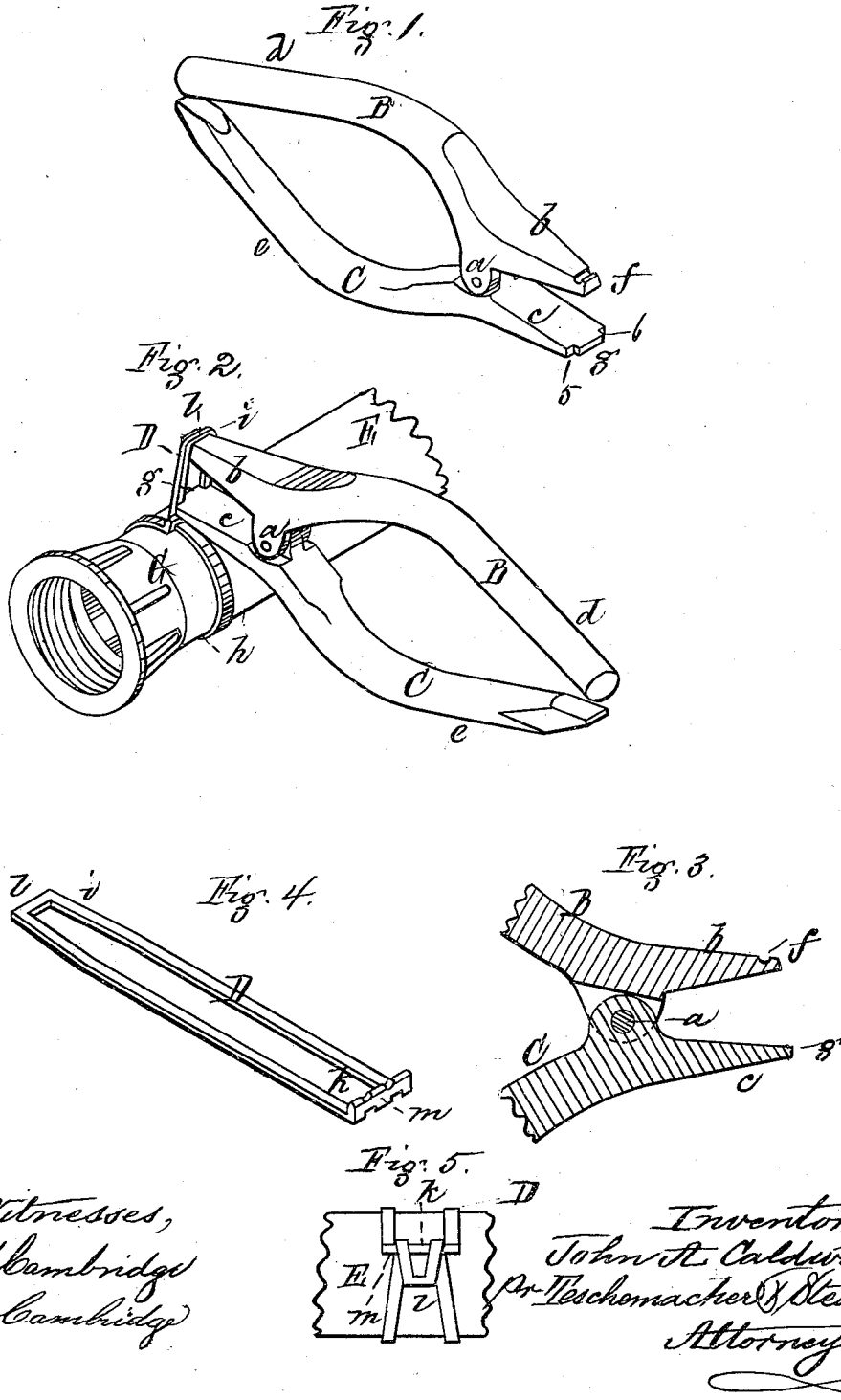


J. A. CALDWELL.

TOOL FOR TIGHTENING AND FASTENING STRAPS FOR SECURING
HOSE TO COUPLING.

