F. A. THIES.

SNAKE PULLER.

APPLICATION FILED JULY 26, 1913.

1,108,025. **Patented Aug. 18, 1914.**

Fig 1

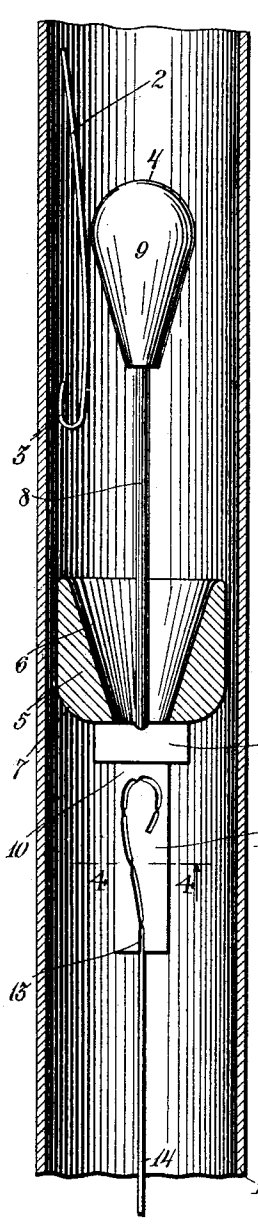


Fig 2

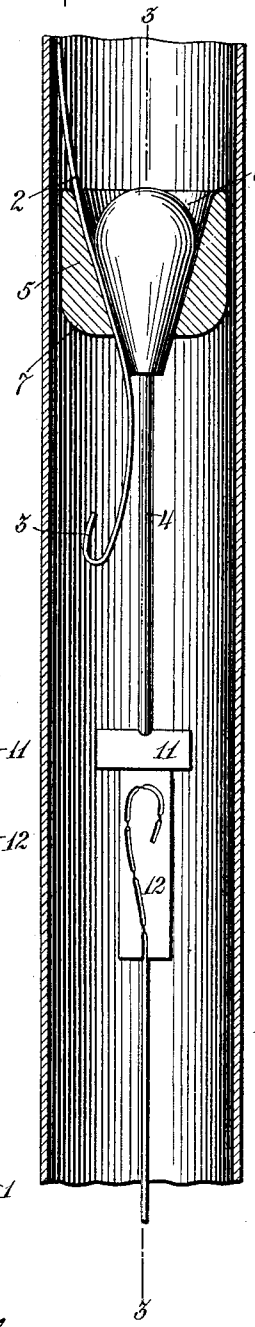


Fig 3

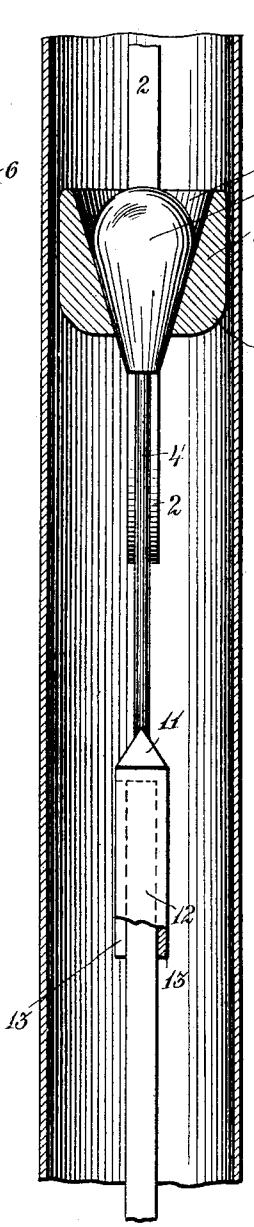


Fig 4

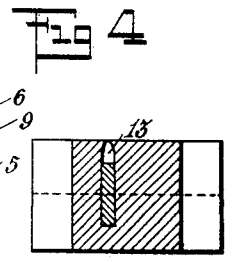
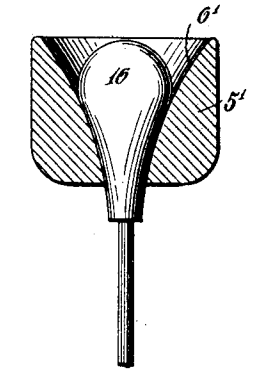


Fig 5



WITNESSES

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SNAKE-PULLER.

1,108,025. Specification of Letters Patent. Patented Aug. 18, 1914.

Application filed July 26, 1913. Serial No. 781,393.

To all whom it may concern:

Be it known that I, FREDERICK A. THIES, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Snake-Puller, of which the following is a full, clear, and exact description.

