

No. 638,865.

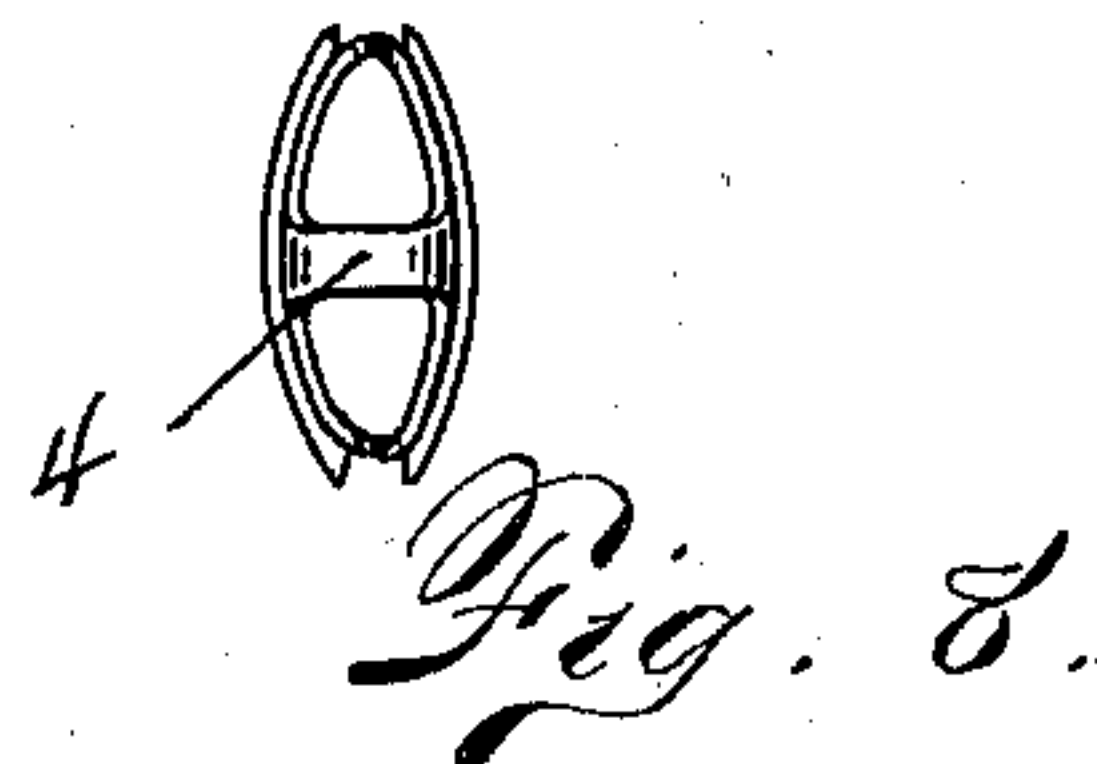
