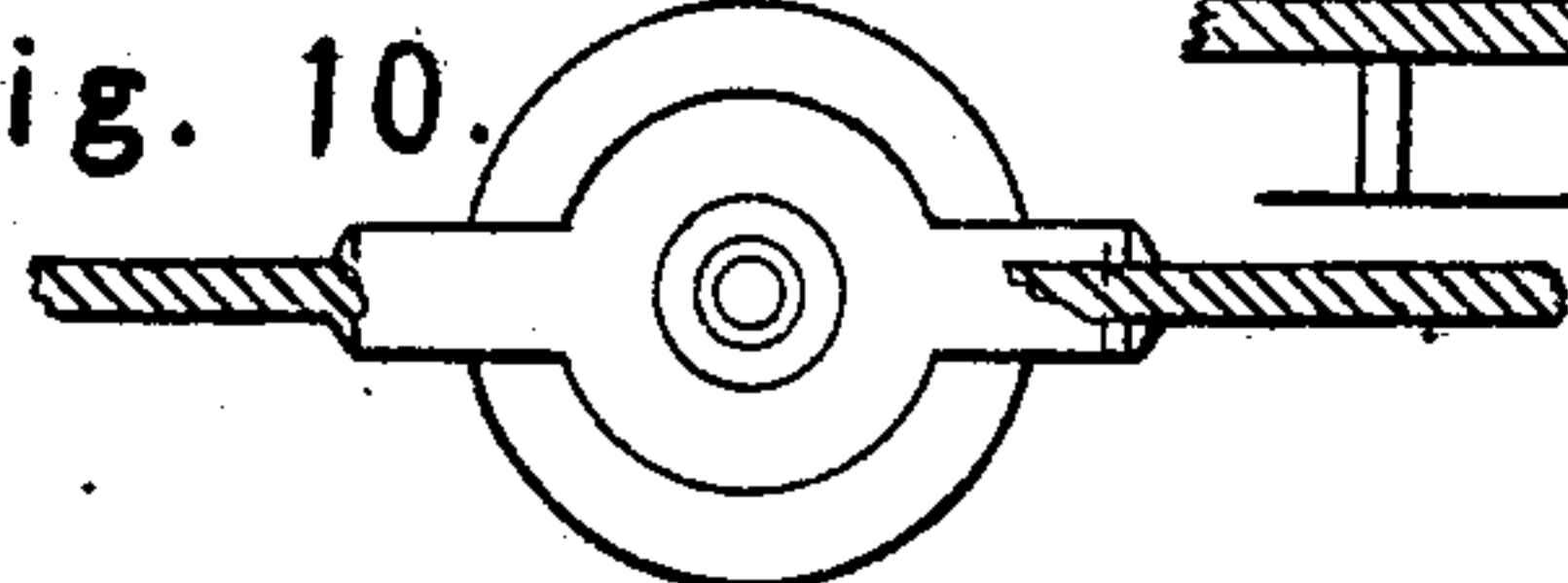


Fig. 11.

UNITED STATES PATENT OFFICE.

CHARLES S. GOODMAN, OF WASHINGTON, DISTRICT OF COLUMBIA.

HOOP FOR LADIES' SKIRTS.

Specification of Letters Patent No. 18,013, dated August 18, 1857.

To all whom it may concern:

Be it known that I, CHARLES S. GOODMAN, of the city of Washington and District of Columbia, have invented a new and Improved Mode of Constructing an Elastic Skirt-Hoop; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention consists in the use of short tubes or spools, strung upon an elastic cord the ends of the spools, tubes or cylinders being cut at an angle, the line of which will point to the center of the hoop. The tubes may be made of any suitable material.

Another mode of effecting the same result is to use elastic tubes constructed in the same manner as of other material with a rigid cord, or with an elastic cord. This modification, I deem the equivalent of that first named.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation, the hoop may be made in many different ways, of which I have experimented with fifteen forms, but I shall prefer to describe only four either of which will be easily manufactured and all of which contain the whole principle of the invention.

I shall commence with Figure 1, of the drawings which is constructed of pieces of wood, about one and a half inches long, and $\frac{3}{8}$ of an inch in diameter, with a $\frac{2}{16}$ of an inch hole bored through its center and those pieces strung on to an elastic or linen cord, for a skirt one yard diameter I make use of 71 of those pieces as, *a*, Fig. 1, and one piece of Fig. 10 which is the tightener and in all cases, or of whatever material, the outside of the piece be made of, it will be important that the angle of the end radiates to the center *C*, if made of wood it may be turned off in the shape of a spool or scalloped out as Fig. 2, to give lightness to the hoop. The lines traced with red ink in all the different figures refer to the cord whether it pass through the spool or be attached to the outside of it.

Fig. 3, represents the mode of using india rubber tubing with the cylinders placed outside of it.

Fig. 7 represents the mode, of constructing the spool, or ball, of metal. I make two thimbles of any desired metal as tin brass

or sheet iron about $\frac{5}{16}$ diameter, more or less as the case may require, and any desired length, $\frac{3}{4}$ to $\frac{1}{4}$ inches will be a desirable length for any size hoop. I make one of such size that it shall pass over the other, forming up by machinery one end of each piece, to the size of the cord, I wish to make use of, which may be of catgut or linen to work the best, a light iron wire may work well, inside of these two tubes I place a spiral spring or its equivalent an india rubber tube or cylinder of suitable elasticity, to give action to the hoop, which will be in proportion to the tension of the cord passing through the center.

Fig. 14 represents one made with india rubber tube and metal pipe, *a* the pipe, *b* the india rubber tube, *c* the cord, Fig. 8. I make by taking a piece of any suitable spring metal spring steel will be good $2\frac{1}{4}$ inches long more or less, punch a hole the size I wish my cord, these holes should be far enough from the end, to form a little more than a semicircle, and when each end is bent, have the spring of any desired length, I make a spiral spring and place inside of this which by compressing will form quite a stiff spring when both act together, as they will when the two ends of the cord which is drawn through the center are brought together, and drawn to any desired tension to give the hoop proper action and keep it in a perfect circle, when the lady is standing and allow it to take any form with the dress when the lady is sitting, and without any possibility of breaking or getting out of order, a hoop may be supported by tape as Fig. 16, in which case or in any case the side *o* of the spring should be kept on the outside, if tacked to the skirt as it may readily be, it keeps that position Fig. 15 shows the manner of forming one of the spools when made of wood for securing the ends of the cord or the same method may be used in the use of the metal tube, the great advantage of this hoop over any now in use is its great durability and safety in action and in its perfect adaptation to the skirt, which is not only an ornament to the dress as well as of great benefit to the wearer's health.

All other modes of hoops have not only been an annoyance to the lady herself but generally to those at least who sat by her side especially, in a coach, or in church, as there are many of them liable to break and

many of them when compressed, will not sustain pressure, by which to resume their proper shape, and leaves the dress in an uncomely position and again the smell of
5 the india rubber and gutta percha is objectionable, in this respect my hoop may be made without using any of these articles and will bear compressing, without being in any way prevented from resuming its
10 proper position.

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

Constructing the hoop of spools or tubes

as Figs. 1 and 2, strung upn an elastic cord 15 or its equivalent to give elasticity to the hoop, with the ends of the spools cut on a line radiating to the center of the hoop, whether the same be made of wood or any other substance to produce the same effect, 20 the whole being arranged substantially in the manner and for the purposes herein specified.

C. S. GOODMAN.

Witnesses:

D. SMITH,

J. F. WALLARD.