

(No Model.)

C. S. SMITH.
FITTING FOR BICYCLES.

No. 587,337.

Patented Aug. 3, 1897.

Fig. 1.

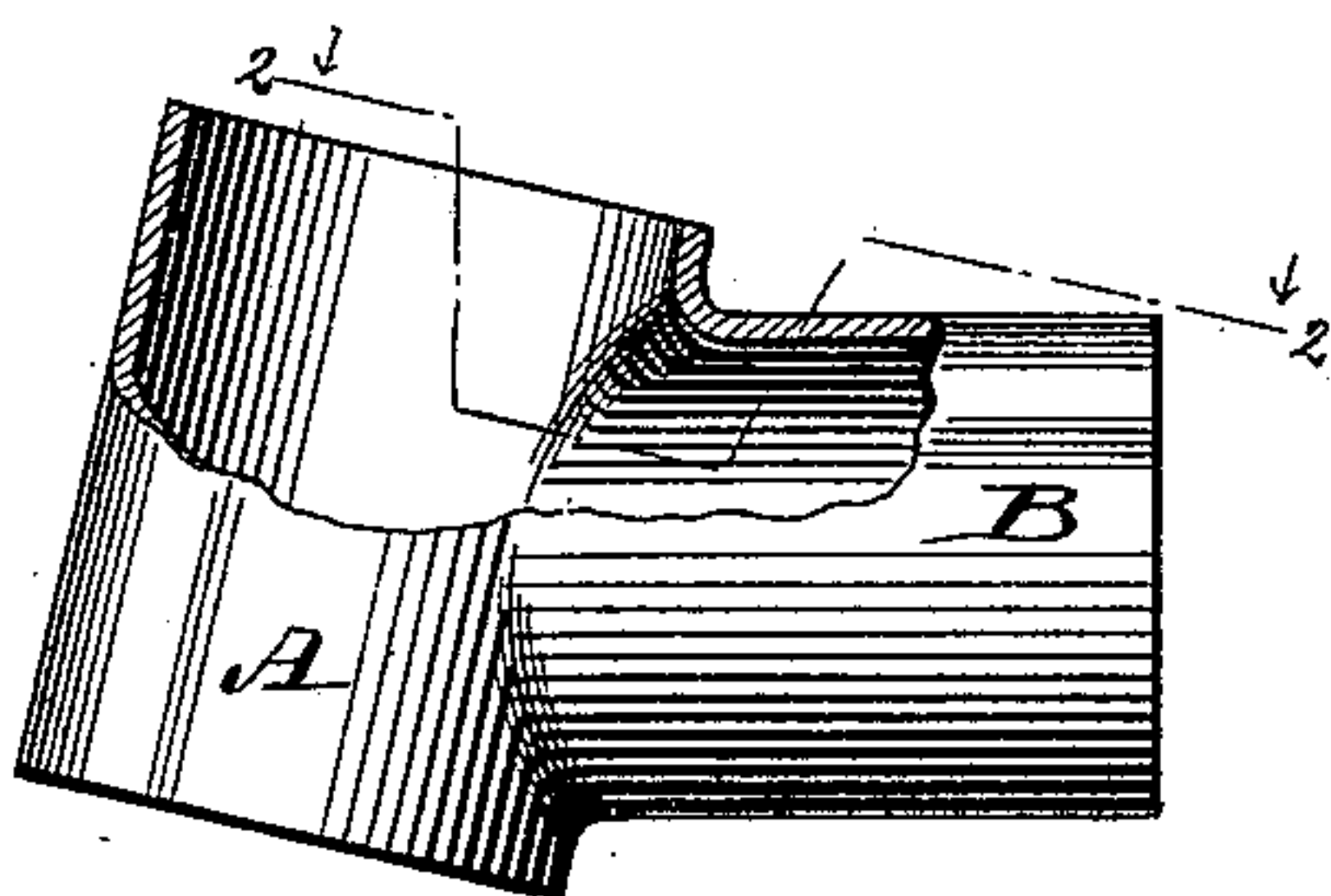


Fig. 2.

