

(No Model.)

J. M. SMITH.
ARMOR FOR RUBBER HOSE.

No. 338,310.

Patented Mar. 23, 1886.

Fig. 1.

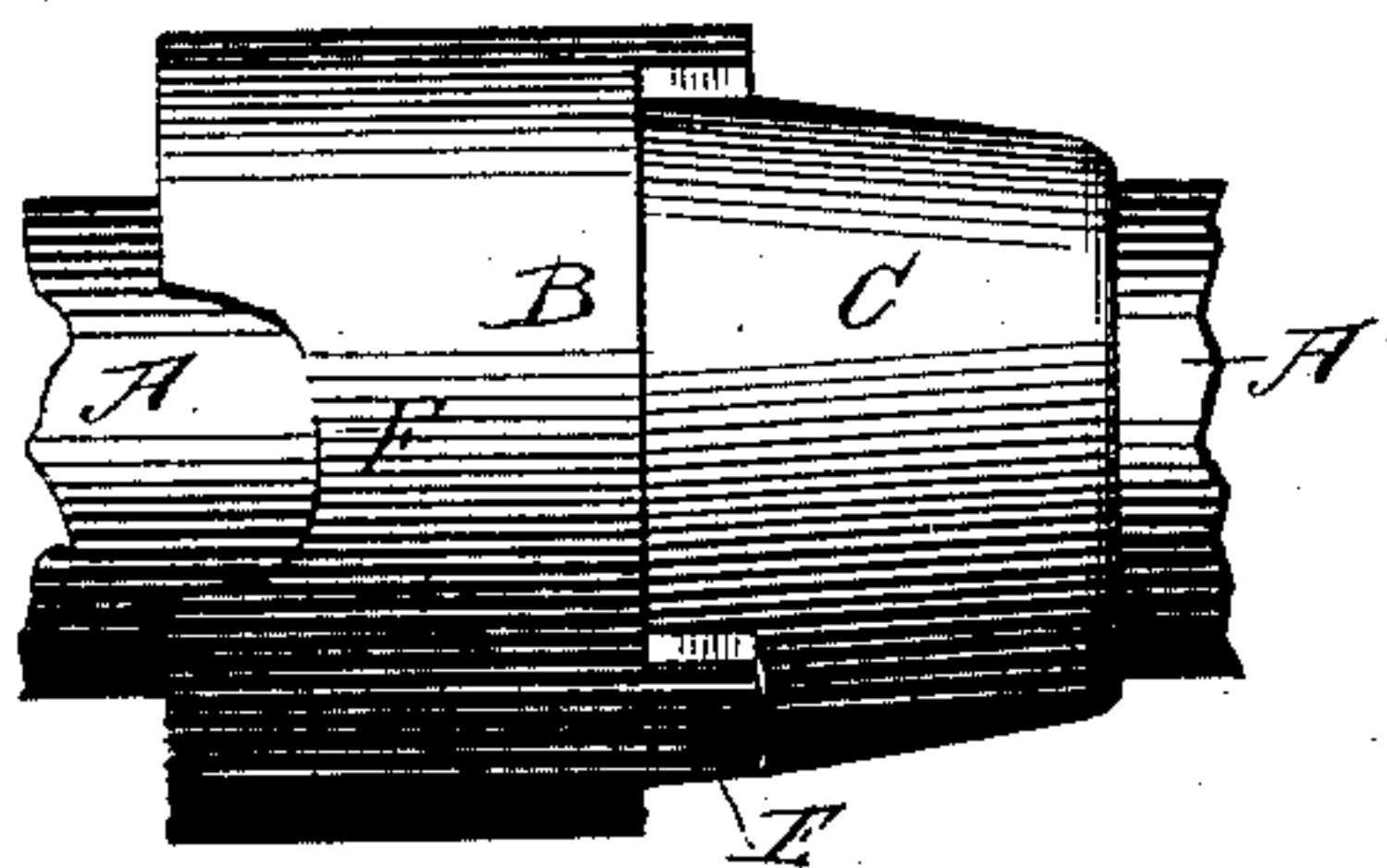


Fig. 2.

