Dec. 16, 1924. 1,519,587

F. L. LODWICK

DEVICE FOR ATTACHING, TIGHTENING, AND CLAMPING WIRE HOSE BANDS

Filed July 30, 1923

Fig. 3.

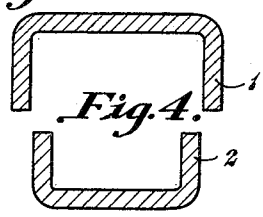


Fig. 4.

Fig. 1.

Fig. 2.

Fig. 5.

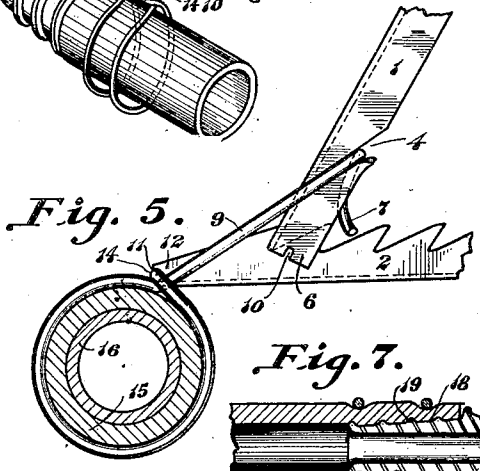


Fig. 6.

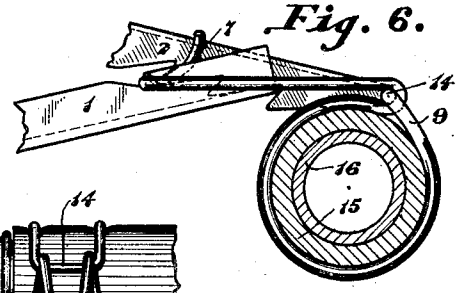


Fig. 7.

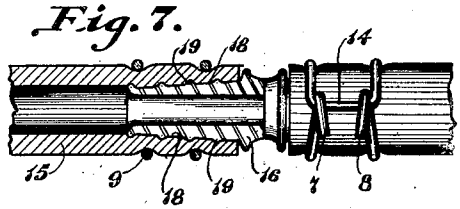


Fig. 8.

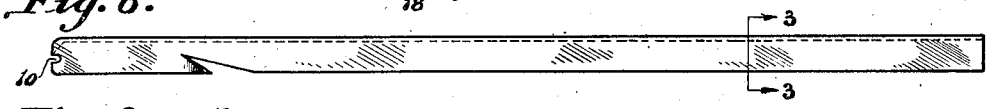
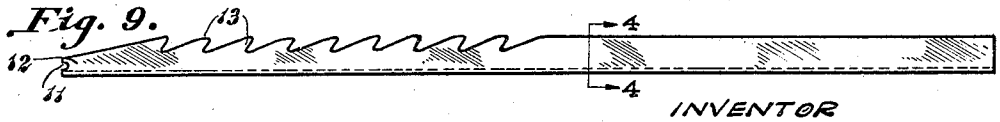


Fig. 9.



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UNITED STATES PATENT OFFICE.

FRANK L. LODWICK, OF NEWPORT, KENTUCKY.

DEVICE FOR ATTACHING, TIGHTENING, AND CLAMPING WIRE HOSE BANDS.

Application filed July 30, 1923. Serial No. 654,521.

To all whom it may concern:

Be it known that I, FRANK L. LODWICK, a citizen of the United States, residing in the city of Newport, in the county of Campbell and State of Kentucky, have invented new and useful Devices for Attaching, Tightening, and Clamping Wire Hose Bands, of which the following is a specification.

My invention relates to novel devices for securing two pieces of hose together endwise over a coupling core by means of wire or bands.

The objects of my invention are to provide simple, efficient, convenient and economical means for tightening and clenching the hose in position and so compressing it between the exterior threads, ribs or indentations of the coupling core as to obviate all leaking, separation and slipping; to provide a device for tightening bands or wires and clenching them in position around hose or other articles that require tightening and which require no assembling in the manufacture thereof; and to provide a simple, efficient, sturdy in construction and easily operated device for the purposes as herein set forth.

My invention consists in the construction, combination and arrangement of parts and in the details of construction as herein set forth and claimed.

In the drawings:

Fig. 1 is a perspective view of my novel device engaging a wire encircling a portion of a hose containing one end of a coupling core before the wire is tightened;

Fig. 2 is a plan view of the same showing the wire tightened;

Fig. 3 is a sectional view of the lever handle enlarged taken on the line 3—3 of Fig. 8;

Fig. 4 is a similar sectional view of the ratchet bar taken on the line 4—4 of Fig. 9;

Fig. 5 is a side elevation of my novel device engaging a wire encircling a hose containing a portion of a coupling core showing the coupling core and hose in section and the lever handle and the ratchet bar broken away;

Fig. 6 is a side elevation of the same showing my device in reversed or wire clamping position upon the hose and core shown in section;

Fig. 7 is a view illustrating the manner in which the wire grips the hose around the coupling core, showing two ends of a hose broken away, with one end of the coupling core and hose in longitudinal section and the other portion of the view in side elevation;

Fig. 8 is a side elevation of my channeled lever handle; and

Fig. 9 is a side elevation of my channeled ratchet bar.

My device consists of channeled lever handle 1 and channeled ratchet bar 2. The flanges 3 of the channeled lever handle are provided with V notches 4 and 5 near the lower end 6 for receiving ends 7 and 8 of wire 9. Flanges 3 of the channeled lever handle are also provided with transverse grooves 10 at lower end 6 for shaping wire 9 to be received by transverse grooves 11 formed in lower end 12 of channeled ratchet bar 2 for tightening wire 9 by lower end of channeled lever handle 1 coacting with ratchet teeth 13 of the channeled ratchet bar at 2.

