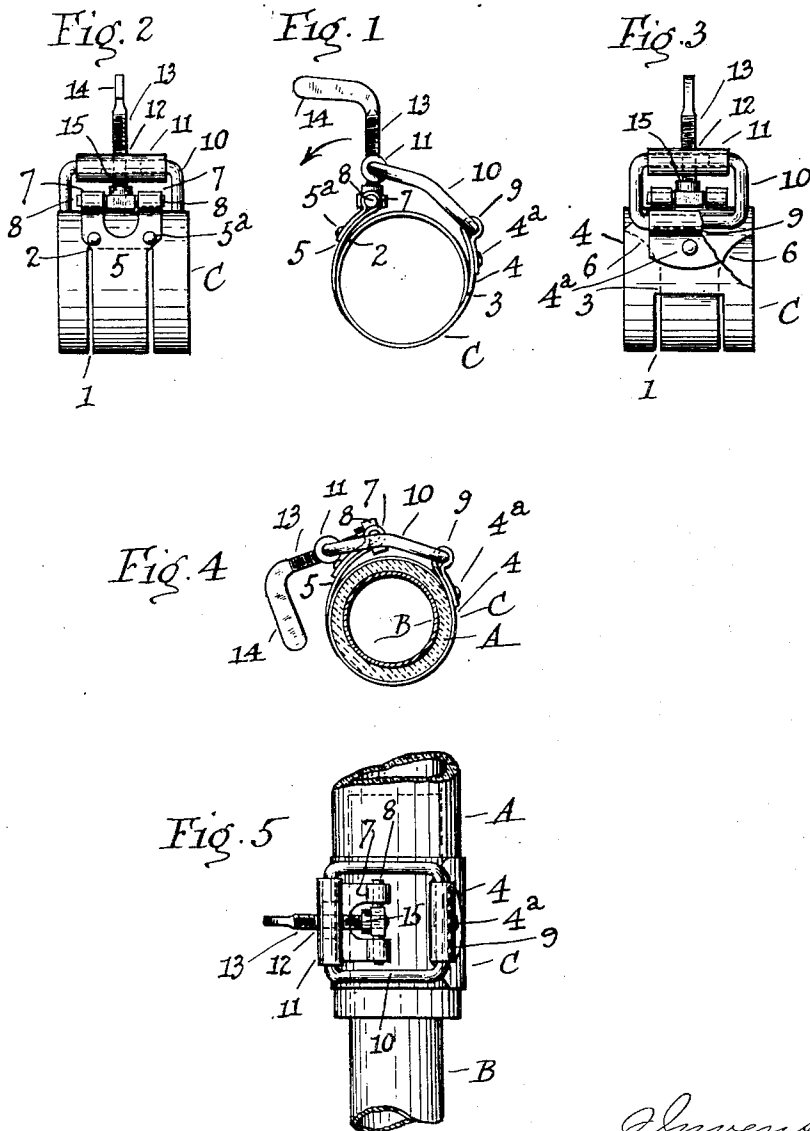


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HOSE AND OTHER CLAMP.
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1,399,416.

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HOSE AND OTHER CLAMP.

1,399,416.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRY TURNER, SR., a subject of the King of Great Britain and Ireland, etc., residing at Glenelg, in the State of South Australia, Commonwealth of Australia, have invented certain new and useful Improvements in Hose and other Clamps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved clamp or binder of band or ring type for mending hose, for connecting an outer to an inner member, for binding articles together, and for use in other ways. The pressure on the article or articles to be fastened can be regulated, and the clamp is easy to apply and remove without using tools.

To regulate my clamp I use a screw bolt which has also the function of a lever, and contraction of or compression by the band can be thereby effected and the force of the clamp grip may be varied to produce the joint desired.

I provide an integral handle on the tightening screw bolt so that there is no time lost when the bolt needs to be rotated.

This invention will now be explained by the aid of the accompanying drawings, in which Figure 1 shows one side of a clamp, Fig. 2 is an end view of it, and Fig. 3 shows the other side. In Figs. 1 to 3 the band is relaxed.