No. 191,026.

Patented May 22, 1877.



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UNITED STATES PATENT OFFICE.

JOHN A. CALDWELL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN TOOLS FOR TIGHTENING AND FASTENING STRAPS FOR SECURING HOSE TO COUPLINGS.

Specification forming part of Letters Patent No. **191,026**, dated May 22, 1877; application filed April 19, 1877.

To all whom it may concern :

Be it known that I, JOHN A. CALDWELL, of Boston, in the county of Suffolk and State of Massachusetts, have invented a Tool for Tightening and Fastening Straps Employed for Securing Hose to Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved tool. Fig. 2 is a perspective view, illustrating the manner in which my tool is used for tightening and fastening straps employed for securing hose to couplings. Fig. 3 is a section through the jaws of the tool. Fig. 4 is a perspective view of a looped metallic strap. Fig. 5 is a plan of a piece of hose secured to its coupling by means of the strap.

This invention relates to a tool for tightening and fastening metallic looped straps used in securing hose to couplings; and consists in a pair of levers pivoted together and provided with jaws at their outer ends, one jaw being provided with a groove or projection, forming a hook, and engaging with one end of the strap, and the other jaw engaging with its other end, whereby the strap is drawn or strained tightly around the hose when applied to the coupling, in order that they may be securely held together, as desired.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, B C are two bent levers pivoted together at *a*, the two shorter arms of these levers forming jaws *b c*, and the two longer arms *d e* serving as handles for the tool, the end of the arm *d* being round in cross-section, and the end of the arm *e* being wedge-shaped, as shown. The jaw *b* is provided near its outer end with a groove, *f*, (forming a hook,) extending transversely across it, and the jaw *c* has a rectangular projection, *g*, at its extremity by which two square shoulders, 5 and 6, are formed, the jaws *b c* thus constructed being especially designed for use in tightening and fastening a metallic looped strap, D, Fig. 4, (of peculiar construction,) around the outside of one end of a section of hose, E, fitted over the corru-

gated neck *h* of one portion of a coupling, G. After being bent around the hose, the narrow portion *i* of this strap is passed through the wide end *k*, and the strap is partially tightened by inserting the wedge-shaped end of the handle *e* of the tool through the narrow end of the strap, and prying it still farther through the wide end, after which the jaw *b* is hooked into or engaged with the cross-bar *l* of the narrow end of the strap, and the jaw *c* so applied to the wide end thereof that the rectangular projection *g* will fit between the sides of the tapering or narrow end *i*, and be simultaneously brought to bear against the cross-bar *m* of the wide end, the portion of the jaw *c* forming the shoulders 5 6 abutting against the flattened sides of the tapering or narrow portion *i* of the strap, by which construction and arrangement, when the handles *d e* are brought together, the jaws *b c* are separated, and a strong purchase is thus obtained for still farther drawing the narrow end through the wide end, and the strap is thus tightly drawn or strained around the hose, causing the portion thereof under the strap to be forced into the corrugations of the coupling, when the narrow end is bent by the hooked end of the jaw down over the wide end, and is then flattened in place on the hose, as seen in Fig. 5, by a blow of the tool.

It is evident that the projection *g* of the jaw *c* may be omitted, and instead of the groove *f* the jaw *b* may be provided with a suitable projection for hooking over the narrow end of the strap without departing from the spirit of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

The within-described tool for tightening and fastening metallic straps used in securing hose to couplings, consisting of the levers B C, pivoted together, and having jaws *b c*, one being provided with a groove or projection and the other provided or not with a projection, constructed to operate substantially as described.

Witness my hand this 17th day of April, 1877.

JOHN A. CALDWELL.

In presence of—

N. W. STEARNS,
W. J. CAMBRIDGE.