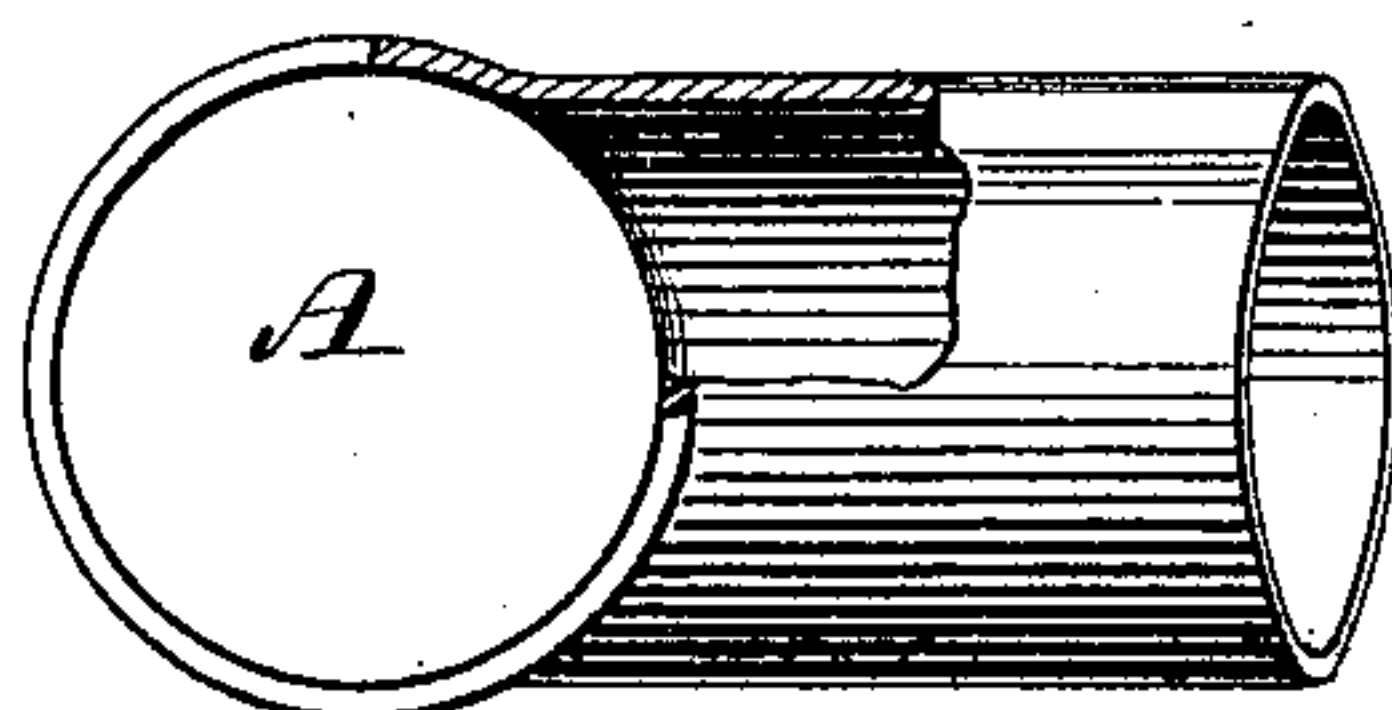


Fig. 3.

