No. 682,713. Patented Sept. 17, 1901.

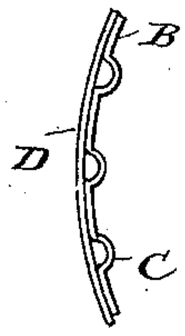
T. A. JUDGE.

CONSTRUCTION OF TUBES FROM SINGLE STRIPS OF METAL.

(Application filed July 18, 1901.)

(No Model.)

Fig. 2.



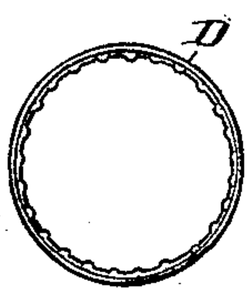


Fig. 1.

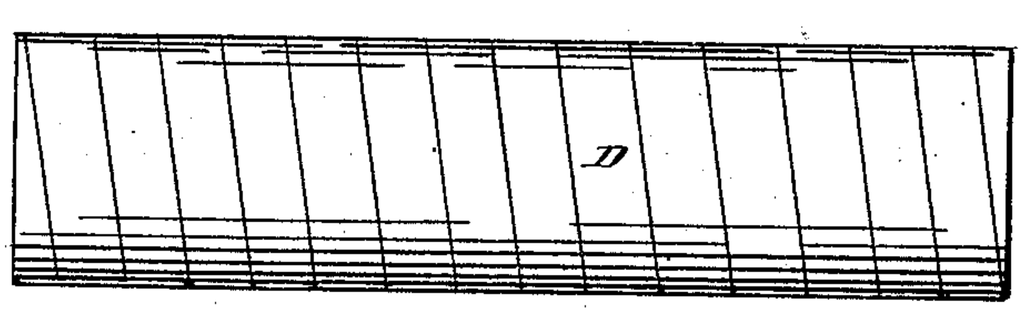


Fig. 4.

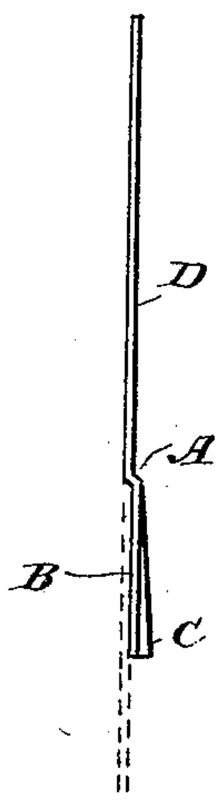
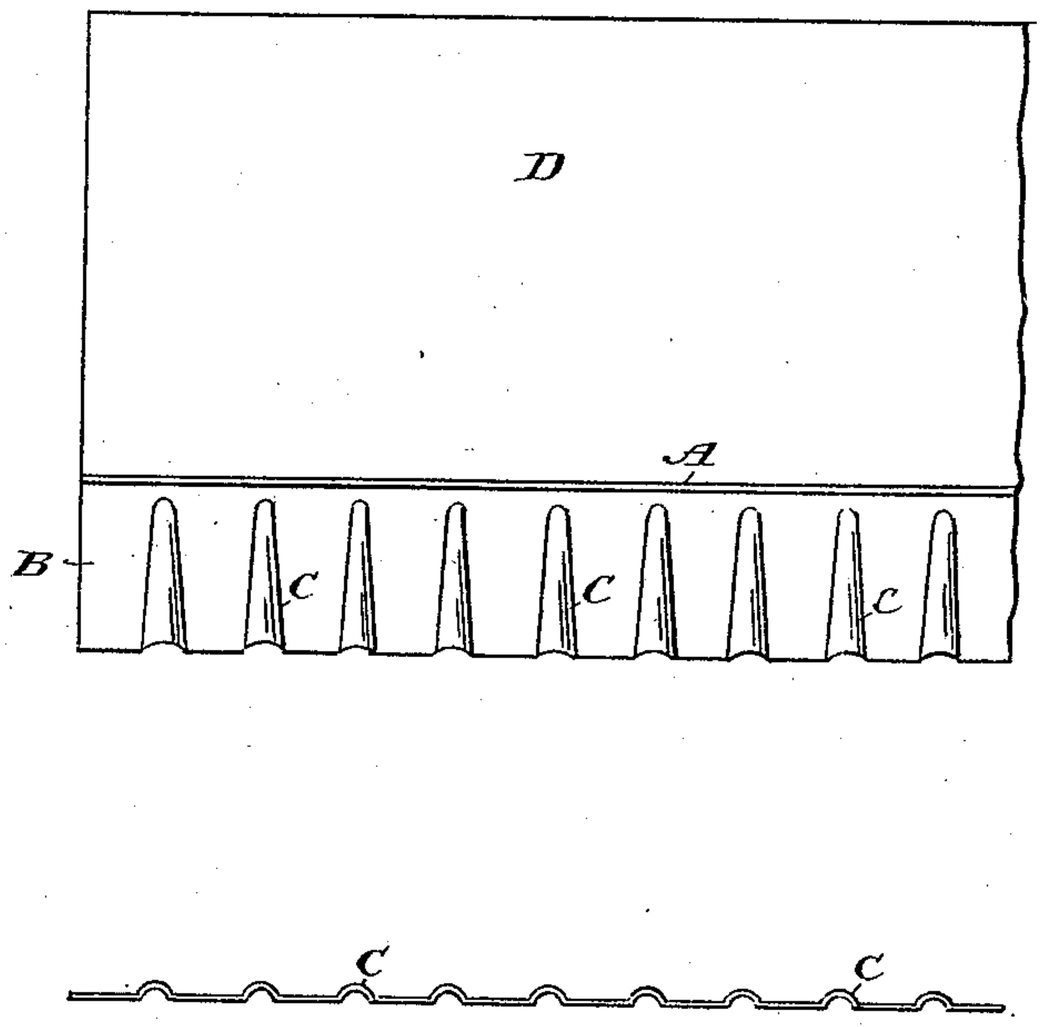


