

(No Model.)

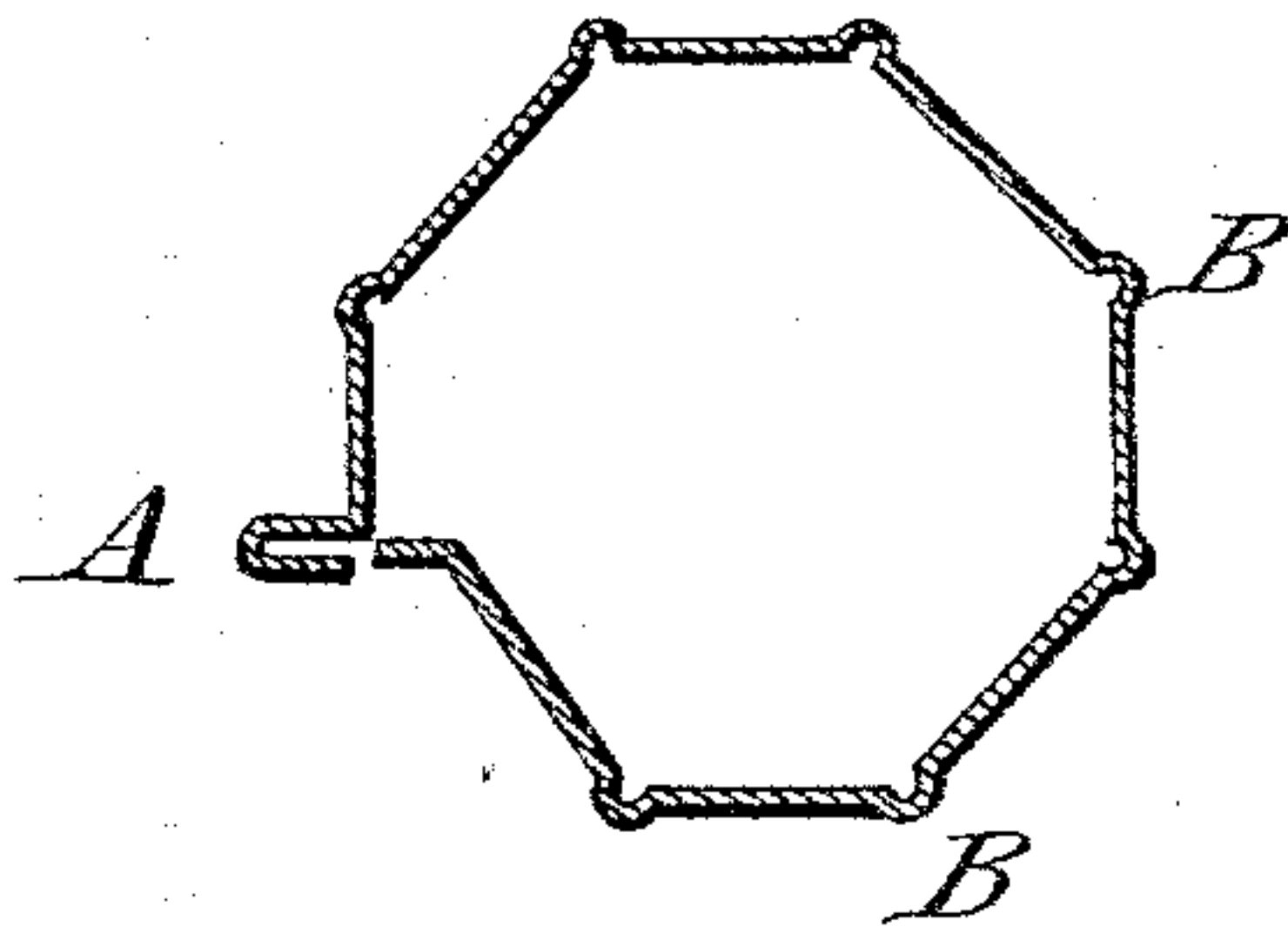
H. PFEIFFER.

EXPANSIBLE CONDUCTOR PIPE.