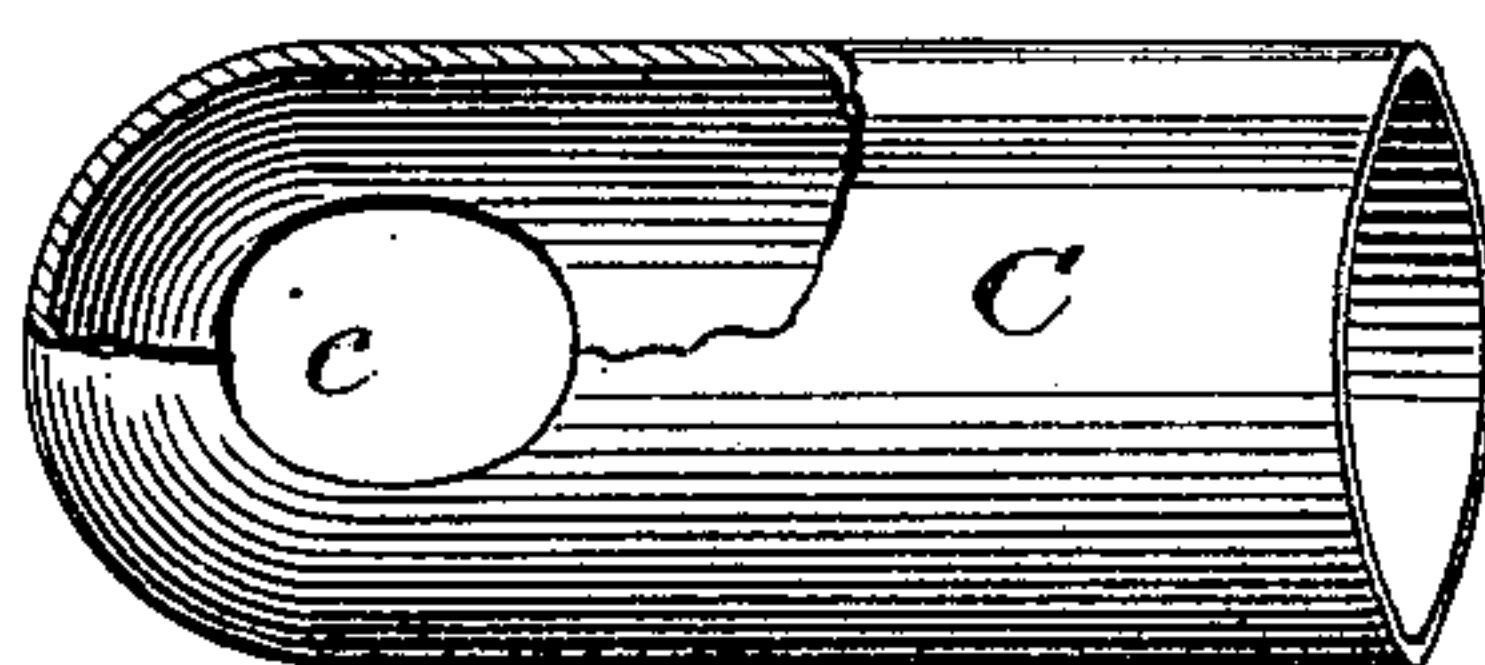
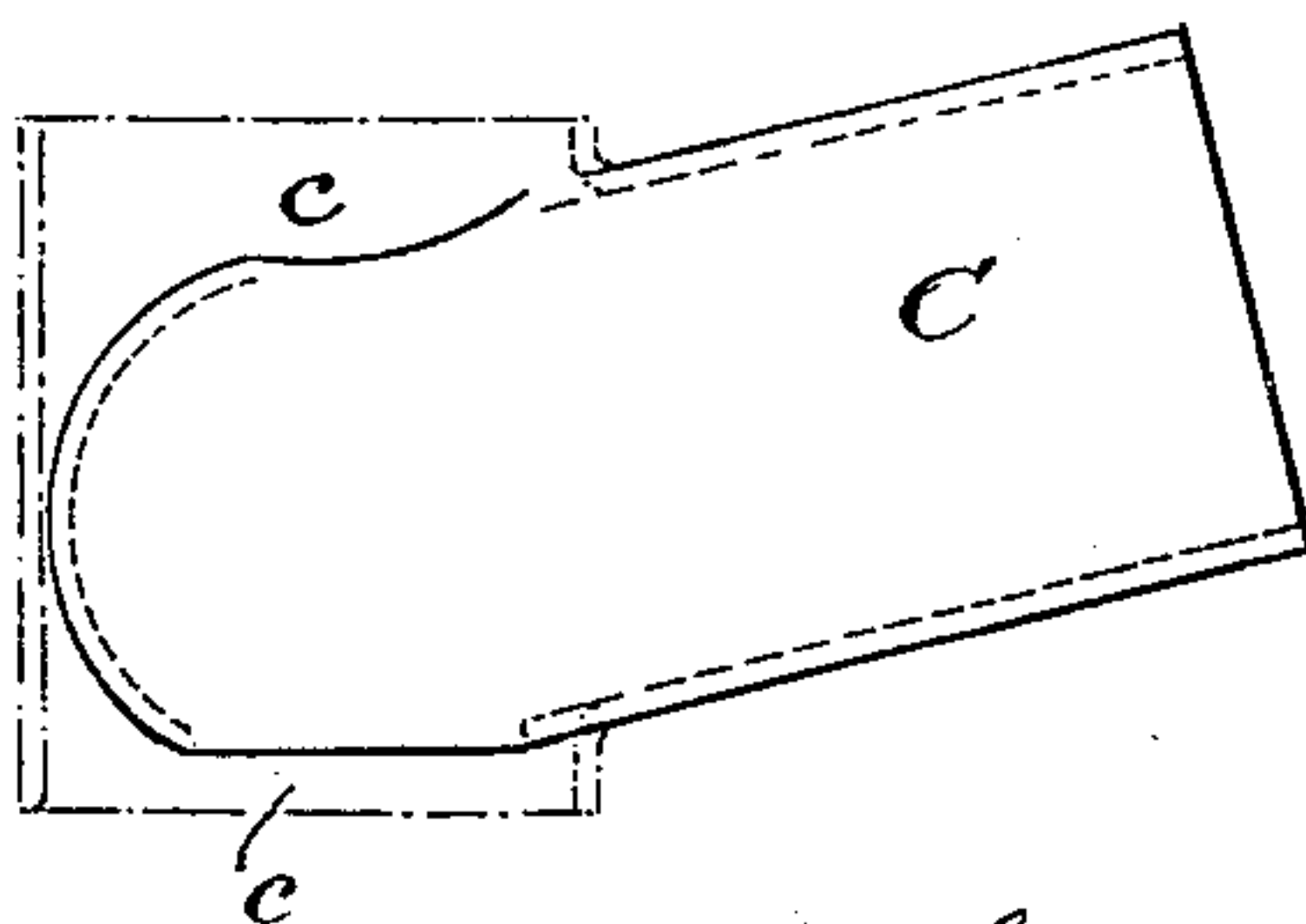


