No. 640,091. Patented Dec. 26, 1899.

D. C. CARR.

HOSE STRIPPING APPARATUS.

(No Model.) (Application filed Dec. 30, 1898.)

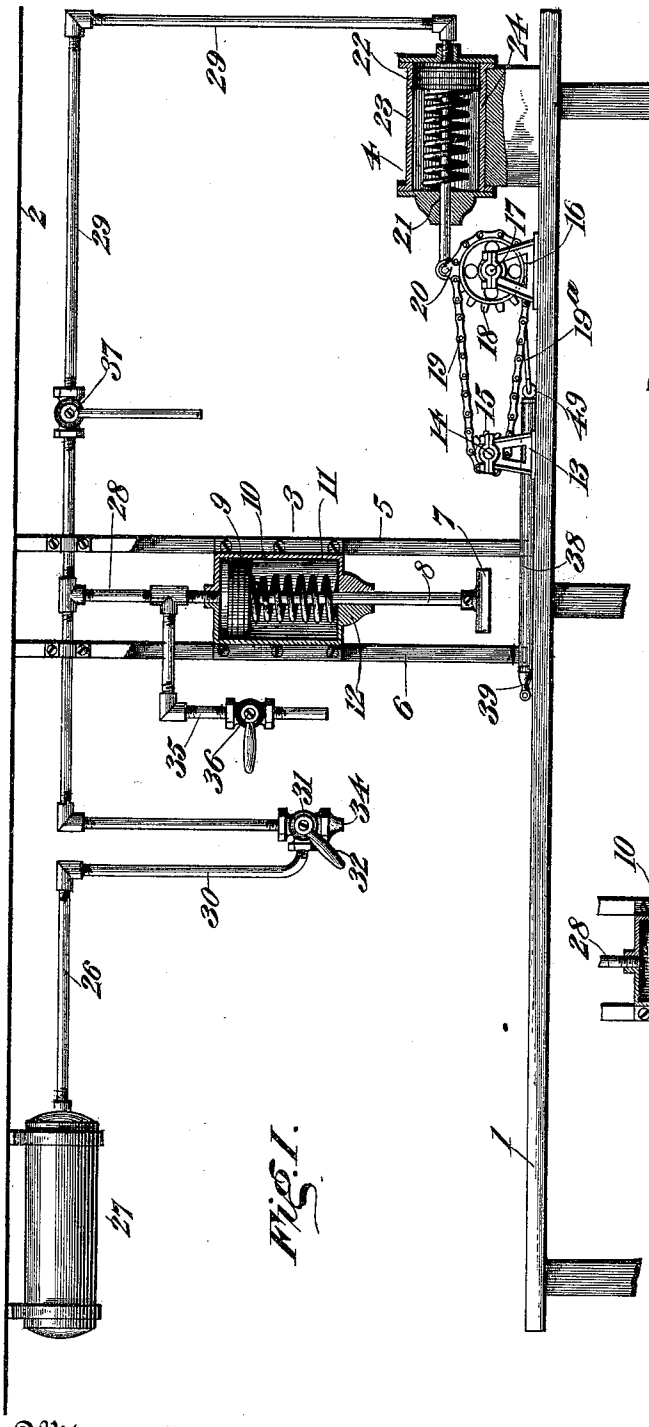


Fig. I.

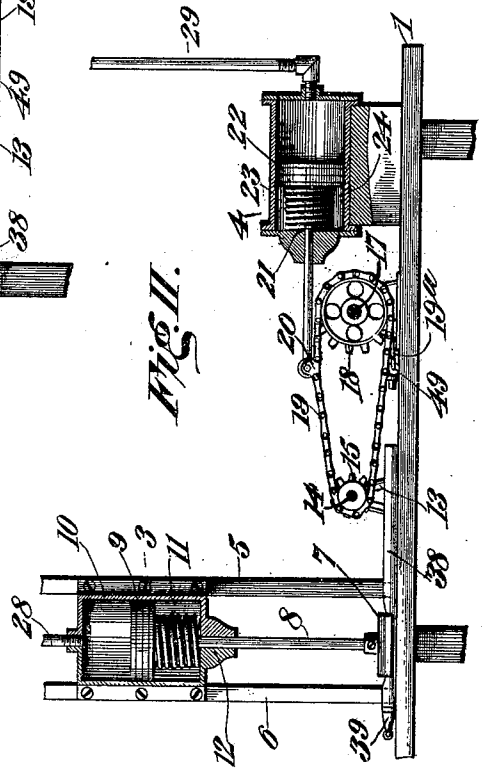


Fig. II.

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UNITED STATES PATENT OFFICE.

DELBERT CLAYTON CARR, OF ROCHESTER, NEW YORK.

HOSE-STRIPPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 640,091, dated December 26, 1899.

Application filed December 30, 1898. Serial No. 700,698. (No model.)

To all whom it may concern:

Be it known that I, DELBERT CLAYTON CARR, of Rochester, in the county of Monroe, State of New York, have invented certain new and useful Improvements in Hose-Stripping Apparatus, of which the following is a complete specification, reference being had to the accompanying drawings.

The object of my invention is to produce a machine for stripping the metallic terminals from hose.

In air-brake and steam-heating systems for railway-cars the flexible connections ordinarily consist of sections of rubber hose provided with terminal fittings by which the hose-sections may be connected to the pipes of a car or cars of a train. Heretofore when it was desired for any reason to separate the terminals from the hose it has been necessary to chip away the rubber hose, thereby injuring or destroying the hose. Such a method is, moreover, tedious and expensive. My invention provides means for quickly stripping the hose without injuring it.