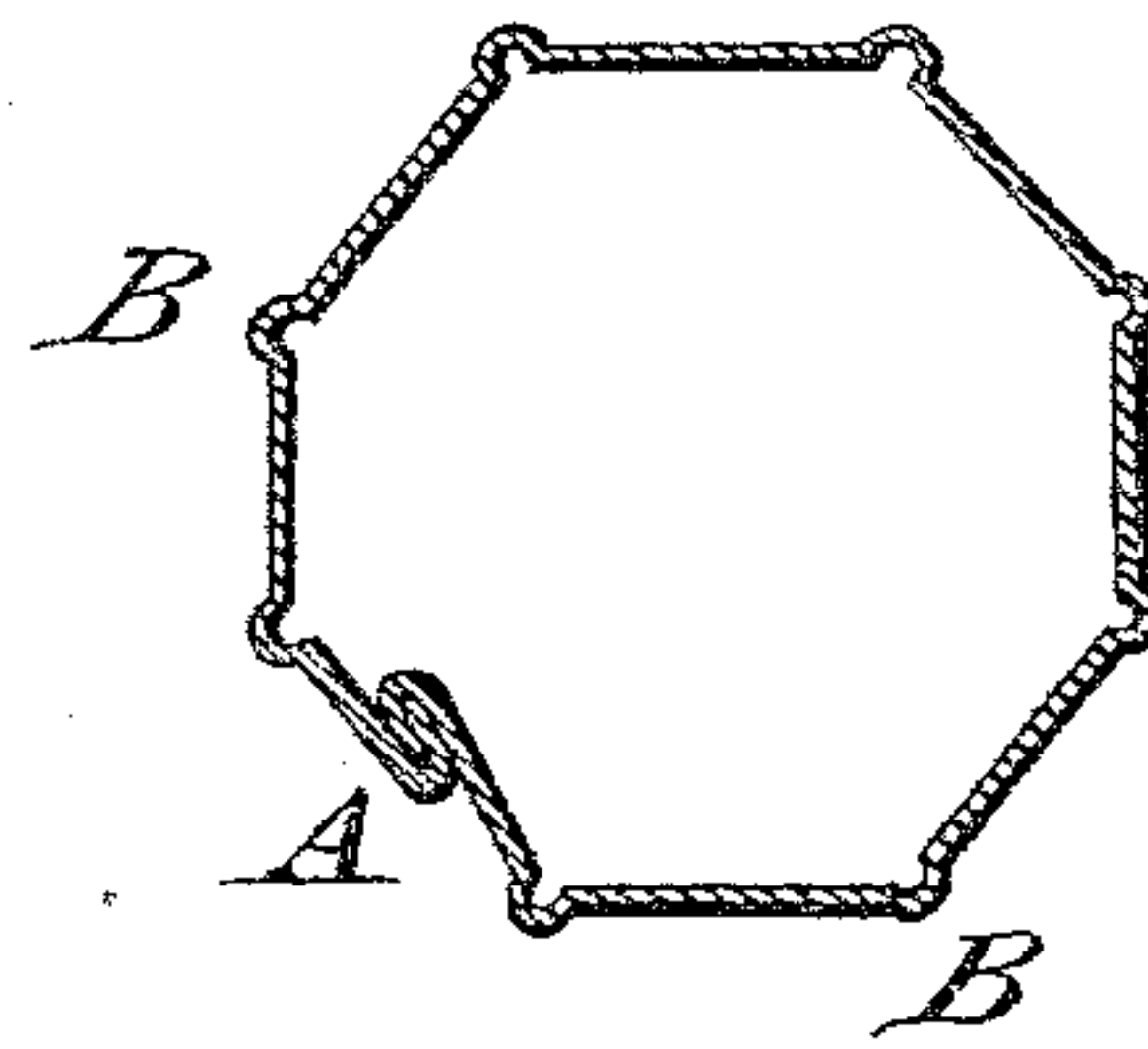
No. 356,888.

Patented Feb. 1, 1887.

