No. 712,019. Patented Oct. 28, 1902.

J. M. THOMAS & LE R. B. STUMPH.

HOSE PATCH.

(Application filed Apr. 4, 1902.)

(No Model.)

Fig. 1.

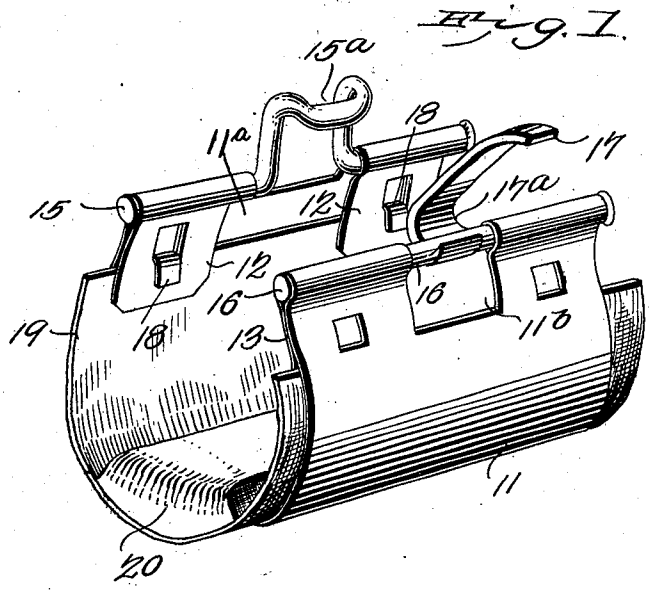
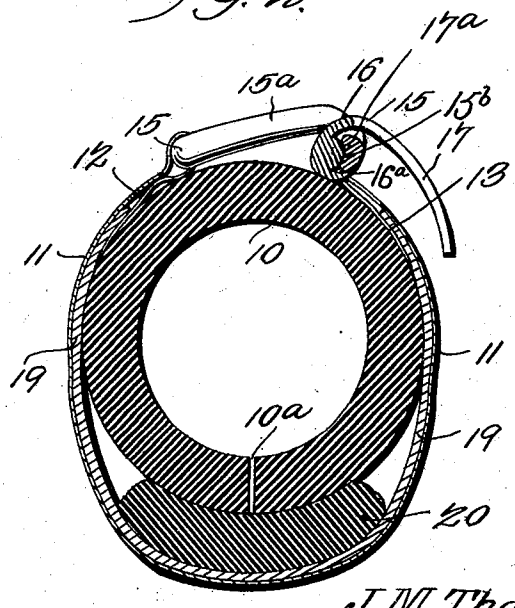


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES M. THOMAS AND LE ROY B. STUMPH, OF CHESTERVILLE, OHIO.

HOSE-PATCH.

SPECIFICATION forming part of Letters Patent No. 712,019, dated October 28, 1902.

Application filed April 4, 1902. Serial No. 101,428. (No model.)

To all whom it may concern:

Be it known that we, JAMES M. THOMAS and LE ROY B. STUMPH, citizens of the United States, residing at Chesterville, in the county of Morrow and State of Ohio, have invented a new and useful Hose-Patch, of which the following is a specification.

This invention relates to devices for temporarily closing or patching ruptures in hose, and more particularly to air-brake and other hose subject to high pressures; and it consists in a flexible split band having a yieldable lining, such as rubber, and provided with clamping-catches, whereby its adjacent edges may be united, and having a supplementary yieldable interior cushion adapted to engage the rupture, and thereby insure its more certain closure.

The invention further consists in certain novel features of the construction, all as hereinafter shown and described, and specified in the claims.

In the drawings illustrative of the invention, Figure 1 is a perspective view of the device detached and with its sides separated and catches disengaged. Fig. 2 is a transverse section with the device in position on a section of hose.

The hose is represented at 10, with the rupture indicated at 10^a.

