

No. 812,088.

PATENTED FEB. 6, 1906.

W. W. PIERCE.
CARTRIDGE EXTRACTING IMPLEMENT.
APPLICATION FILED DEC. 30, 1903.

Fig. 1.

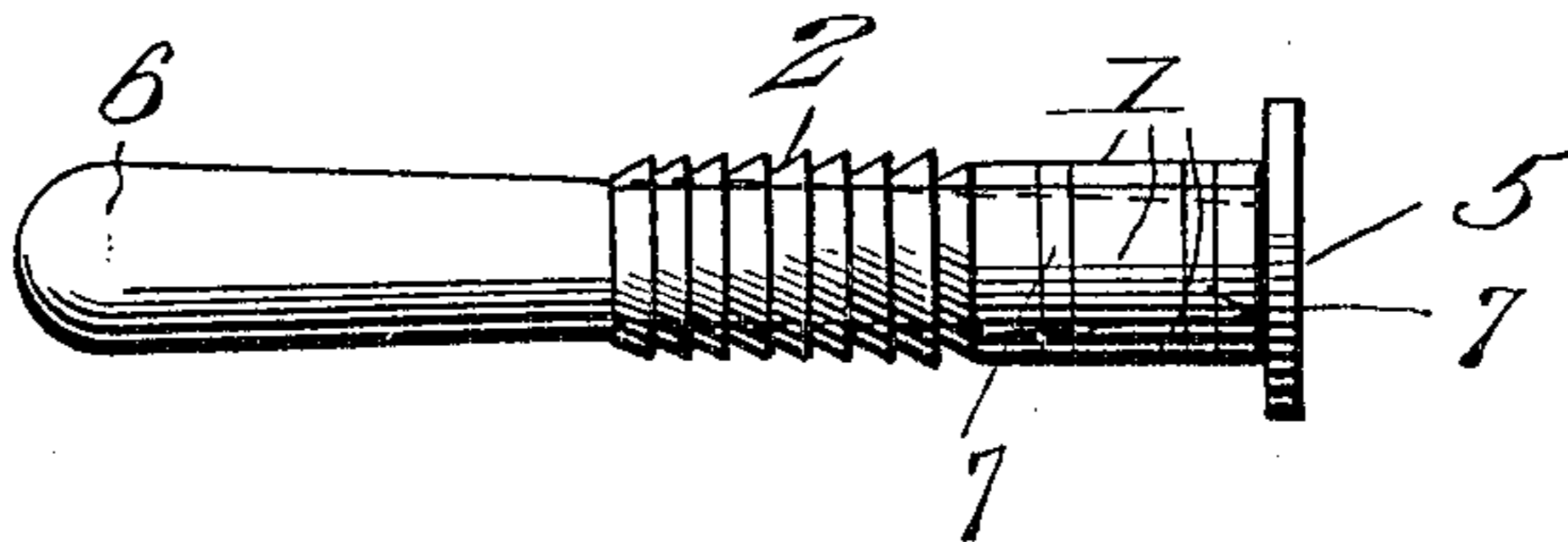


Fig. 2.

