

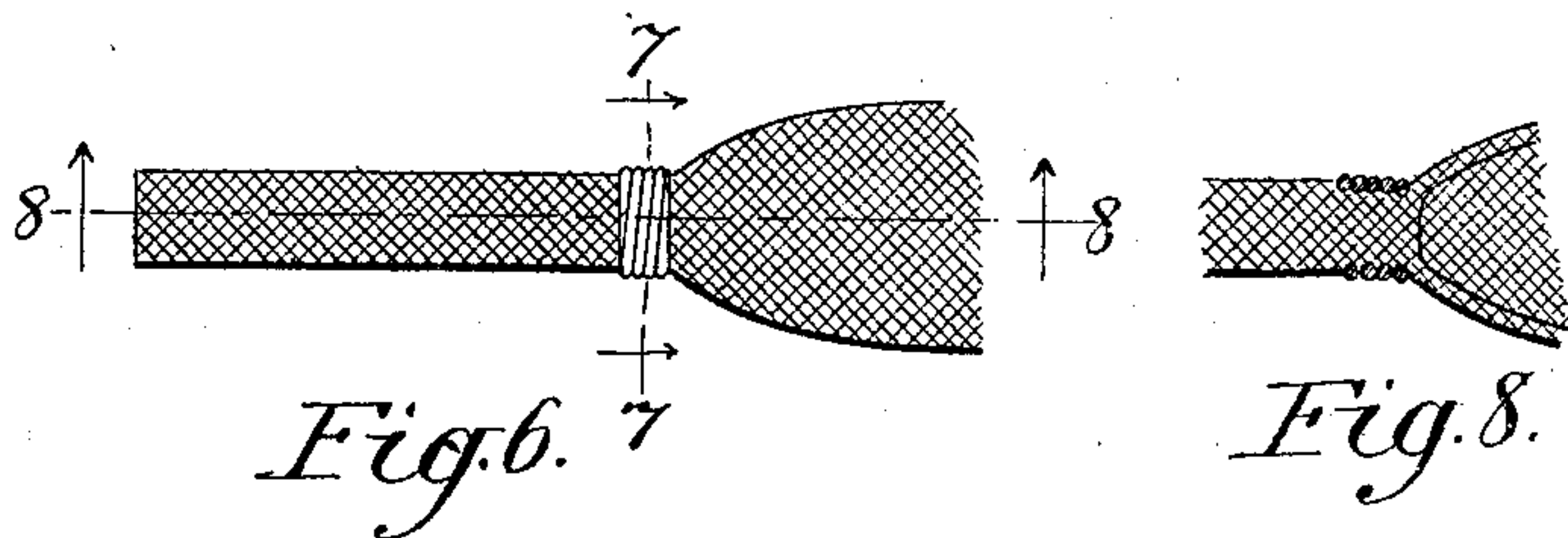
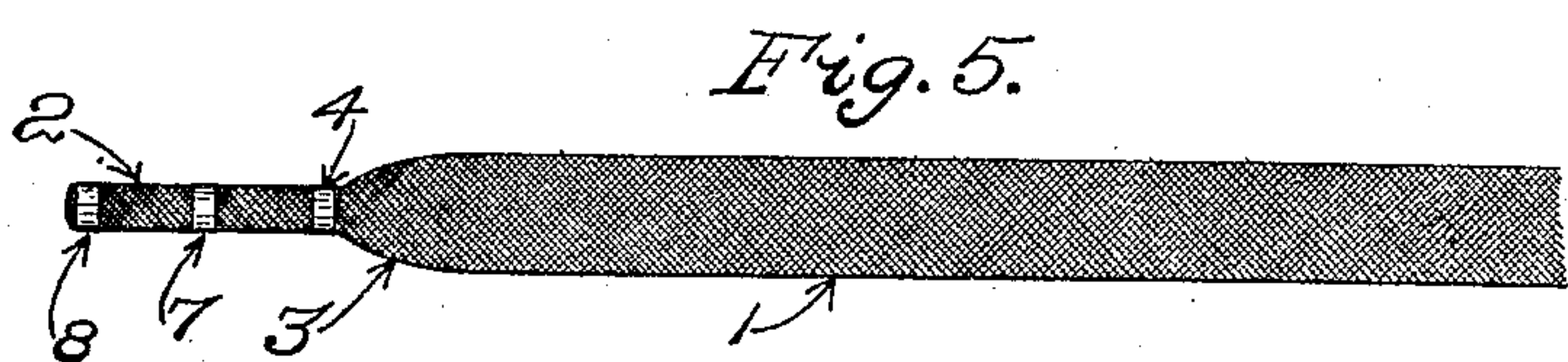
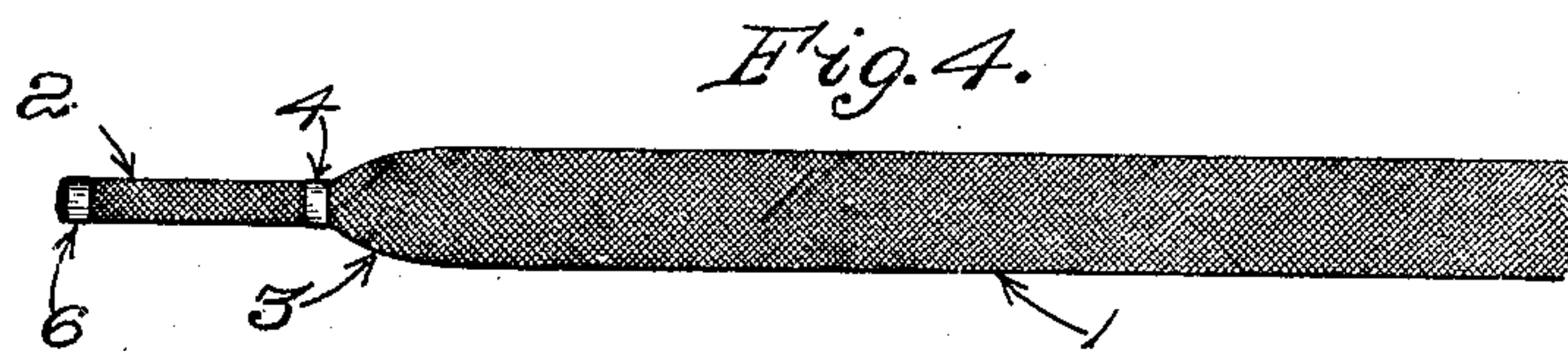