The patching device comprises a sheet-metal casing or band 11, curved to embrace the hose and with its ends bent backward upon the body of the band, as at 12 and 13, the parts 12 inclosing a rod 15, bent upward centrally into a loop 15^a, and the parts 13 inclosing a rod 16, as shown. The band 11 is formed with central cavities 11^a and 11^b beneath the loop 15^a and the central portion of rod 16, as shown. Attached to the rod 16 within the cavity 11^b is a hook catch or lever 17, having a short curve 17^a next to the rod 16 and adapted to engage the loop 15^a and serve as a locking means for firmly clamping the two ends of the band upon the hose, as represented in Fig. 2. The cross-bar member of the loop 15^a is concaved, as at 15^b in Fig. 2, and conforming to and adapted to closely engage the cylindrical rod 16, so that a yieldable locking-joint is formed between the parts 16 and 15^a, which will effectually resist any force to which it would be liable to be subjected when in use, but which would yield to a force applied to the outer end of the lever-catch 17 when the device is to be released. Extending from the rod 16 on the opposite side from the part 17^a is a lug 16^a, which engages the under side of the part 15^a when the catch is closed, as shown in Fig. 2. When the lever-catch 17 is first moved outward in the act of releasing the band 11, the lug 16^a moves around with the revolving rod 16 and forces the concaved cross-bar of the loop 15^a out of engagement with the rod, and thereby materially assists in disconnecting the parts and reducing the power necessary to operate the lever-catch 17. In the band 11 adjacent to the rods 15 and 16 are tongues 18, formed by cutting slits in the sheet metal and bending the metal thus released inward and "clenching" it upon the parts 12 and 13, whereby the parts 12 and 13 are connected to the body of the band and bearings also thereby formed for the rods 15 and 16.

The band 11 is supplied with a yieldable lining 19, preferably of sheet-rubber or other similar material or fabric, the lining being secured in position by inserting its upper edges between the body of the band and the depending bent-over portions 12 and 13, as shown. Supported upon the lining 19 is a mat or cushion of some yieldable material, such as sponge-rubber, as indicated at 20, the function of this cushion being to engage the rupture 10^a in the hose and afford a compressible cushion to effectually close the rupture when pressure is applied by closing the catch-lever 17. By this simple means a very effectual "patch" may be applied to the hose at the point where the rupture occurs and a strong pressure exerted to compress the yielding cushion in engagement with the hose adjacent to the rupture and effectually close it and prevent leakage therethrough.

The band 11 by being formed of sheet metal yields readily to the pressure and automatically adapts itself to the hose and conforms readily to any irregularity of its outlines, and thereby engages it more closely than a rigid envelop would do. This is an important feature and adds materially to the efficiency of the device.

The device will be made in sizes to correspond with the different sizes of hose and

may be modified in minor particulars and the proportions altered without departing from the spirit or affecting the scope or sacrificing any of the advantages of the invention.

Having thus described our invention, what we claim is—

1. A temporary hose-patch comprising a split metallic band, a flexible lining to said band having its edges secured between the folded edges of the latter, and a yieldable cushion supported upon said flexible lining, substantially as described.

2. In a temporary hose-patch, a split band having folded edges, rods inclosed within said folds and having means whereby they may be connected and drawn together and tongues struck up from and folded upon the said folded portions of the band thereby securing said folded portions and the inclosed rods, substantially as described.

3. A temporary hose-patch comprising a sheet-metal split band having folded edges, rods inclosed within said folds and carrying suitable connecting means, a flexible lining in said sheet-metal band having its edges extended within the folds at the edges of said band, and locking means for said folded portions consisting of tongues struck up from and folded thereon, substantially as described.

4. In a hose-patch, the combination with a split band having recessed and folded edges, of stiffening-rods folded within said edges, one of said rods having a U-shaped loop, bent inwardly and having a concavity in the edge thereof, and a lever connected with the other stiffening-rod and having a bulged or eccentric portion adapted to engage the concavity in the edge of the U-shaped loop, thereby to lock the edges of the band together, substantially as described.

5. A temporary hose-patch comprising a sheet-metal band having its adjacent edges folded over and inclosing rods in the folds, means for connecting said folded-over portions to the band, and a flexible lining to said band with its edges supported between said folds and the body of the band, substantially as described.

6. A temporary hose-patch comprising a sheet-metal band having its adjacent edges folded over and inclosing rods in the folds, and fastening means consisting of tongues extending from said band and engaging apertures in said folds and adapted to be "clenched" thereon, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JAMES M. THOMAS.
LE ROY B. STUMPH.

Witnesses:
FRANK E. BURNS,
A. L. CATON.