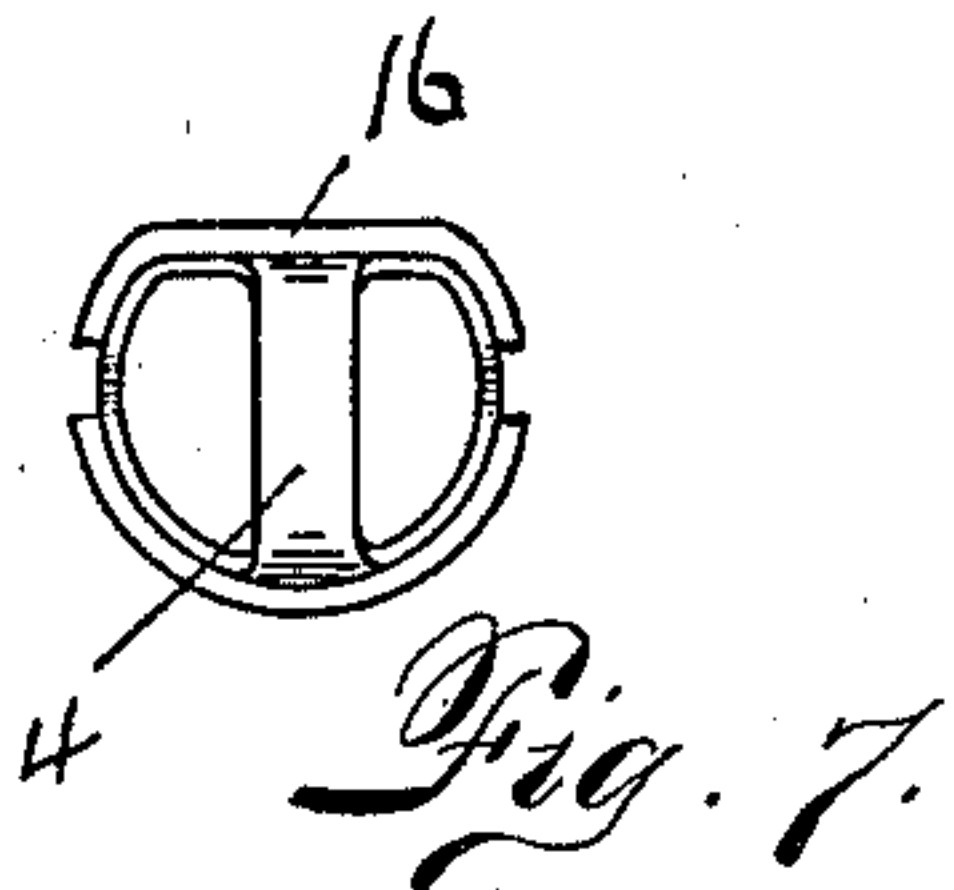
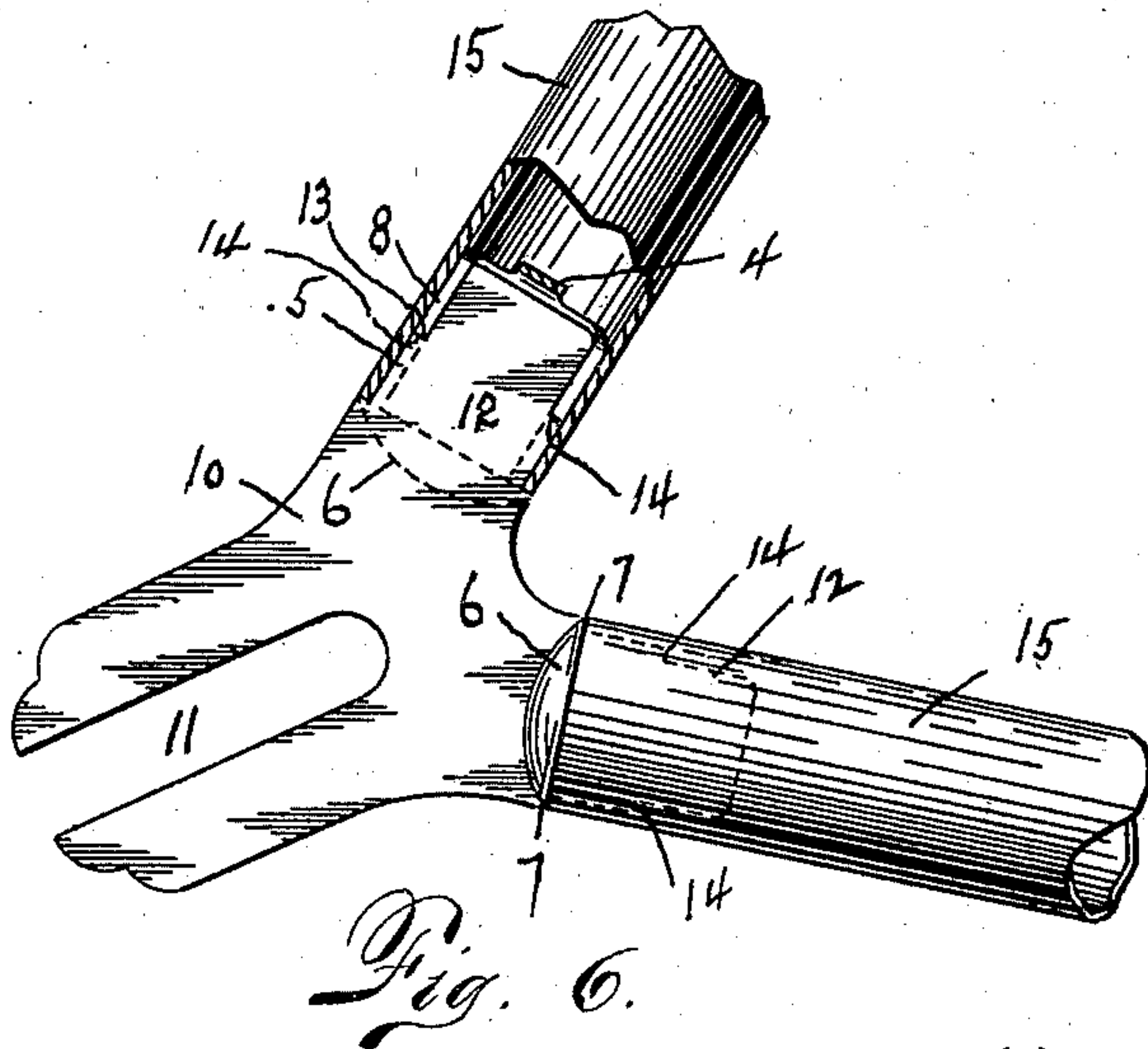