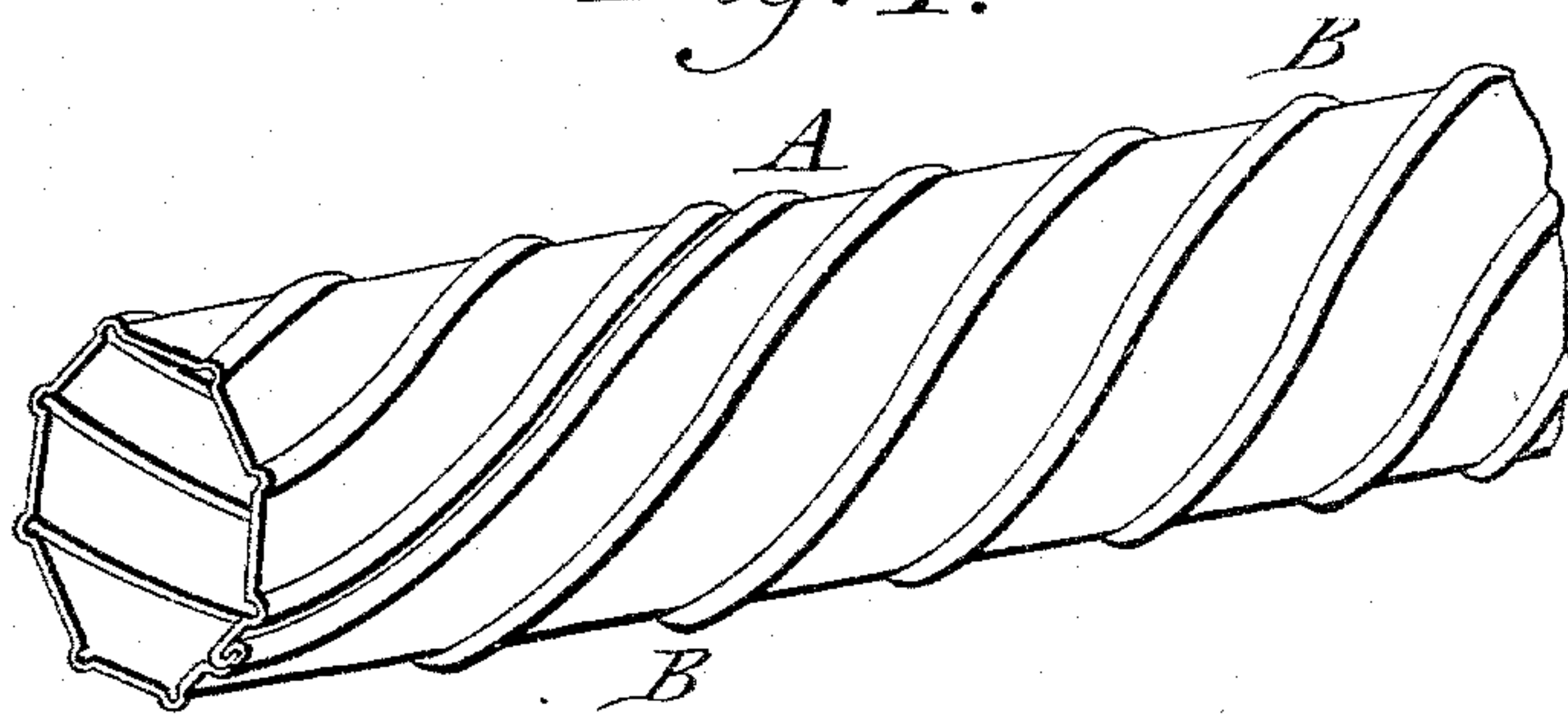
*Fig. 2.*



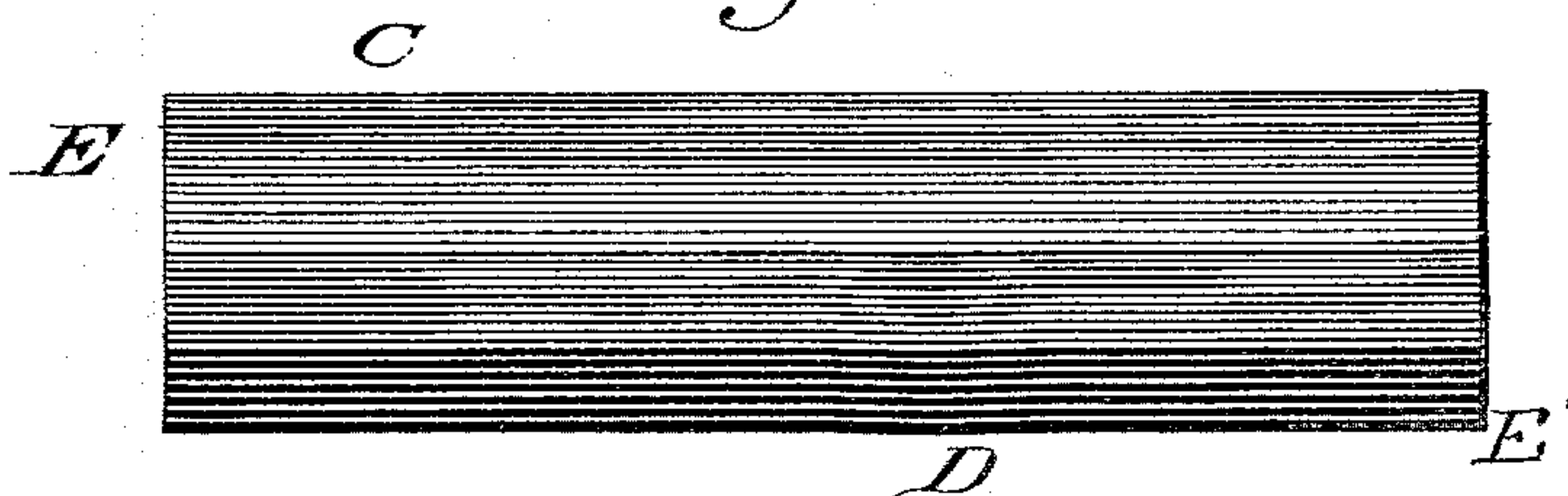
*Fig. 3.*



*Fig. 1.*



*Fig. 5.*



*Fig. 4.*



WITNESSES:

*P. F. Apple.*  
*Wm. H. Carson.*

INVENTOR

*Henry Pfeiffer*  
*per George E. Buckley*  
*his Atty.*

# UNITED STATES PATENT OFFICE.

HENRY PFEIFFER, OF PHILADELPHIA, PENNSYLVANIA.

## EXPANSIBLE CONDUCTOR-PIPE.

SPECIFICATION forming part of Letters Patent No. 356,888, dated February 1, 1887.

Application filed August 2, 1886. Serial No. 209,817. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY PFEIFFER, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented an Improved Expanding Conductor-Pipe; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making part hereof.

10 The nature of my invention will fully appear from the following specification and claims.

In the drawings, Figure 1 is a perspective view of a short section of my pipe; Fig. 2, an end view of the same before the joint is made; Fig. 3, a similar view after the joint is made; Fig. 4, an end view showing a modification of my improved tubing polygonal in cross-section; and Fig. 5, a side view of a corrugated sheet before the seam is made.

20 A, Fig. 1, is the seam formed by the joint between the longitudinal edges of the sheet forming the tube.

B B are longitudinal corrugations. C is an end view of the enveloping half of the seam which engages with the longitudinal flanged portion D of the opposite longitudinal end of the sheet in the manner shown in Fig. 2, which shows the joint in process of formation. In Fig. 3 the joined edges C D are shown flattened down.

35 In constructing my tubing I first take a sheet of metal—such as sheet-tin, sheet-iron, sheet-brass, sheet-copper—and pass the same through rollers to corrugate or flute the same.