This invention relates to improvements in snake pulling devices, and has for an object the provision of an improved structure designed to be forced into a pipe and to interlock with a snake therein so as to readily pull the same therefrom even when the snake has become "stuck" or pinched in the pipe.

Another object of the invention is to provide an improved snake dislodging and removing device formed with a loosely arranged mouse structure which has co-acting therewith a knob so as to grip the snake preparatory to the removal thereof.

In carrying out the object of the invention a snake of any desired construction, as for instance the ordinary metallic strip, is designed to be removed. It is usual for snakes to get caught in the pipes through which they are being forced, and the puller involving the present invention is designed to remove these snakes. In order to accomplish this the puller is formed with a sleeve which acts in a certain sense like a mouse through which projects a rod carrying a snake at one end and an interlocking knob at the opposite end, the interlocking knob co-acting with the mouse for gripping the end of the snake after the sleeve or mouse is slipped over the snake, whereby a reverse movement of the puller will cause a longitudinal movement of the snake through the pipe.

In the accompanying drawings—Figure 1 is a sectional view through a pipe disclosing an embodiment of the invention arranged therein, part of said embodiment being disclosed in section; Fig. 2 is a view similar to Fig. 1 except that the various parts are arranged with the snake gripped by the puller; Fig. 3 is a section through Fig. 2 on line 3—3; Fig. 4 is an enlarged detailed fragmentary sectional view through Fig. 1 on line 4—4; Fig. 5 is a slightly modified form of the mouse or sleeve and co-acting knob.

Referring to the accompanying drawings by numeral 1 indicates a pipe of any desired kind through which a snake 2 is designed to be forced. The snake 2 is formed of any desired structure, as for instance, a thin strip of steel bent at the end for forming a hook 3. In using the snake 2 for pulling telephone wires and other wires through pipe 1 the same oftentimes gets caught so that it is impossible to force the same farther through the pipe and difficult to move backward. In circumstances of this kind it is desirable to force a snake puller through pipe 1, as shown in the drawings, so as to engage the snake and pull the same properly. The puller 4 is formed with a sleeve or mouse 5 having a conical-shaped opening 6 and rounded corners 7. Through the sleeve or mouse 5 extends a shaft 8 having a knob 9 secured thereto at one end and a base 10 secured at the opposite end. Knob 9 is formed with a beveled portion designed to fit against the walls of the tapering conical-shaped opening 6 so as to grip the snake 2, as shown in Fig. 2. It will be observed that the sleeve 5 is of slightly less diameter than the tube 1 so as to freely pass therethrough, while the shaft 8 may be of any desired length, preferably made comparatively short so as to go around comparatively small bends or curves in the pipes. The base 10 is formed with an A-shaped upper end or head 11, and with a lower part 12 having arranged therein a groove 13 designed to accommodate a second snake 14. The A-shaped upper end of head 11 forms an edge bearing for supporting the sleeve 5 so that the sleeve is caused to tilt for being more easily threaded over the end of snake 2. After the hooked end of the second snake 14 has been placed in groove 13 the groove is closed to a greater or less extent by having the upper part of part 12 struck with a hammer. This will result in the material on the opposite walls to approach each other as shown in Figs. 1, 2 and 4, and thus prevent the accidental removal of snake 14. The head 11 is made A-shaped so as to allow the hooked end 3 of snake 2 to pass through the sleeve 5 while the head is raising sleeve 5.

In Fig. 5 will be seen a slightly modified form of the invention in which the sleeve 5′ is formed with a rounded opening 6′ in which a stop or ball 16 is designed to fit, the same being rounded or curved so as to fit the curvature of the opening 6′.

Having thus described my invention what

I claim as new and desire to secure by Letters Patent is—

1. In a snake puller of the class described, a sleeve, a shaft extending through said sleeve, a knob on one end of said shaft coacting with said sleeve for pressing a snake against said sleeve, and a supporting base on the opposite end of said shaft, said supporting base being formed with an edge bearing, whereby said sleeve is caused to tilt for being more easily threaded over said snake.

2. In a snake puller of the class described, a sleeve formed with a conical-shaped opening and with rounded exterior edges, a shaft extending through said sleeve formed with a knob at one end having its walls designed to extend substantially parallel with the walls of said conical-shaped opening so as to press a snake against the walls of said sleeve, and a base member connected with said shaft formed with means for receiving an operating member and with an A-shaped bearing on which said sleeve rests whereby said sleeve may freely tilt so as to receive the end of a snake.

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

FREDERICK A. THIES.

Witnesses:
A. L. KITCHIN,
GEORGE H. EMSLIE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."