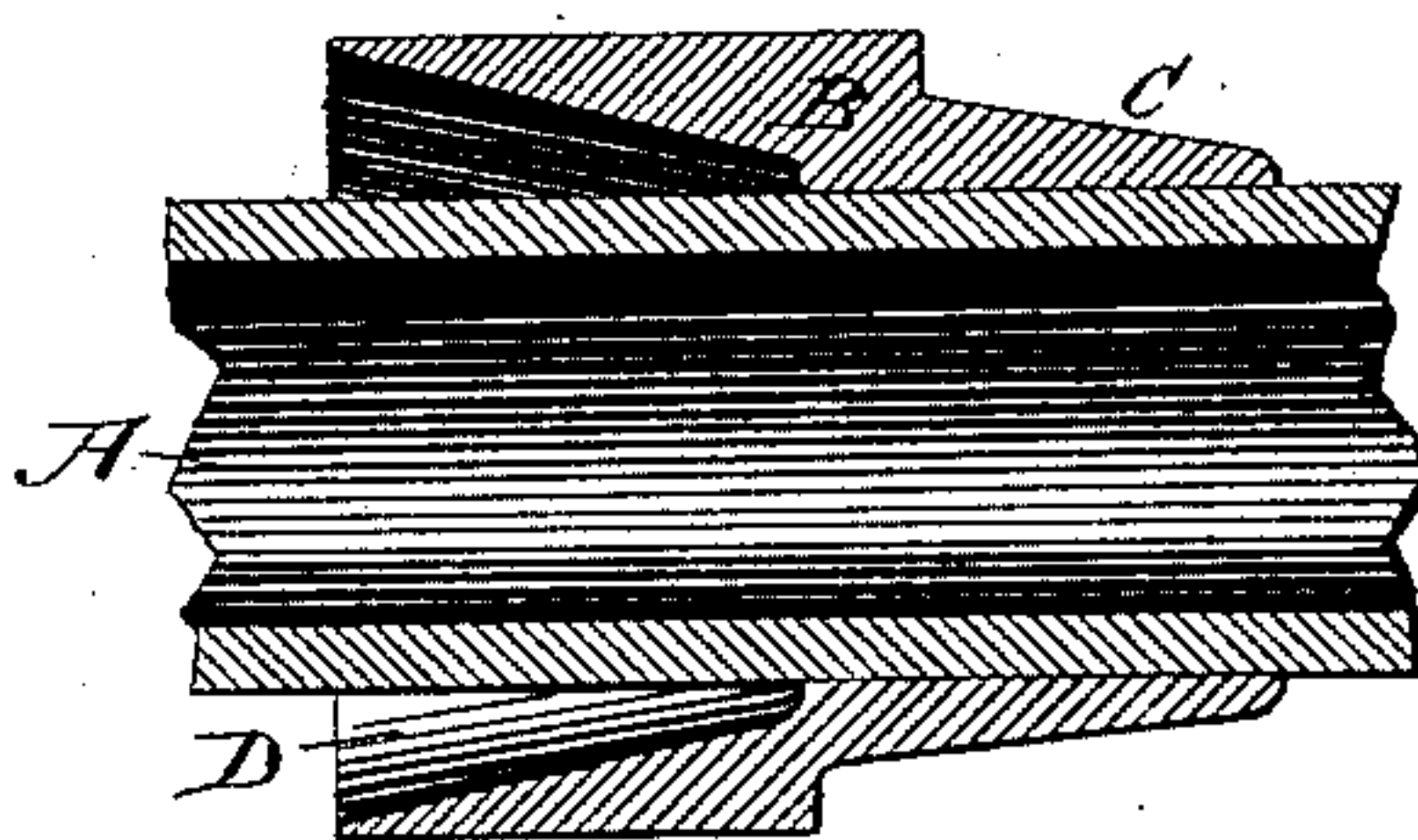
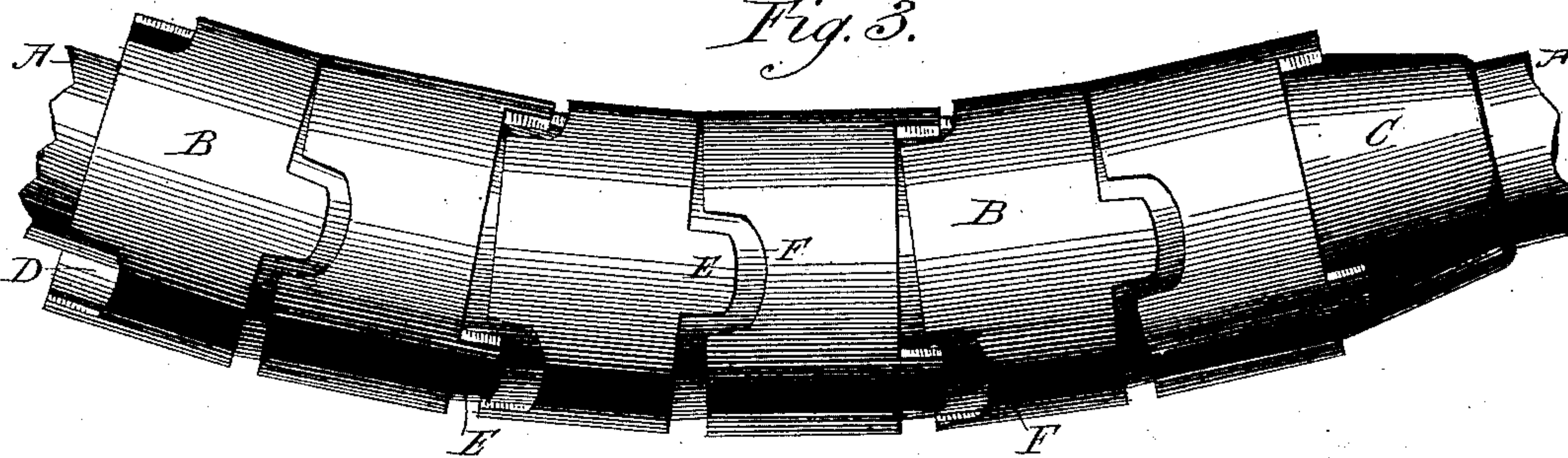