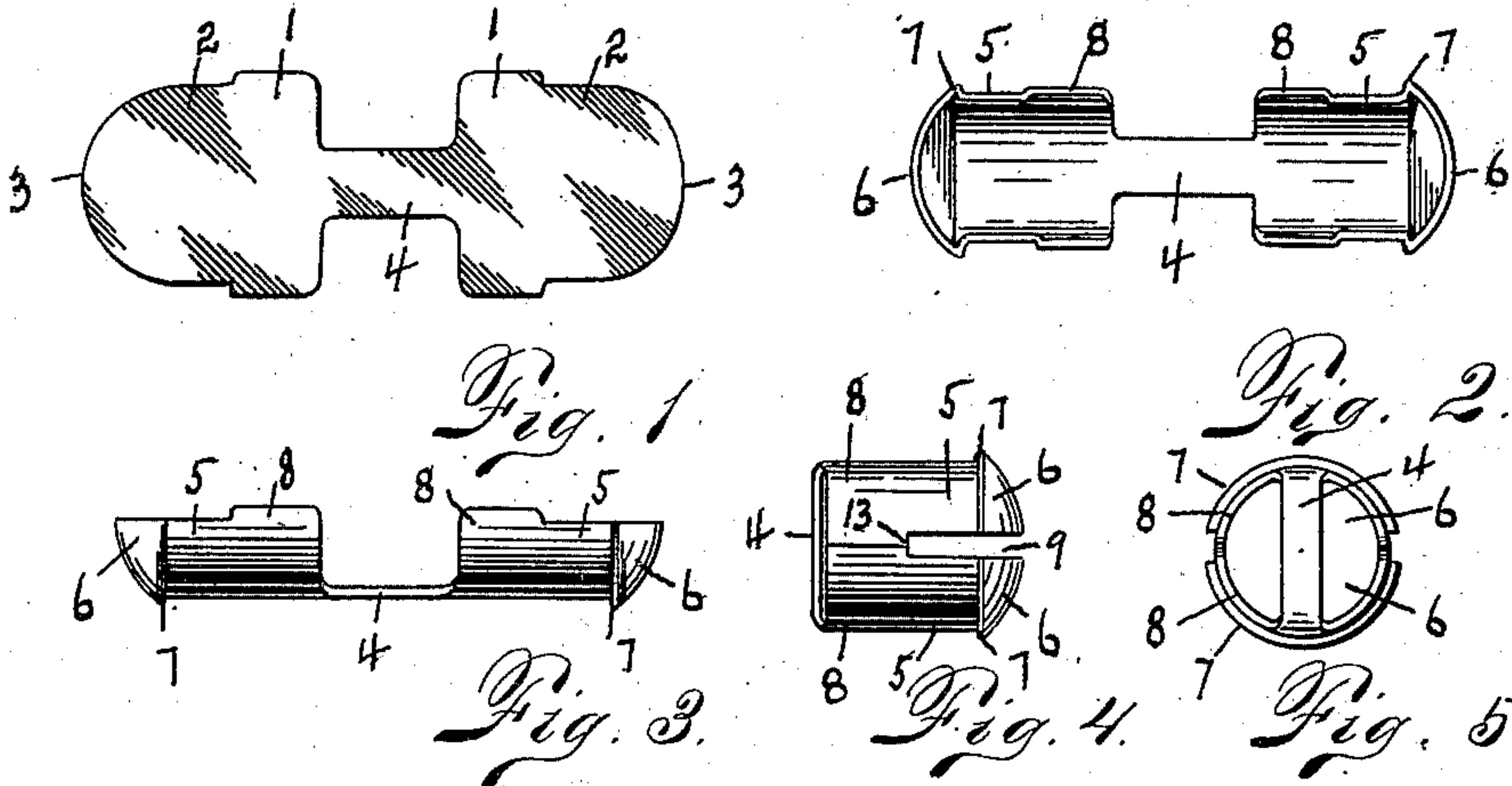
Patented Dec. 12, 1899.