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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FITTING FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 587,337, dated August 3, 1897.

Application filed August 6, 1896. Serial No. 601,859. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. SMITH, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Fittings for Bicycles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The main object of my invention is to produce from sheet-metal a seamless connection or T-fitting for bicycles without welded, brazed, or other joints.

It consists of the method of making the fitting hereinafter particularly described, and pointed out in the claim.

In the accompanying drawings like letters designate the same parts in the several figures.

Figure 1 is a side elevation of a T-fitting constructed according to my invention, a part of the fitting being broken away and shown in medial vertical section. Fig. 2 is a top or plan view of the same, a portion being broken away and shown in section on the line 2 2, Fig. 1. Fig. 3 is a plan and sectional view, and Fig. 4 a side elevation and diagram illustrating the steps in the process of making the fitting.

For the purpose of illustration I have shown and will describe the process of making a fitting designed particularly to connect the steering-head and one of the reaches of a bicycle-frame; but with slight modification the process is applicable to the construction of seamless handle-bar stems and T's and seat-posts and T's, one of the arms of the fitting for either of these purposes being made considerably longer and of smaller diameter than in the fitting herein shown and described, and for a handle-bar stem and T the short arm being formed at right angles to the longer arm or stem.

Referring to Figs. 1 and 2 of the drawings, A designates a seamless sleeve, fitted in this case to be brazed upon the steering-head of a

bicycle-frame, and B designates a hollow seamless cylindrical lug, arm, or extension formed on one side of the sleeve A transversely thereto and integrally therewith, the two parts constituting a fitting that is approximately T-shaped. In this case the arm or extension B is adapted to be brazed upon the end of one of the reaches and to connect it with the steering-head of a bicycle-frame.

Heretofore fittings of this character have been made from sheet metal by forming one part of the fitting from a single piece of sheet metal by drawing from a sheet-metal blank a seamless tube to form the part B and wrapping the metal at one end of the tube around a mandrel to form the part A, the meeting edges of which on the opposite side from the part B being brazed or welded together. Such a fitting has also been made by wrapping a sheet-metal blank, the ends of which have been pressed by dies into semi-cylindrical shape to form the part B, around a mandrel to form the part A, the meeting edges along opposite sides of the part B being brazed or welded together. It is the purpose of my invention to avoid brazed, welded, or other joints in the construction of a fitting of this kind. By my method of construction a sheet-metal blank is drawn by dies into the form of a tube or cylinder C, having a closed, rounded, or semispherical end, as shown in Fig. 3. This tube or cylinder is punched or otherwise formed in opposite sides and near its closed end with holes *c c* of considerably smaller diameter than the diameter of the tube. The end of the tube is then expanded into cylindrical form, the edges around the holes *c c* being flanged or turned outwardly, as indicated by dotted lines in Fig. 4, by passing a mandrel or suitably-shaped die through said holes. A light seamless fitting is thus easily and cheaply produced without lapping, welding, or brazing.

I claim—

The herein-described method of making seamless T-shaped fittings of sheet metal without lapping, welding or brazing, which consists in first forming from a sheet-metal blank a tube or cylinder having an open end and a closed end, forming transversely

through and in opposite sides of said tube or
cylinder near its closed end and in line with
each other holes of smaller diameter than the
cylinder, expanding the closed end of the tube
5 or cylinder and flanging or turning outwardly
its edges around said holes into cylindrical
form, substantially as and for the purposes
set forth.

In testimony that I claim the foregoing as
my own I affix my signature in presence of 10
two witnesses.

CHARLES S. SMITH.

Witnesses:

CHAS. L. GOSS,
M. L. EMERY.