

No. 747,367.

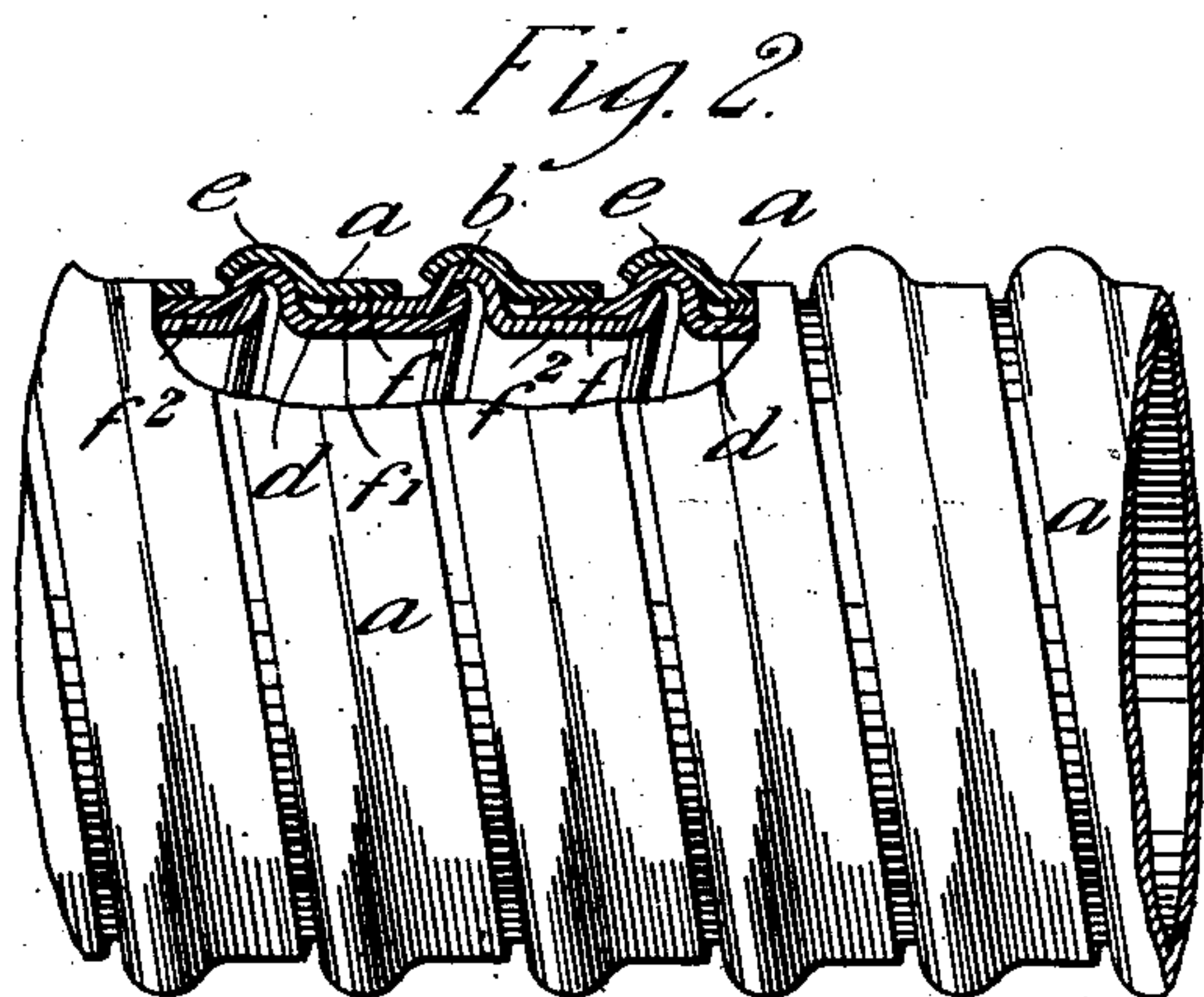
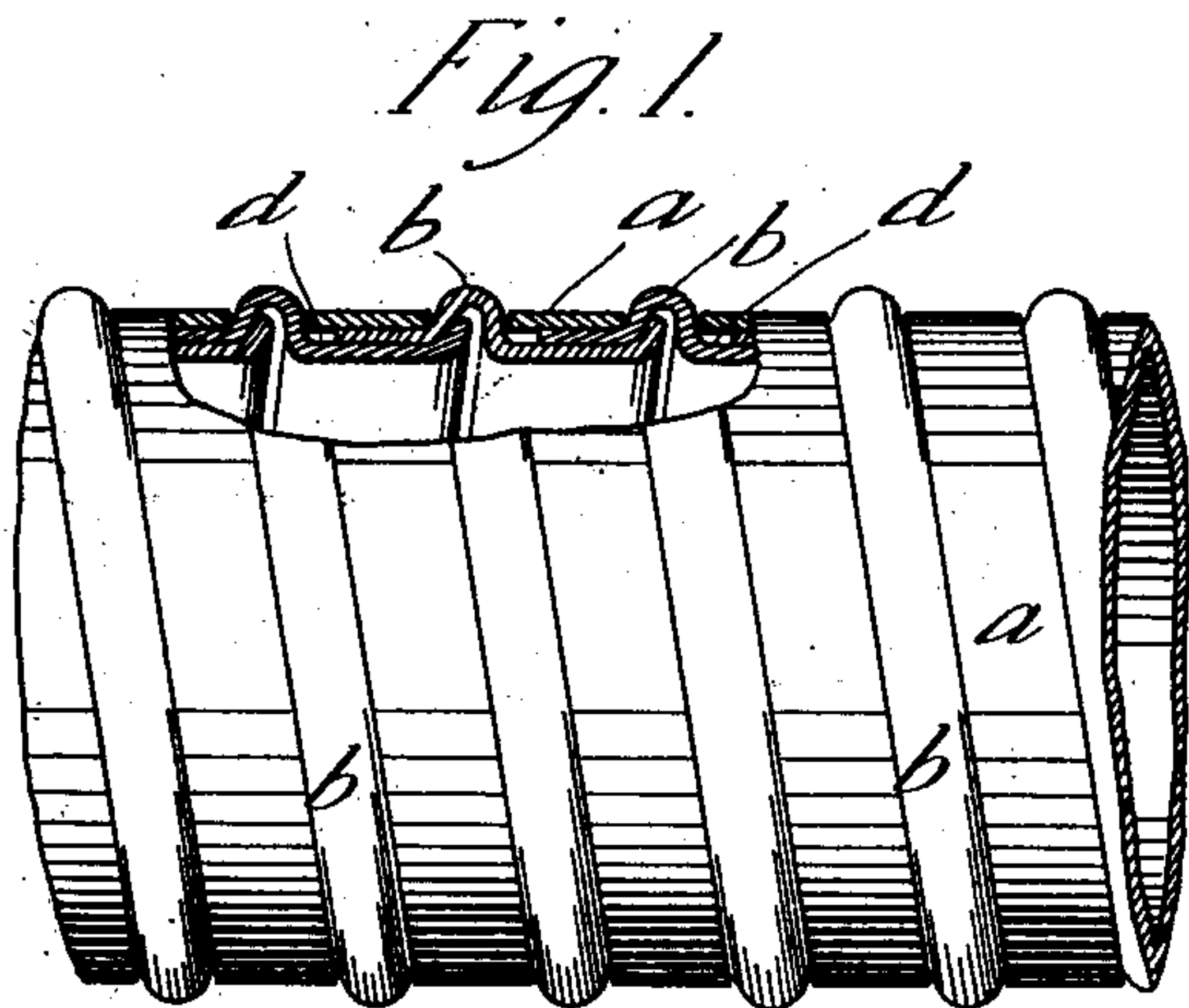
PATENTED DEC. 22, 1903.