W. H. CROSBY & E. EHLER.

BICYCLE FITTING.

(Application filed Dec. 17, 1898.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM H. CROSBY AND EDWARD EHLER, OF BUFFALO, NEW YORK,
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BICYCLE-FITTING.

SPECIFICATION forming part of Letters Patent No. 638,865, dated December 12, 1899.

Application filed December 17, 1898. Serial No. 699,624. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. CROSBY and EDWARD EHLER, citizens of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Bicycle-Fittings; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

Our invention relates to the thimbles which are employed for connecting the rear-fork end and similar fittings of a bicycle or other velocipede with the tubular members of the frame, and more particularly to thimbles of this kind which consist of similar halves or sections.

The object of our invention is to provide a thimble of economical construction by which a neat, strong, and durable joint is effected and which can be readily applied to the fork end or similar part and cheaply and quickly fitted to the frame-tubes.

In the accompanying drawings, Figure 1 is a plan view of the blank from which the thimble is formed. Fig. 2 is an inside view of the blank after stamping the same. Fig. 3 is a side elevation of the stamped blank. Fig. 4 is a side elevation of the completed thimble. Fig. 5 is an end view of the same. Fig. 6 is a sectional side elevation showing the application of our improved thimble to the rear-fork end and adjacent tubes of a bicycle. Figs. 7 and 8 are end views of modified forms of the thimble.

Like numerals of reference refer to like parts in the several figures.

The thimble consists of two similar sections, each of which is convex or approximately semicylindrical in form, so that the sections when brought together form a cylindrical or approximately cylindrical thimble. The sections are connected together at one end by a transverse bar or strip 4, while their opposite ends are disconnected and separated by a longitudinal slot 9, which extends inwardly from the adjacent end of the thimble to about

the center thereof. This slot is formed by recessing the opposing edges of the thimbles, the inner ends of the recesses forming shoulders 13, as shown in Fig. 4. The remaining unrecessed portions of the sections meet or abut against each other, as shown in Fig. 4. The slot 9 receives the wide portion of the lug or extension 12 of the fork end 10, and the shoulders 13 of the thimble abut against the usual shoulders 14, formed at the junction of the wide and narrow portions of the lug. The disconnected outer ends of the sections are each provided with a hollow convex head or enlargement 6, forming external shoulders 7 on the thimble, against which the adjacent end of the frame-tube 15 abuts, the convex head of the thimble closing the end of the tube and forming a neat finish in the usual manner.

