

T. E. MURRAY.
MEANS FOR WITHDRAWING A LINING OF FLEXIBLE MATERIAL FROM THE BORE OF A CONDUIT.
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Fig. 1.

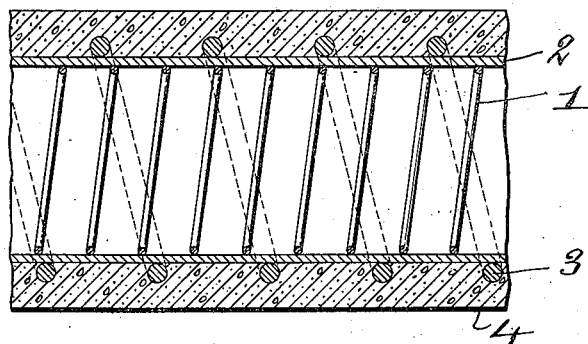
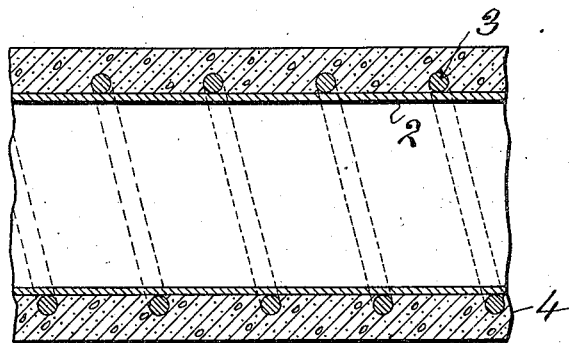


Fig. 2.



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UNITED STATES PATENT OFFICE.

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A CONDUIT.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS E. MURRAY, a citizen of the United States, residing at Brooklyn, in the county of Kings and State
5 of New York, have invented a certain new and useful Improvement in Means for Withdrawing a Lining of Flexible Material from the Bore of a Conduit, of which the following is a specification.

10 Pipes or conduits are sometimes made by processes which leave within the bore a lining of paper or flexible fabric, which it is afterward desirable to remove. Such a condition arises, for example, when the conduit
15 is molded from cement or similar plastic material upon a longitudinally removable core—especially when the core is a wire spiral—inclosed in an envelop or cover of paper which upon the withdrawal of the
20 core, after the cement has hardened, remains in the bore as a lining. This lining not being adherent to the surface of the bore is liable to be detached by a liquid flow through the conduit, and to be so carried into valves,
25 traps, bends or smaller branch pipes, where it accumulates and so clogs the passage. My present invention is a means for withdrawing said covering of flexible material longitudinally from the conduit.

30 In the accompanying drawing—

Figure 1 is a longitudinal section of a portion of the molded conduit, showing the core, the cover or envelop of flexible material therefor and the inclosing spiral therein.

35 Fig. 2 is a similar view, showing the molded conduit after the withdrawal of the core.

Similar numbers of reference indicate like parts.

40 Upon the core 1, here shown as a wire or metal strip in spiral form, is applied, prefer-

ably by wrapping, a cover 2 of paper or similar flexible sheet material. Upon said covering is wound a spiral wire or metal strip 3. Upon the covered and wound core is applied plastic cement or concrete 4 to
45 form the conduit body. Preferably before the cement has hardened and while although soft, it is capable of retaining its form if unsupported, I withdraw the core 1. The paper cover now remains in the conduit as a
50 lining, to withdraw which I pull upon one end of the spiral 3, thereby contracting the diameter of said spiral, and also causing it to grip the inclosed cover or lining. By reason of this contraction and engagement,
55 the spiral 3 may be easily withdrawn longitudinally from the conduit, bringing the cover 2 with it, and so leaving the conduit bore entirely free. Because the cement is then soft, the end draft on the spiral 3 causes the
60 turns to more or less obliterate any groove in the inner conduit surface which may remain after the removal of said spiral.

I claim:

1. A conduit molding device, comprising
65 a flexible tubular core, and a spiral wire inclosing and engaging said core for withdrawing the same longitudinally from the molded conduit.

2. A conduit molding device, comprising
70 a core, a cover of flexible material thereon, and a spiral wire inclosing and engaging said cover for withdrawing the same longitudinally from the molded conduit.

In testimony whereof I have affixed my
75 signature in presence of two witnesses.

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,
MAY T. MCGARRY.