(No Model.)

C. CALLAHAN.

TOOL FOR REMOVING HOSE COUPLING FROM HOSE.

No. 245,055. Patented Aug. 2, 1881.

FIG. 1.

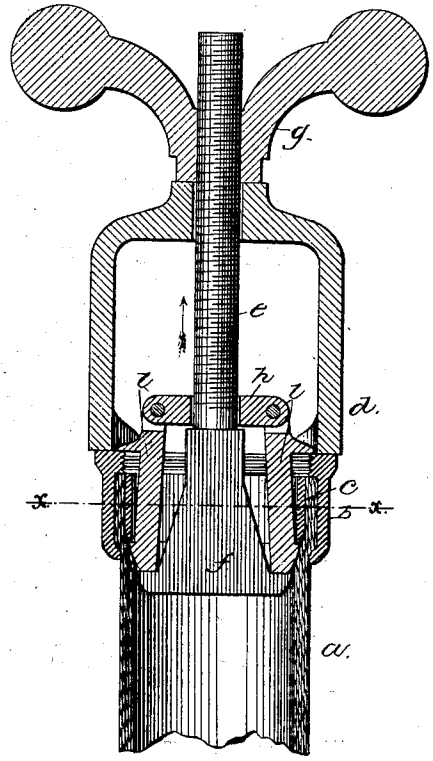


FIG. 2.

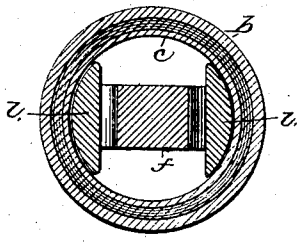
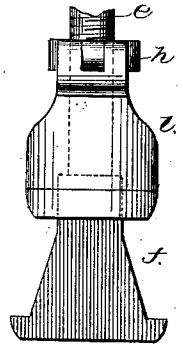


FIG. 3.



Witnesses.
B. J. Noyes.
L. F. Connor.

Inventor:
Cornelius Callahan
by Crosby & Gregory
Attys.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CORNELIUS CALLAHAN, OF CHELSEA, MASSACHUSETTS, ASSIGNOR TO THE AMERICAN FIRE HOSE COMPANY, OF SAME PLACE.

TOOL FOR REMOVING HOSE-COUPLINGS FROM HOSE.

SPECIFICATION forming part of Letters Patent No. 245,055, dated August 2, 1881.

Application filed May 11, 1881. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS CALLAHAN, of Chelsea, county of Suffolk, and State of Massachusetts, have invented a new and useful Improvement in Tools for Removing Hose-Couplings from Hose, of which the following description, in connection with the accompanying drawings, is a specification.

This invention has for its object the production of a tool for removing hose-couplings from hose for purposes of repairs, &c.

The tool herein referred to consists of an arched foot or rest to bear upon the end of the hose-coupling, two or more hooks to engage the innermost annular ring or collar of the hose-coupling, and a wedge and screw to cause the said hooks to engage with the under edge of the inner ring and to then withdraw the hooks and ring from the interior of the hose.

Figure 1 represents, in vertical section, a hose and hose-coupling, and one of my improved tools applied thereto preparatory to withdrawing the inner ring of the hose-coupling, in order that the outer ring of the coupling may also be removed from the hose. Fig. 2 is a cross-section on the line *x x*, Fig. 1; and Fig. 3 is a detail showing the hooks in the position with relation to the wedge, that they will occupy when being inserted into the hose to engage the ring.

In the drawings, *a* represents a piece of hydraulic hose, upon which is a coupling composed of an outer ring, *b*, and an inner ring, *c*, the two rings holding the hose pinched firmly between them, there being, however, in practice a working-screw or a union screwed into the open end of the outer ring, *b*, the lower end of the said screw or union resting against the top of the inner ring, *c*.

When it is desired to remove the inner ring, *c*, the working-ring or union referred to, but not shown, will be removed from the ring *b*, leaving the two rings *b c* as in the drawings, Fig. 1.

The tool employed by me consists of an arched foot or yoke-shaped rest, *d*, suitably shaped to bear upon the upper edge of the outer ring, *b*, as shown in Fig. 1, and of a screw, *e*, having a wedge-shaped head, *f*, a nut, *g*, applied to the screw, and a collar, *h*, applied loosely to the screw *e*, the said collar having pivoted upon it the two hooks *l*, the lower ends of which are suitably shaped to catch underneath the lower end of the inner ring, *c*, when the parts are as in Fig. 1. Assuming the tool to be placed as in Fig. 1, rotation of the nut *g* in one direction will move the screw *e* in the direction of the arrow near it, and lift it and its wedge-block *f* and hooks *l*, the said wedge maintaining the catches in engagement with the lower end of the ring *c*, and as the screw *e* is lifted withdrawing the ring *c*, with the said catches from within the hose *a*. Two sides of the wedge-block *f*, as shown in Fig. 2, are parallel.

When the tool is being inserted within the hose *a*, in order that the hooks may engage the ring and withdraw it, the yoke *h* and its hooks are so turned that the hooks fall opposite the parallel sides of the wedge-block *f*; but when the hooks reach a position below the lower end of the ring the screw is turned sufficiently from the position, Fig. 3, to rotate the wedge-block one-fourth around, and bring the inclined sides thereof directly opposite the backs of the hooks, and then the vertical movement of the wedge-block, its inclined sides acting against the inner sides of the hooks, will force them outward until they pass beyond or under the lower edge of the ring *c*. The inclined sides of the wedge-block hold the said hooks firmly in engagement with the lower end of the ring while the hooks and screw and wedge-block are being withdrawn from within the hose *a*.

With a tool of this kind a hose-coupling may be quickly removed from a piece of hose, in order that another coupling may be applied thereto to repair damages.

In another application, filed concurrently with this, I have shown apparatus for applying the coupling.

By means of this tool the inner ring may be removed without injuring it, and it may be again inserted into the hose when another coupling is to be applied.

I claim—

1. A yoke-shaped rest or frame, *d*, provided with a screw, *e*, having a wedge-shaped end, and nut *g*, combined with hooks *l*, pivoted to

a collar, *h*, all arranged to operate substantially as and for the purpose described.

2. In a tool for removing couplings from hose, a screw and connected wedge-block having two parallel sides, combined with a loosely-held yoke having upon it two pivoted hooks adapted to be forced outward by the longitudinal movement of the screw and wedge-block, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CORNELIUS CALLAHAN.

Witnesses:
G. W. GREGORY,
BERNICE J. NOYES.