Our improved thimble is stamped in one piece from a blank of sheet metal cut to the form shown in Fig. 1. The blank consists of twin sections, each of which comprises an inner rectangular portion 1 and an outer portion 2, made of less width than the inner portion and having rounded ends 3. These sections are united at their inner ends by the connecting bar or strip 4. After cutting the blank the sections of the same are stamped by suitable dies into the half-round form shown in Figs. 2 and 3, the rounded portions 3 of the blank being at the same time stamped to form the convex heads 6 and shoulders 7. The stamped sections of the thimble are then bent inwardly at right angles to the connecting-bar 4 and brought against each other, so that the unrecessed edges of the sections meet, whereby the sections together form the complete thimble, as shown in Fig. 4. As shown in the drawings, the bends are located at the junction of the sections with the ends of their connecting-bar.

In assembling the parts the slotted end of the thimble is passed over the lug 12 of the fork end until the shoulders 13, formed by the inner end of its slot, abut against the shoulders 14 of the lug, and the frame-tube 15 is then passed over the thimble until its end abuts against the shoulders 7 of the thimble, after which the assembled parts are rigidly joined by brazing.

In Fig. 7 is illustrated a modified form of

thimble in which one side thereof is partly flattened, adapting the same to tubing of D-shaped cross-section, while in Fig. 8 is shown another modification in which the

5 thimble is elliptical in form, adapting it to tubing of corresponding cross-section. Both of these modified forms of the thimble are made in substantially the same manner as the cylindrical thimble first described.

10 Our improved thimble is formed from the blank by a single stamping operation and a subsequent bending operation, the shoulders 7 and the slot 9 being formed by the same operations, while in other thimbles stamped

15 from a single blank the slot is formed by milling or sawing the same. The cost of producing our thimble is thus reduced to a minimum. A further important advantage of the thimble is that it can be cheaply fitted to the

20 frame-tubing and at the same time readily applied to the fork end or similar cycle-fitting.

We are aware that it has been proposed to construct such thimbles of two like independent or disconnected sections which bear at

25 their straight edges against opposite sides of the fork end. A thimble made of separate sections can be readily fitted to a frame-tube in case the thimble is somewhat too large

30 when applied to the fork end. In such a case it is only necessary to grind or cut off the straight edges of the thimble-sections sufficiently to reduce the thimble to the proper diameter, which can be done in less time and

35 at less expense than by turning off the outer cylindrical surface of the thimble, which is necessary when the same is made in the form of a seamless or continuous cylinder; but while such a divided thimble affords this ad-

40 vantage it has the disadvantage of requiring two pieces to be handled and assembled. By our improved construction a thimble of excessive diameter can be fitted in the same manner as one composed of two separate

45 parts, and the thimble-sections are at the

same time united, requiring the handling of but a single part, thus combining the advantage of ready and inexpensive fitting afforded by a two-piece thimble with the advantage of quick and convenient assemblage 50 afforded by the ordinary one-piece thimble.

We claim as our invention—

1. A thimble for connecting a tubular member of a velocipede-frame with a fork end or similar fitting, consisting of two convex or 55 approximately semicylindrical sections disconnected at their outer ends and connected together at their inner ends by a transverse bar, and having their opposing straight edges separated by a longitudinal slot or recess 60 which extends to the outer end of the thimble and is adapted to receive the lug of the fork end or similar fitting, substantially as set forth.

2. A thimble for connecting a tubular member of a velocipede-frame with a fork end or similar fitting, consisting of two convex or 65 approximately semicylindrical sections adapted to bear at their opposing straight edges against opposite sides of a fork end or similar 70 fitting and each provided in its straight edges with longitudinal recesses which extend from the central portion of the section to the outer end thereof and together form a longitudinal slot, the closed inner end of which is adapted 75 to bear against the fork end, the sections being connected together at their inner ends by a transverse bar formed integral therewith and each section being provided at its outer end with a head or enlargement, forming an 80 external shoulder against which the end of a frame-tube is adapted to abut, substantially as set forth.

Witness our hands this 14th day of December, 1898.

WILLIAM H. CROSBY.
EDWARD EHRLER.

Witnesses:

CHARLES MAYER,
JNO. J. BONNER.