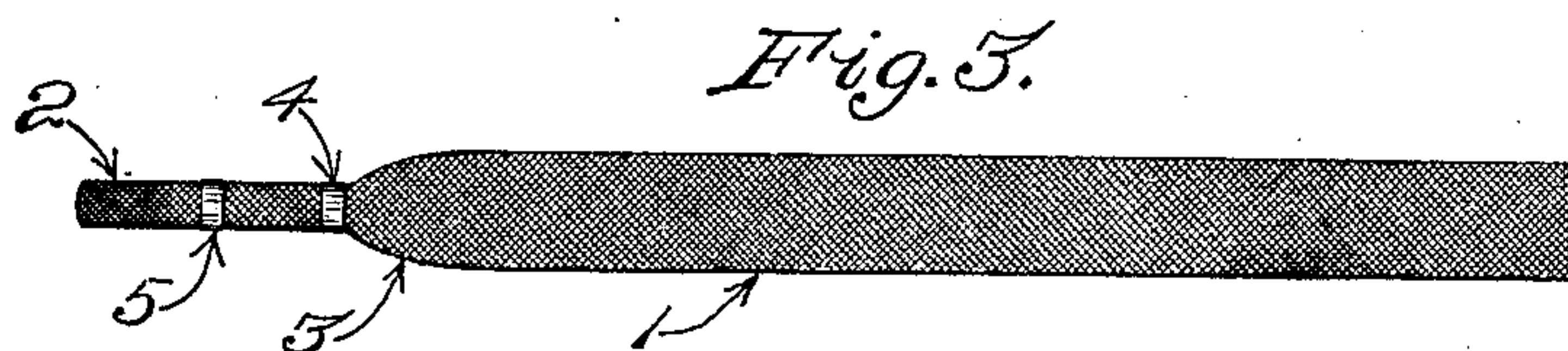
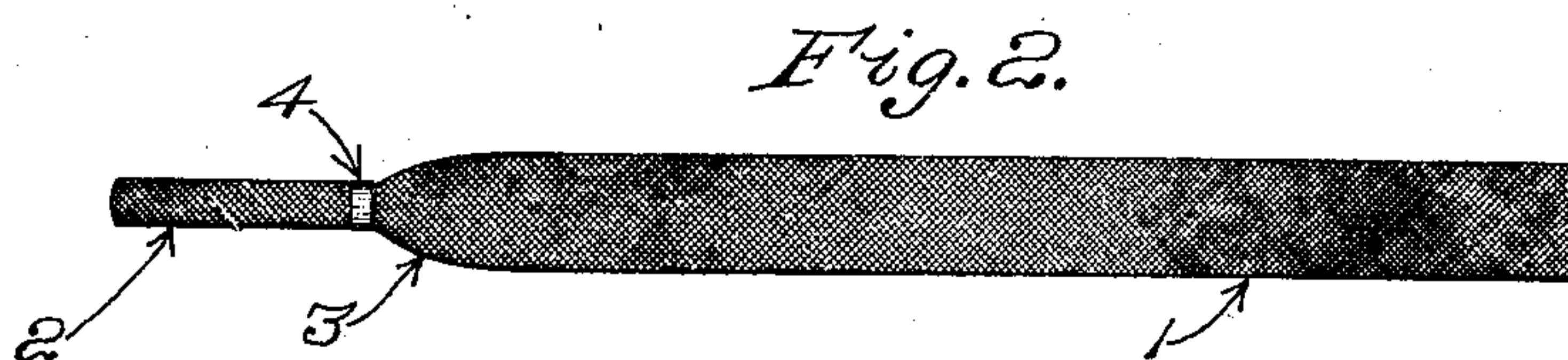
No. 828,525.