My apparatus consists, essentially, of a co-acting vise and tension-creating mechanism or stripper, and in its preferred form of embodiment those members are designed to be actuated by air or other fluid pressure.

In the accompanying drawings, Figure I is a side elevation, partly in section, of my apparatus complete, showing the vise and stripper in the inoperative position, a hose being illustrated in position ready to be stripped. Fig. II illustrates a portion of the apparatus, showing the vise and stripper in the positions which they respectively occupy after a complete operation.

Referring to the figures on the drawings, 1 indicates a bench or table, and 2 a fixed support above the same—as, for example, the ceiling of the room in which the table is located. Coöperating with the table I employ a vise 3 and a stripper 4. The vise consists, preferably, of uprights 5 and 6, rigidly secured between the bench 1 and the ceiling 2. Between the uprights works a clamping member 7. The vise being preferably operated by fluid-pressure, the member 7 is affixed to the lower end of a piston-rod 8, that is attached to a piston 9, working within a cylinder 10, secured to the uprights 5 and 6. The piston is yieldingly urged to its upward limit of movement, as by a coiled spring 11, surrounding the rod 8, seated at one end against the piston 9 and at the other end against the cylinder-head 12.

The stripper consists, essentially, of tension-creating mechanism, and in its preferred form of embodiment comprehends a pair of journal-supports 13, within which is revolubly mounted the shaft 14 of a sprocket-pinion 15, and journal-supports 16, within which is revolubly mounted the shaft 17 of a sprocket-wheel 18. Around the pinions 15 and 18 passes an endless sprocket-chain 19, one link of which carries a hook or engaging member 19^a and another lugs 20. Secured to the chain 19, as between the lugs 20, I provide a piston-rod 21, which is attached at its other end to a piston 22, working within a cylinder 23. A coiled spring 24 serves normally to drive the piston 22 away from the vise 2, and thereby to advance the hook 19^a toward the vise.

It is obvious that the hook 19^a may be incorporated with other mechanical elements than a sprocket-chain and gears, but that mechanism is preferred, as affording convenient and simple mechanism for imparting limited reciprocal movement to the hook. It would, for example, be practicable to join the hook 19^a directly to the piston 21, the piston 21 being intended to represent suitable hook-actuating mechanism and illustrating the preferred fluid-actuated mechanism comprehended by the preferred form of embodiment of my invention.

As was specified above, the vise and stripper are preferably fluid-pressure-actuated mechanisms, and therefore in illustrating the preferred form of embodiment of my invention I show a fluid-pressure-supply pipe 26, communicating with a source of fluid-pressure supply—as, for example, a compressed-air reservoir 27 at one end—and through branch pipes 28 and 29 with the interior of the cylinders 10 and 23, respectively. The pipe 26 is preferably provided with a depending loop 30, that carries near its bend, within easy access of an operator, a valve-shell 31, within which works a three-way valve (not illustrated) that is adapted to be manipulated as by a handle 32. By turning the handle 32 in one direction air-pressure is allowed to pass from the pipe

26 through its loop 30 to the branch pipes 28 and 29. Turned in another direction the valve confines the air-pressure within the pipe 26 and allows exhaust from the branches 28 and 29 through the discharge-port 34. The branch 29 is preferably provided with an exhaust-pipe 35, controllable as by a cock 36.

37 indicates a cock intersecting the pipe 29.

38 indicates a section of hose, such as is provided with metallic terminals, which my apparatus is designed to strip from it. These terminals usually consist of rings or fittings provided with male or female screw-threads.

39 indicates a connecting-eyelet adapted to be screwed upon a male thread, and 49 an eyelet adapted to be screwed into a female thread. The eyelets may be of any suitable shape adapted to make a firm union with the metallic terminal to which they are respectively fitted.

In operation a workman attaches to a section of hose to be stripped an eyelet or eyelets at its opposite ends and engaging the hook 19^a with one of the eyelets lays the hose-section upon the table 1, under the clamping member 7. The clamping member is then depressed, so as to grip the hose-section, after the manner illustrated in Fig. II. The stripper is next actuated to create a tension upon the hook 19^a, which being connected with an eyelet—for example, the eyelet 49—extracts the terminal to which the eyelet is secured. In practice the terminals are secured by metallic bands or clips, which are of course first removed before stripping the hose. The operation of the vise and of the stripper may be controlled by manipulation of the valve-handle 32, its movement in one direction serving, through application of pressure behind the pistons 9 and 22, respectively, to drive the clamping member 7 against the hose-section and to create tension upon the hook 19^a. After the terminal is withdrawn the turning of the handle 32 permits exhaust of air through the port 34 and the repulsion of the pistons 9 and 22 under the force of their respective springs. The cock 36 is provided as a means of expediting the exhaust when required. After the stripping of one terminal the hook 19^a is disengaged from the eyelet to which that terminal is secured, the hose-section is reversed, the hook is engaged with the other eyelet, and the operation is repeated. The cock 37 is provided in order to permit the operation of the piston 9 independent of the piston 22, so that the vise, if desired, may be used independently of the stripper.

What I claim is—

1. In hose-stripping apparatus, the combination with a vise, of a pair of sprocket-gears, an endless chain carried thereon, a hook upon the chain, and means for actuating the chain upon the gears in order to produce movement of the hook, substantially as set forth.

2. A hose-stripper consisting of a pair of suitably-mounted sprocket-gears, an endless chain thereon, a cylinder, a piston within the cylinder connected with the chain, and an engaging member carried by the chain, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

DELBERT CLAYTON CARR.

Witnesses:

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