E. B. PRESTON.

Apparatus for Detaching Hose from Coupling.

No. 205,902. Patented July 9, 1878.

FIG. 1.

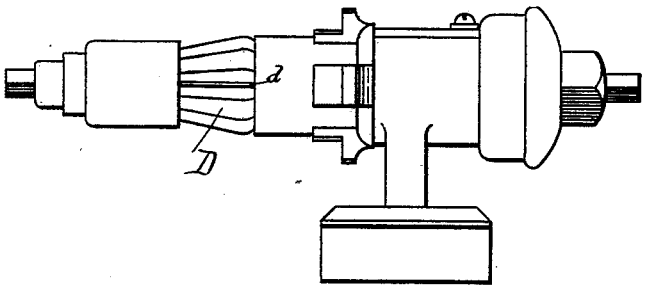
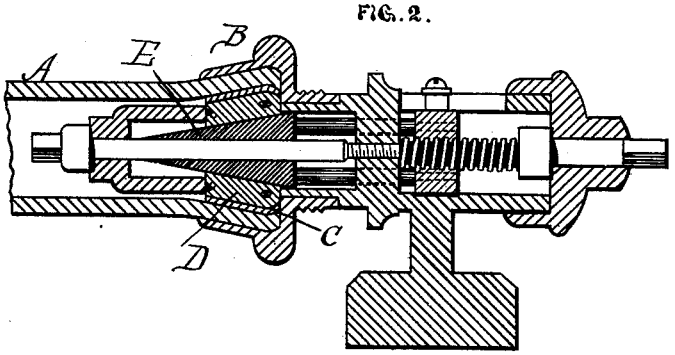


FIG. 2.



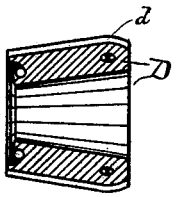


FIG. 4.

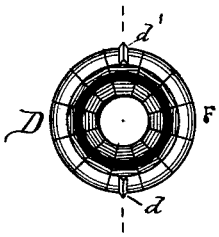


FIG. 3.

WITNESSES:

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A. H. Gawler.

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Everett B. Preston

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his attys

UNITED STATES PATENT OFFICE.

EVERETT B. PRESTON, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN APPARATUS FOR DETACHING HOSE FROM COUPLINGS.

Specification forming part of Letters Patent No. **205,902**, dated July 9, 1878; application filed April 18, 1878.

To all whom it may concern:

Be it known that I, EVERETT B. PRESTON, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Apparatus for Detaching Hose from Couplings, of which the following is a specification:

Hose are quite commonly secured to their couplings by a swaged internal ring of metal, placed within the hose and forcibly expanded, so as to compress the hose between the exterior of the ring and the interior of the chambered coupling. This has been deemed one of the best methods of securing the hose to the coupling, and several devices have been invented for swaging the ring in place. There has, however, existed this serious objection, that it is exceedingly difficult to separate the hose from the coupling when desired, resort usually being had to the laborious and difficult operation of cutting the ring with a cold-chisel or burning the hose out. This objectionable feature has been felt to be a serious drawback.

Among the devices for swaging the ring in place is one invented by W. A. Caswell, and patented January 22, 1878, to said Caswell and myself, being Patent No. 199,350, and which consists, essentially, in a segmental expanding piece, to be placed within the ring, and expanded by a sliding cone forced into the expanding piece by a screw. This is the apparatus which I have been using for inserting the rings; and my invention consists in applying to this or a similar expander a cutting edge or edges on exterior of the expanding piece, so that when inserted within the swaged ring and forcibly expanded the ring will be cut in two by the cutting edge or edges, as will be more fully explained.

In the accompanying drawing, which forms a part of this specification, Figure 1 represents a side view of Caswell's apparatus with my expanding cutter applied. Fig. 2 is a vertical longitudinal section of the same, shown within a hose-coupling as in the act of cutting the ring. Fig. 3 is an end view, looking at the smaller end of the segmental expanding cutter. Fig. 4 is a vertical section of the same.

Like letters of reference indicate like parts wherever used in the several figures.

In the said drawing, A represents the hose; B, the coupling; C, the internal swaged ring; D, the expanding cutter or segmental piece; *d*, the knives thereof, and E the conical plug within the expanding piece, the motion of which produces the expansion of the segmental piece D.

It will be noticed that two of the segments are furnished with cutting ribs or edges *d*, and that these segments are arranged opposite to each other. This is in order to afford a more direct bearing in the operation of cutting than would be obtained if only a single knife were used.

In operation, the hose is slipped upon the apparatus, as shown at Fig. 2, and, by means of the screw turned by a winch or key, the cone is driven forward, expanding the cutters and forcing the knives into the metal of the ring, severing the ring usually at one point only instead of at two, as might be expected, because one knife will usually serve as a bearing and the other as a cutter. When the cutting is complete the apparatus is withdrawn, and the severed ring may be readily sprung together and removed, permitting the withdrawal of the hose.

The cutting may be done with a single knife, but not so well as with two. More than two knives may be used, if desired; but I have not found any advantage from employing a greater number.

I claim—

The expanding piece provided with a cutting edge or edges lying in the direction of the axis.

EVERETT B. PRESTON.

Witnesses:

JOHN W. MUNDAY,

EDW. S. EVARTS.