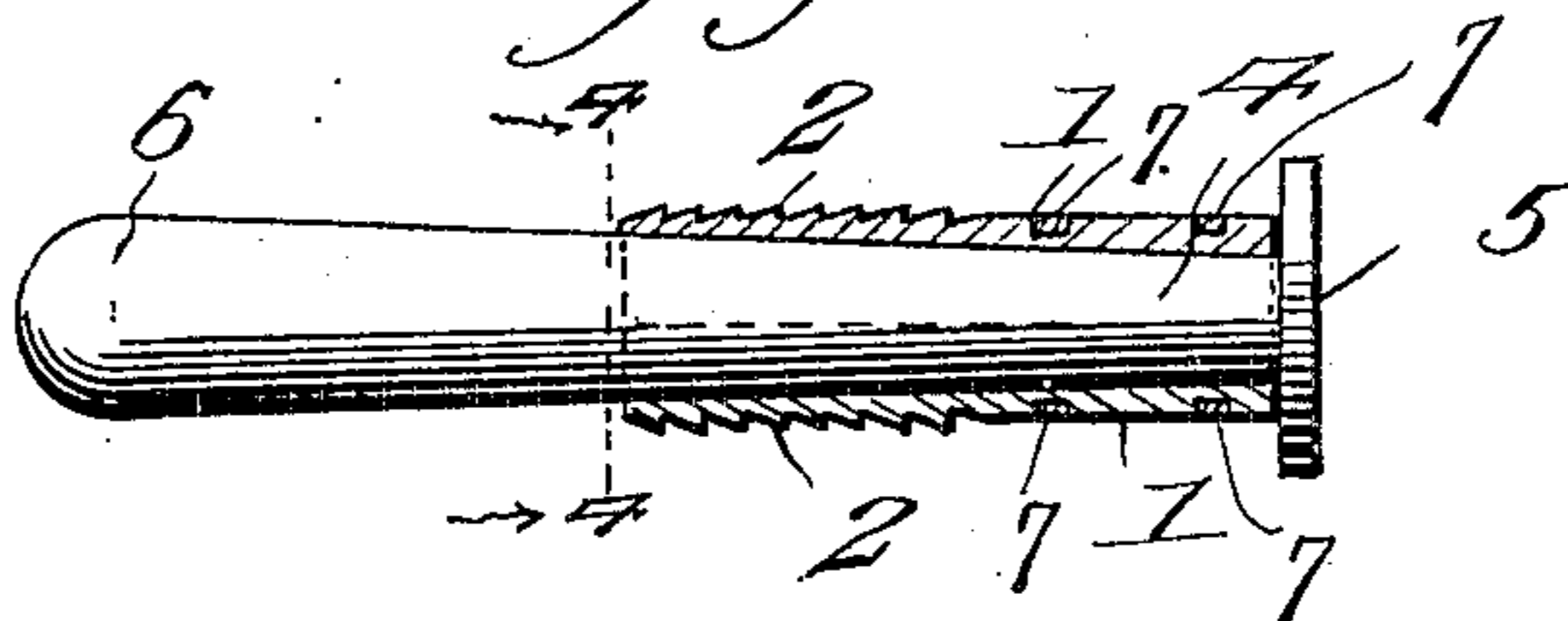


Fig. 3.