Fig. 4 is an end view showing the clamp compressing one article upon another, and Fig. 5 is a plan of the parts in Fig. 4.

The clamp is expanded in Fig. 1 with its screw lever projecting outward, the band being ready to be placed around the article or articles to be clamped. The lever is to be swung down as per the arrow, and this has a clamping effect, the ends of the band being drawn or forced closer to one another.

A is an outer article to be clamped over an article B. The encircling band C of the clamp is formed of a blank of spring steel, sheet brass, or other suitable material, and is of such length that it makes somewhat less than two turns around article A.

A relatively wide part of the band begins at one end 4, and extends more than a revolution around clamped member A and contains a circumferential hole 1, having ends

2 and 3. In prolongation of this wide part, the band has a narrow tongue end 6 which is next to the wide portion, part of the band being broken away in Fig. 3 to show end 6. The tongue passes through hole 1, and its other end 5 is bifurcated, and has looped limbs 7 riveted at 5^a, to provide eyes or sockets which carry a pivot pin 8. The other end of the band is looped at 9 and riveted at 4^a to provide a socket to carry part of a swing member or link 10 the other end of which is attached to a member 11 which has a screw thread to receive a screw lever 13, the base of which is revolvably secured to pin 8.

Link 10 is when desired curved or bent; there could be a combination of links.

Lever 13 has an abutment 15 against pin 8, which relatively to its ends is enlarged under the abutment. The lever has an integral wing 14, which enables it to be easily rotated and which takes a safety position near article A when the clamp is tight as in Fig. 5.

It will be noted that the spring band conjointly with the link encircles the clamped hose or other article twice, thus increasing the clamping effectiveness of the device.

By swinging down the lever as per arrow in Fig. 1 its pivot pin becomes located between nut 11 and band end 9; consequently stress is set up which prevents the band returning by spring action to the position of Fig. 1. The position of nut 11 can be regulated before such swinging is effected. This leverage causes a degree of clamping, its extent depending on the nearness of nut 11 to the lever pivot. But when it is desired to force the ends of the band still closer together, and insure a tighter joint, the screw lever 13 will be rotated to set the nut 11 farther from the pin 8 and thus from band end 7.

Link 10 and nut 11 may be integral; the lever may be modified and made operatable by a separate key; washers may be introduced where desirable to reduce friction and provide for wear; bands could be made of wire; they could have a plurality of tongues, and different applications of the invention may lead to other modifications.

To release a tightly clamped article, lever 13 should be rotated to move nut 11 closer to pin 8, then the screw bolt should be swung up to, for example the position of Fig. 1. This releases link 10 and sets it back into

non-clamping position so that the band or ring is then free to expand.

Having described this invention, what is claimed by Letters Patent is:—

- 5 1. The combination with an encircling spring band having a relatively wide portion and a narrow tongue portion, one end of the latter being adapted to pass through a circumferential aperture in said wide portion, said end having a bifurcation, and a
10 pivot pin seated in said bifurcation, of a lever pivotally connected with said pivot pin and having a screw-threaded portion, a link pivotally connected at one end with the
15 wide portion of the band, and a screw-threaded member to which the other end of the link is connected and with which screw-threaded member the threaded portion of the lever engages in the manner and for
20 the purpose specified.

2. The combination with a spring band

having a relatively wide portion and a narrow tongue portion having an end adapted to pass through a circumferential aperture in the wide portion of the band, said end 25 having a bifurcation, of a pivot pin seated in said bifurcation, a lever having a threaded portion pivotally connected with said pivot pin and adapted to have a swinging movement relatively to the band, a link hav- 30 ing the form of a bail having a pivotal connection with the end of the wide portion of the band, and a cylindrical member into the ends of which extend bent ends of the arms of the link so as to provide a pivotal con- 35 nection therewith and having a transverse screw-threaded opening through which passes the threaded portion of the lever.

In witness whereof I have hereunto set my hand.

HARRY TURNER, SENR.