If it is desired to make the polygonal form of tubing, I pass the sheet through what is termed a "break," which will result in giving the sheet the form shown in end view in Fig. 4. This latter form is known in the art as "angled" sheet metal. When the sheet is thus angled or grooved, I place it upon a mandrel of a diameter in cross section nearly equal

to that of the tube to be formed. One operative takes hold of corner E of the sheet and the other operative seizes corner E', and they wind the sheet around the mandrel in opposite directions, bringing the opposite edges of the sheet in juxtaposition, as shown in Fig. 2. This operation is conducted in the same manner as would be employed in winding a ribbon spirally around a cylinder. Care should then be exercised to make a complete joint between the edges C and D, after which the joint is flattened down by hammering or pressure, as shown in Fig. 3. The ends of the section thus formed are trimmed off, and that one section of tubing is complete and will have the form shown in Fig. 1.

This form of tubing will possess all the expansive properties of corrugated tubing, while its twisted or curled form will almost entirely obviate the danger of the seam A opening. This form of tubing may be used also for decorative purposes, either in the character of a conductor for fluids or as an ornamental column in architecture and other construction.

I denominate the corrugations B or the angles shown in Fig. 4 "ridges."

I am well aware that plain tubing has been coiled into the spiral form, as in the well-known coil of steam-pipe, and I do not claim a coil of pipe as my invention; but

What I claim as new is—

1. A metallic tube provided with spiral joint A and spiral ridges B, substantially as described.

2. A straight tube formed of spirally-wound sheet metal and provided with the spiral seam A and the spiral ridges B, substantially as described.

HENRY PFEIFFER.

Witnesses:

WM. H. CARSON,

GEORGE E. BUCKLEY.