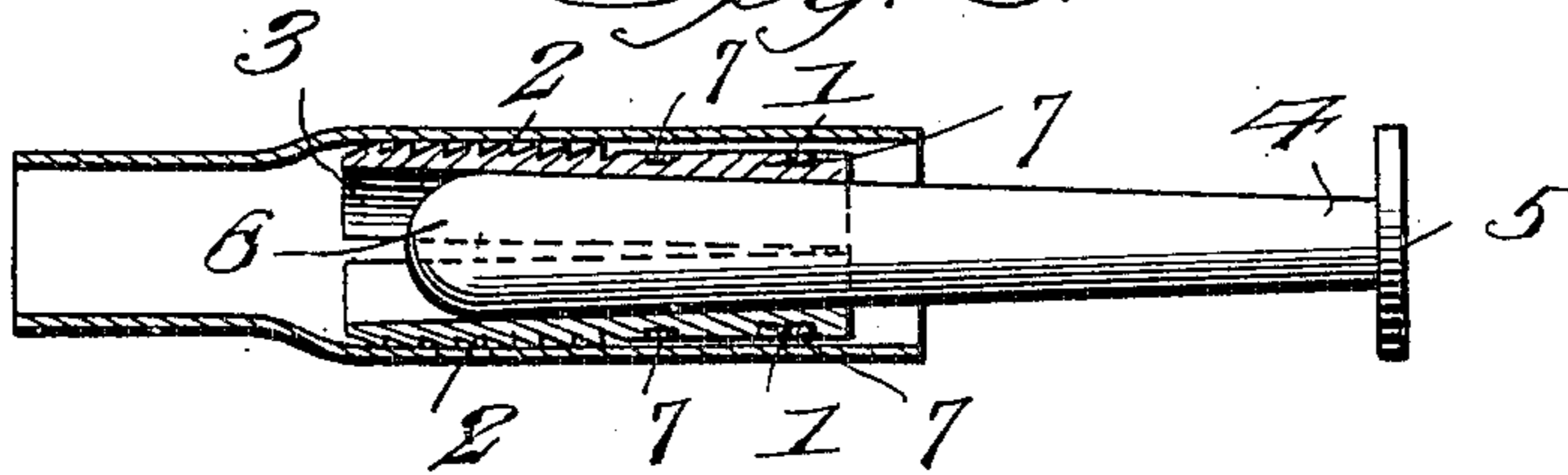
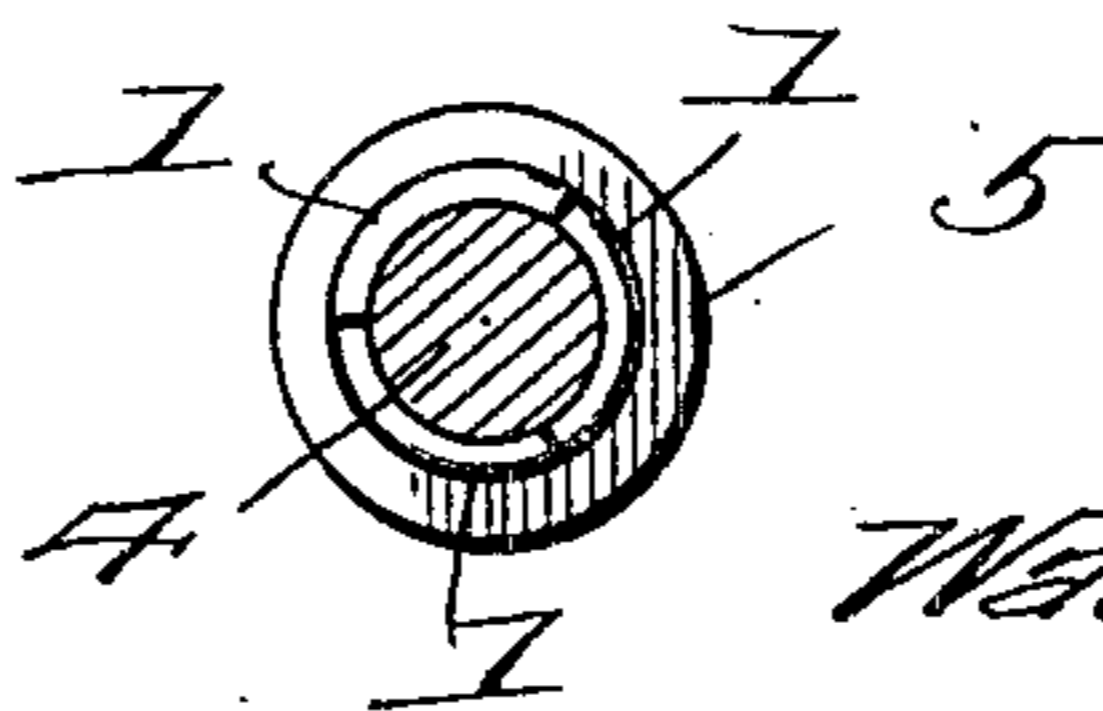


Fig. 4.



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WALTER W. PIERCE, OF MORRO, CALIFORNIA.

CARTRIDGE-EXTRACTING IMPLEMENT.

No. 812,088.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed December 30, 1903. Serial No. 187,141.

To all whom it may concern:

Be it known that I, WALTER W. PIERCE, a citizen of the United States, residing at Morro, in the county of San Luis Obispo and State of California, have invented new and useful Improvements in Cartridge-Extracting Implements, of which the following is a specification.

This invention relates to a cartridge-extracting tool or implement, and is particularly adapted for removing shells from firearms when the heads of the shells become separated or torn off.

It frequently occurs that the flanged heads of cartridge-shells pull off and the shells are left in the barrel of the firearm, and unless some specially-devised implement or tool is used great difficulty will be encountered in removing such headless shells from the barrel. This is especially liable to occur with cartridges that have been used and extracted several times.