W. H. K. BOWLEY.

FLEXIBLE METALLIC TUBING FOR ARMORING INSULATED  
ELECTRICAL CONDUCTORS.

APPLICATION FILED NOV. 17, 1902.

NO MODEL.



Witnesses:  
*James L. Norris, Jr.*  
*J. B. Keefe*

Inventor  
*William H. K. Bowley*  
BY  
*James L. Norris*  
Att'y.

## UNITED STATES PATENT OFFICE.

WILLIAM H. K. BOWLEY, OF LONDON, ENGLAND.

FLEXIBLE METALLIC TUBING FOR ARMORING INSULATED ELECTRICAL CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 747,367, dated December 22, 1903.

Application filed November 17, 1902. Serial No. 131,761. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HENRY KANZON BOWLEY, a citizen of England, residing at 112 Queen Victoria street, in the city of London, England, have invented a certain new and useful Improvement in Flexible Metallic Tubing for Armoring Insulated Electrical Conductors, (for which I have applied for a patent in Great Britain, dated September 27, 1902, No. 21,075,) of which the following is a specification.

For the purpose of armoring insulated electrical conductors flexible metallic tubing has been employed. This flexible metallic tubing is formed by helically coiling a strip of metal corrugated in such a manner that each helical convolution interlocks with the next. Consequently there is therefore generally a double thickness of metal where the convolutions interlock and a single thickness of metal between these parts. This renders such metallic tubing somewhat unsatisfactory for the purpose of armoring electrical conductors, because the tube is liable to be penetrated at those parts where there is only the single thickness of metallic tubing.

The present invention relates to a construction of tube of this kind in such a manner that there shall be a double thickness of metal not only at the part where the convolutions interlock, but also between such parts. For this purpose when great flexibility is not required I construct the tube, as shown in the accompanying drawing, by interposing an additional flat strip of metal *a* between the raised convolutions *b* of the tube, which strip of metal can be coiled on immediately after the first strip of metal has been helically coiled into a tube. It will be seen that by the use of this additional strip the part *d*, where there is a single thickness of metal, is protected. There is also the additional

advantage that it renders the tube flatter and more easy to manipulate between floors and the like. When greater flexibility is required, I preferably make the additional strip of metal *a* of greater width and I first corrugate it into such a shape that a part *e* will fit over the raised convolution *b* of the tube and leave a flat part *f* extending over the part *d* where there was only a single thickness of metal. As in the former case, this additional strip of metal can be coiled on immediately after the original strip of metal has been helically coiled into a tube, and owing to its shape it is retained in the definite position in relation to the other part of the tube. It will be seen that although this strip covers the single part *d* it permits the flat part *f* to slide over the coiled tube and also permits the flat part *f'* of the one convolution to slide over the flat part *f''* of the adjoining convolution of the tube when this is bent in either direction.

In some cases it is preferable to insert between the two strips of metal a flat strip of suitable material to prevent the surfaces rusting together and to act as a packing.

Having thus described the nature of this invention and the best means I know of carrying the same into practical effect, I claim—

A flexible metallic tube for armoring insulated electrical conductors, comprising a corrugated strip of metal coiled so that each turn is partially overlapped by the next succeeding turn, and a strip of metal wound in the spaces between the corrugations of the tube so formed.

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

WM. H. K. BOWLEY.

Witnesses:

GERALD L. SMITH,  
EDWARD GARDNER.