The width of lower end 6 of channeled lever handle 1 is greater than the width of lower end 12 of channeled ratchet bar 2 which permits shaping wire 9 so that grooves 11 in lower end 12 of the channeled ratchet bar may fit over looped end 14 of wire 9 without binding wire 9 as shown in Fig. 2.

The operation of my device to clamp wire 9 upon hose 15 encircling coupling core 16 is as follows: Place a piece of wire 9 in transverse grooves 10 of channeled lever 1 and draw ends 7 and 8 of the wire toward each other to give the wire a shape substantially of a hair pin, then place the bent wire around rubber hose 15 with the free ends of the wire looped through looped end 14 with the back of channeled ratchet bar 1 upon rubber hose 15. End 6 of channeled lever handle 1 is then placed in coacting position with teeth 13 of the channeled ratchet bar 2 nearest rubber hose 15. End 7 of wire 9 is then bent through V notch 4 of chan-

neled lever handle 1 and the other end 8 of the wire is bent through V notch 5 of the channeled lever handle as shown in Fig. 1. Channeled lever handle 1 is then operated as a lever moving end 6 from one pair of ratchet teeth 13 to the next until wire 9 is sufficiently tight around hose 15. Channeled lever handle 1 and channeled ratchet bar 2 are then turned in a reverse direction to a position corresponding to the view as shown in Fig. 6. Wire 9 is now closely embedded in hose 14 which forces the interior portions 18 of the hose between rib indentations or threads 19 of coupling core 16 thereby firmly securing the hose on the coupling core. The ends of the wire 9 may then be cut off leaving sufficient length to permit ends 7 and 8 to be pounded into the exterior of hose 15 as shown in Fig. 7.

While I have shown my invention as used in securing the ends of hose to a coupling it may also be used for securing bands or wires upon kegs, barrels or other articles requiring the same.

It is to be understood that slight changes may be made in the details of my invention without departing from the spirit thereof, and it is not intended to confine the invention to the one form of embodiment herein disclosed because it is susceptible of embodiments of various forms all coming within the scope of the claims.

What I claim as new and desire to secure by Letters Patent is:

1. In a device of the character described, a member and a lever handle, ratchet teeth formed on said member, and means for connecting a band or wire to said lever handle, substantially as and for the purposes set forth.

2. In a device of the character described, a member having ratchet teeth formed thereon, a lever handle separatable from said member having means thereon for attaching a wire or band and adapted to cooperate with the said ratchet teeth for the purpose of tightening said wire or band.

3. In a device of the character described, a member having ratchet teeth formed thereon and a separatable lever handle adapted to coact with said ratchet teeth and with a fastening wire or band for the purpose of tightening said wire or band, substantially as and for the purposes set forth.

4. In a device of the character described, a lever handle having notches formed therein, said notches adapted to secure the ends of a wire or band, a member having ratchet teeth formed thereon, said member adapted to cooperate with the said lever handle for the purpose of tightening a wire or band. substantially as and for the purposes set forth.

5. In a device of the character described, a lever handle having notches formed therein, said notches adapted to secure the ends of a wire or band, a member having ratchet teeth formed thereon, said member adapted to contact said wire between the ends thereof for cooperating with said lever handle for the purpose of tightening a wire or band, substantially as and for the purposes set forth.

6. In a device of the character described, a channeled bar provided with a transverse groove at its end and notches formed on the flanges of said channeled bar, a second channeled bar cooperating with said first channeled bar and provided with V notches adapted to receive a wire or a band, the lower end of said second channeled bar adapted to coact with said notches on said flanges of said first channeled bar for the purpose of tightening said wire or band, substantially as and for the purposes set forth.

7. A channeled bar provided with a tranverse groove at its end, and notches formed on the longitudinal flanges of said channeled bar, a second channeled bar transversely larger than said first channeled bar, said second channeled bar provided with V notches adapted to receive a wire or band, the lower end of said second channeled bar adapted to coact with said notches of said first channeled bar for the purpose of tightening a wire or band, substantially as and for the purposes set forth.

8. In a device of the character described, a channeled lever handle having a transverse groove in the lower end thereof adapted to receive a wire or band for shaping the same, said channeled lever handle also having V notches formed therein near the end thereof adapted to receive a wire or band, a channeled ratchet bar having transverse grooves formed in the lower end thereof adapted to receive a wire or band, said channeled ratchet bar also having notches formed in the flanges thereof adapted to cooperate with the lower end of said channeled lever handle for tightening said wire or band, substantially as and for the purposes set forth.

9. In a device of the character described, a channeled lever handle having a transverse groove in the lower end thereof adapted to receive a wire or band for shaping the same, said channeled lever handle also having V notches formed therein near the end thereof adapted to receive a wire or band, a channeled ratchet bar having transverse grooves formed in the lower end thereof adapted to receive a wire or band, said channeled ratchet bar also having notches formed in the flanges thereof adapted to cooperate with the lower end of said channeled lever handle for tightening said wire or band, said channeled ratchet bar adapted

to be reversed for contacting said grooves in the lower end of said channeled ratchet bar with an opposite side of said wire for clenching said wire, substantially as and for the purposes set forth.

10. In a device for attaching, tightening and clamping wire around a hose upon a coupling, a bar having ratchet teeth and having a notched end, a cooperating lever handle having a notched end and having wire engaging notches between its ends for attaching the free ends of the wire to said handle, said lever handle being adapted to engage said ratchet teeth.

FRANK L. LODWICK.