Fig. 3.



Witnesses,

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UNITED STATES PATENT OFFICE.

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ARMOR FOR RUBBER HOSE.

SPECIFICATION forming part of Letters Patent No. 338,310, dated March 23, 1886.

Application filed June 15, 1885. Serial No. 168,772. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. SMITH, of the city of Sycamore, county of De Kalb, and State of Illinois, have invented a certain new and useful Improvement in Protections for Rubber Hose, or Flexible Hose of other Material; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates, principally, in its application to the flexible hose used upon railroad-trains to assist in the operation of the air-brake system now in general use. A portion of such hose is always exposed, especially between the cars, and is subject to many dangers of separation at that point, especially from malicious persons, by cutting or puncturing, and also to accidental separation or injury to which its exposed position renders it peculiarly liable.

My invention relates to the protecting of such flexible hose with a metallic shield so peculiarly constructed in parts that it will permit the exercise of sufficient flexibility on the part of the hose, while at the same time it will afford such sufficient protection to the hose as to completely prevent any cutting or severance of the same. Another advantage of such metallic shield is the prevention of the twisting of the hose, so as to remove the fixtures or valuable connection devices necessary to join the hose or air-brake flexible tubes between the separate cars.

I will now describe my invention in detail, reference being had to the accompanying drawings, in which similar letters of reference in similar views indicate corresponding parts.

I construct a series of metallic tubes of suitable size to admit of the passage of the desired hose in a closely-fitting manner. I construct one end of each section or short tube conical shaped, so that it may fit easily in its accompanying section, provided with a suitable funnel-shaped or beveled inside conformation adapted to receive such conical-shaped end. The abruptness of the conical-shaped end and the sharpness of the inside bevel will depend upon the length of such separate sections forming the whole, and will also depend on the desired flexibility or curvature desired to be

given to the hose in use; but the section shown in the drawings is believed to be the most suitable size for practical operation in use. The metallic sections, when united and placed in position, form a complete metallic shield or covering for the hose, and accomplishing the purpose desired.

I have illustrated my invention by the accompanying drawings, in which Figure 1 represents of the sections or tubes detached, showing the conical end. Fig. 2 is a view of such section, showing the inside or the beveled or receiving end of the section. Fig. 3 is the metallic shield in position for use.

To prevent the torsion or twisting of the hose, as above indicated, I provide lugs or projections on the surface of the metallic section or scale, and corresponding indentations to receive the same in the accompanying section or scale, each to engage with the other, and prevent any substantial torsion of the hose.

I do not wish to confine myself to the exact form of fitting the shields shown, as it can be seen that this can be changed somewhat without altering the substance of my invention. Neither do I wish to confine myself to the use of such hose in connection with air-brake purposes, as they can be used for many other different purposes to good effect—as, for example, fire-hose under certain conditions, and where a desired metallic protection is important, admitting flexibility.

A is the hose to be protected; B, the metallic section, shield, or scale; C, the conical end; D, the beveled end for receiving the conical end; E, the projection upon the metallic section, and F the indentation for receiving the same.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a rubber or other flexible hose with a series of overlapping metallic rings, substantially as described and shown, about the same, as a protecting cover therefor.

2. A hose-cover consisting of a series of rings dovetailing with each other, substantially as described and shown, whereby twisting of the hose is prevented.

3. A hose cover consisting of rings B, inwardly beveled from one end for substantially their whole length and provided at the other end with the conical projections C, of a length
5 corresponding to the bevel, substantially as described and shown.

4. The section of hose-cover B, conical at one end, beveled inwardly at the other and

provided with projection E, and receiving indentation F, substantially as described and shown.

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