Fig. 3.



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UNITED STATES PATENT OFFICE.

THOMAS ALFRED JUDGE, OF SHEFFIELD, ENGLAND.

CONSTRUCTION OF TUBES FROM SINGLE STRIPS OF METAL.

SPECIFICATION forming part of Letters Patent No. 682,713, dated September 17, 1901.

Application filed July 18, 1901. Serial No. 68,821. (No model.)

To all whom it may concern:

Be it known that I, THOMAS ALFRED JUDGE, a subject of the King of Great Britain, residing in the city of Sheffield, county of York, England, have invented new and useful Improvements in the Construction of Tubes and Cylinders from a Single Strip of Metal, of which the following is a specification.

My invention relates to tubes, cylinders, or drums constructed from a single continuous strip of metal, such as steel, which shall be of one diameter from end to end, without ribs, rivets, or other interferences with the periphery, and in which the edges of the strip are supported and united throughout the entire length of the coil.

In the annexed drawings, Figure 1 is a view of a cylinder, showing the junction of the coils. Fig. 2 is an end view of same. Fig. 3 represents the inside face of the corrugated and set-down or stepped strip, on an enlarged scale; and Fig. 4, an end view of same.

In the manufacture of a cylinder according to my invention I take a strip of thin metal—say, for example, steel—of the desired length and width, and I first set it down or form a step A upon it by means of rolls. I then pass it through either a pair of prepared rolls or a press to produce upon the narrow stepped or set-down edge B a series of tapering indentations C, their projecting convex parts being upon the under side or that part which will be inside the coil. The strip so prepared is now passed through a combined coiling-machine and bath of molten solder, by means which the edge of the flat part D is coiled upon the set-down part B, abutting against the step A, as indicated in Fig. 4, and the molten solder being admitted to the interior of the first coils as they leave the coiling-machine the junction of the overlapping coils is automatically soldered together.

I am aware that cylinders have been made prior to my invention from two or more strips of metal coiled one upon the other and also from a single strip with a lap-joint, also that such joints have been soldered, and I therefore do not claim cylinders, tubes, or drums constructed by such means, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

A cylinder, tube, or drum, constructed from a strip of metal set down longitudinally on one edge to form a step, such set-down edge crimped or corrugated with tapering grooves, then coiled with the plain edge of the strip abutting against the said step and lying upon the set-down portion, to which it is soldered as hereinbefore described and set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

THOMAS ALFRED JUDGE.

Witnesses:
ROBERT F. DRURY,
ENSOR D. DRURY.