PATENTED AUG. 14, 1906.

F. W. WHITCHER.

LACING.

APPLICATION FILED MAR. 8, 1905.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK W. WHITCHER, OF BOSTON, MASSACHUSETTS.

LACING.

No. 828,525.

Specification of Letters Patent.

Patented Aug. 14, 1906.

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To all whom it may concern:

Be it known that I, FRANK W. WHITCHER, a citizen of the United States, residing at Boston, county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Lacings, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has to do with that form of lacings used for shoes, corsets, and the like which are provided with composition tips—such, for example, as are shown in Letters Patent of the United States No. 772,338, granted to E. M. S. Chandler, dated October 18, 1904. These composition tips are formed by bending, doubling, or twisting the end of the lacing upon itself, after which the tip is filled with some suitable material and the whole compressed between dies, whereby a properly-formed tip is produced, the said tip being stiff and convenient for use.

In the use of lacings provided with composition tips it is found that under wear, particularly when subjected to moisture, the tips have a tendency to disintegrate or lose their form and are thus materially impaired in efficiency.

My invention has for its object to provide a tip with means for reinforcing or strengthening it, whereby the disintegration or loss of form above referred to will be largely or wholly obviated.

My invention will be fully understood from the following description, together with the accompanying drawings, and the novel features thereof are pointed out, and clearly defined in the claims at the end of this specification.

In the drawings, Figure 1 is a view of a portion of a lacing having a composition tip of well-known form. Fig. 2 shows a composition tip with my invention applied at the inner end thereof. Fig. 3 is a similar view having my invention applied at the inner end of the tip and the middle thereof. Fig. 4 is a similar view showing my invention applied at the inner end and also at the point or free end thereof. Fig. 5 shows the application of my invention at the inner end of the tip at the point or free end and at the middle thereof. Fig. 6 shows, on an enlarged scale, a modified form of lacing-tip embodying my invention. Fig. 7 is a section on line 7 7, Fig. 6, looking in the direction of the arrows.

Fig. 8 is a section on line 8 8, Fig. 6, looking in the direction of the arrows.

Referring to the drawings, at 1 is shown a well-known form of lacing made from woven fabric or the like. The end of the lacing is covered with or embedded in suitable composition or other stiffening material, which is preferably pressed to form the tip 2, as shown. In Fig. 2 is shown a lacing having a body 1 and a tip 2 made in the same way as has just been described. Around the cylindrical stiffened tip 2, preferably at the inner end or base thereof and close to the tapering portion 3, I place a band or collar 4, preferably of metal, which may be applied in one strip of the whole width of the band or in several turns or convolutions of a narrower strip or of a wire. A lacing-tip provided with a reinforcing-band composed of turns or convolutions of wire 4 is shown in Figs. 6, 7, and 8. This band is preferably pressed onto or around the tip, so that it holds tightly or clamps the tip at this point, or the ends of the band may be firmly secured by inserting and clenching them in the material of the tip. Bands or collars of the kind just described may also be placed at other convenient points upon the lacing-tip, as shown at 5, 6, 7, and 8 in Figs. 3, 4, and 5—namely, at each end and at the middle of the tip 2. These bands or collars, which are independent and separated from each other by an intermediate space, may be varied in width and may be located wherever desired throughout the length of the tip. I find it advisable that one of the bands or collars be placed at the inner end or base of the tip as close as possible to the tapered portion 3, which is the uncovered fabric of the lacing next the tip. The band 4 when thus placed protects a composition tip from being broken by strain on the lacing tending to spread it to its normal width. I have found by experiment and actual practice that it is at this point that the disintegration of a composition tip usually begins to take place, this being the point first attacked by any moisture in the lacing. The band being located at this point effectually prevents this action. In tips of other material the inner end of the tip is the point at which in my experience a reinforcement may be most advantageously employed. These bands or collars may be made very ornamental in color or design, and therefore serve not only

to increase greatly the utility of the tip, but very materially enhances its finish and appearance.

What I claim is—

- 5 1. A composition or stiffened tip for lacings provided with an external, encircling, metallic, reinforcing band.
2. A composition or stiffened tip for lacings provided with external, encircling, me-

tallic, reinforcing bands, one of which is located at the base or inner end of said stiffened tip. 10

In testimony whereof I affix my signature in presence of two witnesses.

FRANK W. WHITCHER.

Witnesses:

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