The primary object of the present invention is to provide a device by which headless or torn shells can be readily extracted by a simple operation; and the invention consists, essentially, in a series of gripping or biting sections arranged in operative relation to an expander or mandrel.

The invention consists in the details of construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of a tool or implement embodying the features of the invention. Fig. 2 is a side elevation of a mandrel embodied in the tool or implement and showing the gripping or biting members in section. Fig. 3 is a partial longitudinal vertical section of the implement shown applied to a cartridge and illustrating the operation of the gripping or biting members or sections. Fig. 4 is a transverse vertical section on the line 4 4, Fig. 2.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

A series of segmental sections 1 are provided, and in the present instance three of the same are used and when drawn together in close relation will form a cylinder. Each section about midway of its length and from such point to its forward extremity is formed with a series of transverse serrations or teeth 2, which are directed rearwardly, the outer surface of the remaining or rear portion of

each section being smooth. The serrations or teeth 2 project outwardly beyond the rear smooth portion of each section, and the inner concaved surface 3 of each section is gradually inclined upwardly from the rear end toward the front terminal. Freely slidable in relation to the gripping members or sections 1 is a mandrel or expander 4, having a flanged or disk head 5, which provides a convenient means for drawing the said mandrel or expander through the sections and also in removing the shell from the barrel of the firearm after a positive gripping action has been set up between the teeth of the members or sections 1 and the mutilated or torn shell within the barrel. The mandrel or expander 4, which is approximately double the length of the sleeve and wholly free from positive engagement with the latter, gradually increases in diameter from the head 5 to a rounded end 6 to render it effective in throwing the several members or sections 1 outwardly and causing a firm engagement of the teeth 2 with the interior wall of the shell.

To hold the gripping members or sections 1 in connection with the mandrel or expander 4, rings 7 are used, which are disposed at intervals, as shown. The function of these rings is to retain the members or sections 1 in place on the mandrel or expander and prevent the same from becoming lost and also to facilitate the regular insertion of the said members in the shell to be withdrawn from the barrel of the firearm.

In the use of the device the members or sections 1 are forced backwardly against the head 5, so that the enlarged portion of the mandrel or expander will be located in advance of the front terminals of said members. The implement in this condition is then inserted in the shell and the mandrel or expander drawn rearwardly to force out the members and cause the teeth 2 to firmly grip or bite against the interior surface of the shell, as shown by Fig. 3. By engaging the head 5 and exerting a rearward pull on the implement the shell can be withdrawn from the barrel. It will be understood that the head 5 may be of dimensions corresponding to that of the ordinary shell-head, and when made in such proportions the several forms of shell-extractors now used in connection with breech-loading firearms may be caused to engage said head 5 and operate to withdraw the shell.

It is to be observed that owing to the man-

drel being considerably longer than the sleeve the forward rounded end 6 may be projected in advance of the sleeve to facilitate entrance of the device into a cartridge
5 or shell, and, further, that because of the mandrel being wholly free from positive engagement with the sleeve relative sliding and rotary movements of the parts are permitted, whereby during the operation of
10 withdrawing the mandrel to expand the sleeve a twisting movement of the mandrel may be effected for attaining a greater expansive force.

It will be understood also that the portions and dimensions of the several parts
15 of the implement may be varied at will to adapt the same to be used with shells of varying dimensions, but for ordinary shells or those only slightly differing in diameter a single implement may be used in extracting the
20 same.

Having thus fully described the invention, what is claimed as new is—

In a device of the class described, a tubular sleeve wholly composed of a plurality of

coöperating relatively movable segmental sections, an external series of rearwardly-pitched teeth or serrations provided on and extending peripherally of the sleeve, said teeth being extended beyond the plane of the
30 face of the sleeve and the latter having its interior wall gradually and diminishingly tapered from front to rear, a correspondingly-tapered mandrel fitted within and free from positive engagement with the sleeve to permit
35 relative sliding and rotary movement of the parts, said mandrel having its forward larger end rounded and being of greater length than the sleeve, whereby said rounded end may be projected in advance of the
40 sleeve to facilitate entrance of the device into a shell, and a disk-like head fixed on the rear smaller end of the mandrel.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER W. PIERCE.

Witnesses:

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