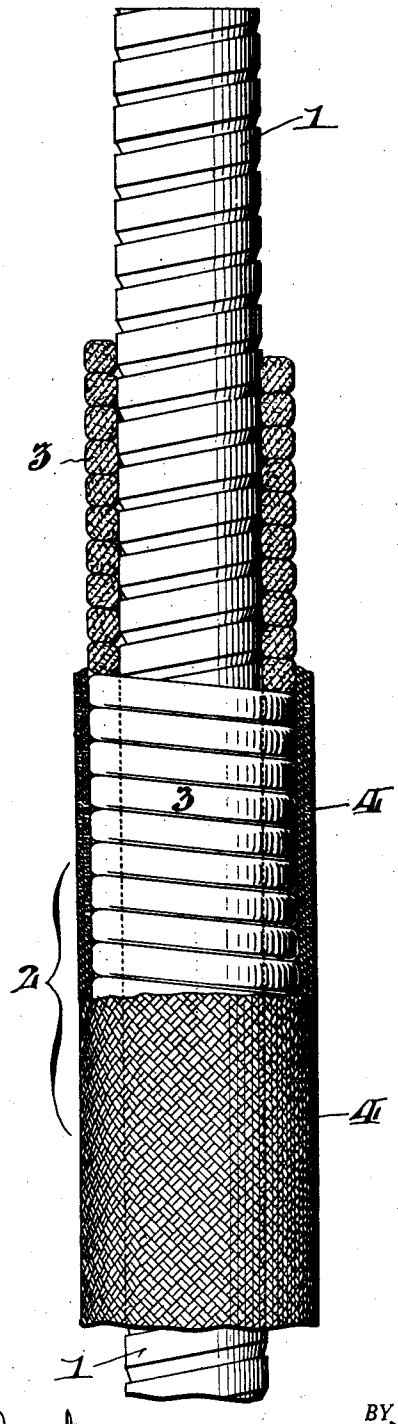
June 2, 1931. J. H. BROWN 1,808,204

FLEXIBLE CONDUIT

Filed March 7, 1929



WITNESSES

Thomas W. Kerr, Jr.

George M. Meyerhoefer

INVENTOR:

John H. Brown,

BY Fraley & Paul

ATTORNEYS.

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UNITED STATES PATENT OFFICE

JOHN H. BROWN, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO KEASBEY & MATTISON COMPANY, OF AMBLER, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

FLEXIBLE CONDUIT

Application filed March 7, 1929. Serial No. 345,042.

This invention relates to conduits useful for example with automobile heating appliances to conduct heated air from the exhaust manifolds of the engines to radiators or registers within the bodies of the vehicles.

In connection with conduits useful as above indicated and for similar purposes, I aim to secure the advantages of strength, flexibility and ready adaptability inherent to spiralized metallic tubing by employing the same as a core in conjunction with a covering of thermo insulation for offsetting heat losses through conduction and radiation; and to attain the foregoing desideratum with capacity of the covering to adapt itself readily to the flexing of the core, notwithstanding firm and effective attachment to the latter.

The accompanying drawing is a fragmentary view showing my improved conduit partly in elevation and partly in section.

In carrying out this invention, I employ as a core for my improved conduit, flexible tubing 1 preferably of a well known commercial kind fabricated through spiral curling of strip metal with incidental interlocking of the contiguous strip edges; and build around such a tube a thermo-insulate covering 2. As shown, this protective covering 2 comprises an inner layer 3, and an outer layer or jacket 4. The inner layer 3, I form by closely and tightly winding about the metallic core tube 1, comparatively thick cordage of twisted asbestos fibre or the like ordinarily known in the art as "wick packing." Although I have shown the cordage layer 3 as wound in a direction counterwise to the turns of the spirals of the core tube 1, it may, if desired or found more convenient in practice, be wound in the same direction as the tube spirals. The outer retaining jacket 4 may be very much thinner than the inner cordage layer 3 and formed either by winding on asbestos tape or yarn of lighter gage than the cordage 3, or in the manner illustrated as a braided or woven fabric. The jacket 4, it will be seen, serves as an effective retaining means to hold the inner insulate thickness 3 intact and in close embrace about the tubular metallic core 1.

By virtue of the yielding texture of the outer layer 4, and by reason of the fact that the cordage of the layer 3 is wound on the metallic bore 1, the covering 2 obviously adapts itself readily to flexure of the conduit without tendency to disintegrate or to detach itself.

Having thus described my invention, I claim:

1. A flexible conduit comprising a tubular core of spirally curled strip metal; and a covering including a wound on thickness of comparatively heavy thermo-insulate cordage, with an outer retaining jacket, also of thermo-insulate material, both capable of adapting themselves to the flexing of the metallic core.

2. A flexible conduit comprising a tubular core of spirally curled strip metal; and a covering including a wound on thickness of comparatively heavy thermo-insulate cordage, and a braided thinner outer retaining jacket, both capable of adapting themselves to the flexing of the metallic core.

3. A flexible conduit comprising a tubular core formed from spiralized strip metal having the contiguous edges interengaged; a covering layer of relatively heavy thermo-insulate cordage; and a braided thinner outer retaining jacket, said cordage layer and outer covering both capable of adapting themselves to flexing of the metallic core.

In testimony whereof, I have hereunto signed my name at Minneapolis, Minnesota, this 28th day of February, 1929.

JOHN H. BROWN.

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