(No Model.)

H. KNIGHT.

FLEXIBLE TUBE.

No. 367,301. Patented July 26, 1887.

Fig. 2.

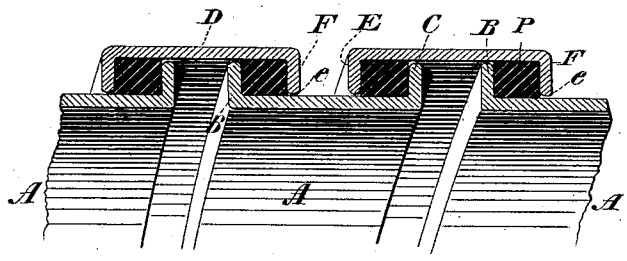
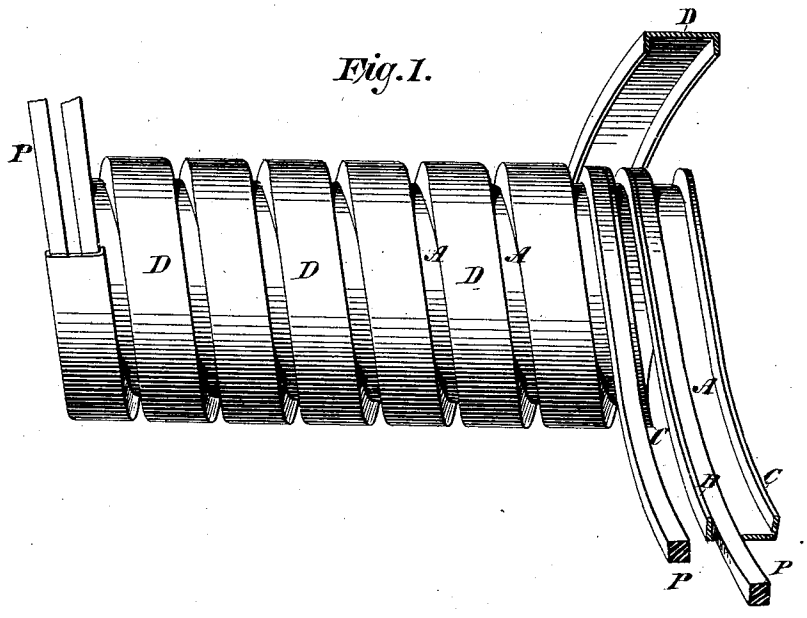


Fig. 1.



WITNESSES:

Gustave Dieterich

Geo. L. Wheelock

INVENTOR

Herbert Knight,

BY Knight Bros.

ATTORNEY

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

HERBERT KNIGHT, OF NEW YORK, N. Y.

FLEXIBLE TUBE.

SPECIFICATION forming part of Letters Patent No. 367,301, dated July 26, 1887.

Application filed April 28, 1887. Serial No. 236,528. (No model.)

To all whom it may concern:

Be it known that I, HERBERT KNIGHT, of New York, in the county and State of New York, have invented certain new and useful Improvements in Flexible Tubes, of which the following is a specification.

My invention relates to a flexible metallic tube; and it consists of two continuous strips of metal and independent strips of packing, the metallic strips having flanges at their edges, between which the strips of packing are inserted, one of the metallic strips forming the inner part of the tube and the other the outer part, as will be described.

Referring to the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of the tube, showing, also, how the parts are assembled together. Fig. 2 is a longitudinal section of a portion of the tube.

In the drawings, A represents a metallic strip having its edges turned outwardly, thereby forming flanges B C, as shown in Fig. 1.

D is a similar strip having flanges E F, turned in the opposite direction to B C. These two strips are assembled together as shown in the drawings, the strip A with the outwardly-extending flanges being first turned and bent into shape, the strip D being bent around it afterward.

Between the flanges E C and B F, respectively, are wound two independent strips of elastic packing, P, so that the joints will be secured from leaking and serve to prevent the water, steam, air, or other fluid that is passing through the pipe from escaping.

The edges *e* of the several flanges are made slightly rounded, so that when the pipe is bent the edges will turn on the opposed flat surfaces of the metallic strip without unnecessary friction.

The inner strip, A, is made of such a size as that it will press outward, and the outer strip, D, is made so that it will press inward, so that a continuous tight joint is always maintained.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. A tube formed of two or more continuous strips of metal which are helically wound one upon the other and made to interlock with each other, and independent strips between the flanges of the strips of metal, providing an elastic packing at the joints, substantially as shown and described.

2. The combination of the metallic strip A, having outwardly-extending flanges B C, and the corresponding strip, D, having the inwardly-extending flanges E F, with the elastic packing P, all arranged substantially as and for the purposes set forth.

3. The combination of the metallic strips overlapping each other, as shown, and provided with the elastic packing between the contiguous flanges, the said flanges having rounded edges, whereby they are adapted to turn on the opposite flat surfaces of the strips without unnecessary friction.

4. The combination of the inner metallic strip wound helically and having the outwardly-extending flanges, the outer strip with the inwardly-extending flanges wound around the inner strip, and the two strips of elastic packing located as shown, the two metallic strips being so formed as to press toward each other for the purpose of maintaining a tight joint.

HERBERT KNIGHT.

Witnesses:
GEORGE S. BELL,
WILLIAM P. WILSON.