D. H. WATTS.

TREE PRUNER.

APPLICATION FILED SEPT. 24, 1914.

1,174,785. Patented Mar. 7, 1916.

Fig. 3.

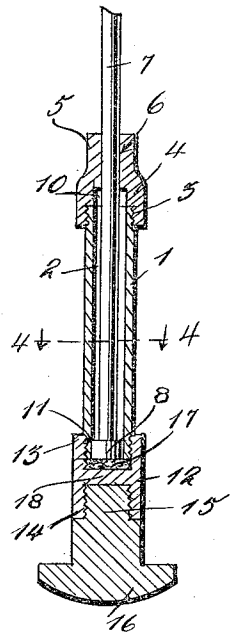


Fig. 1.

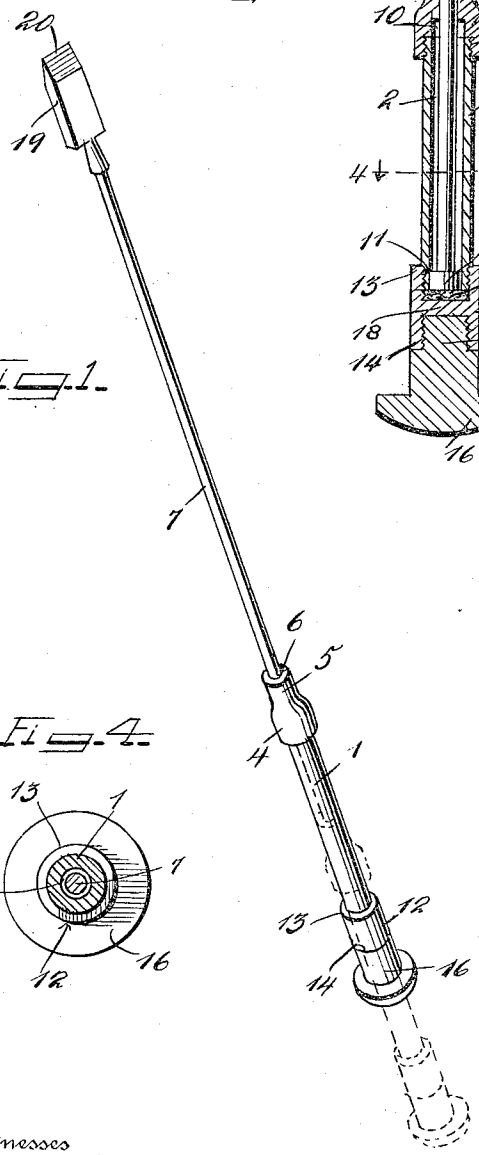


Fig. 2.

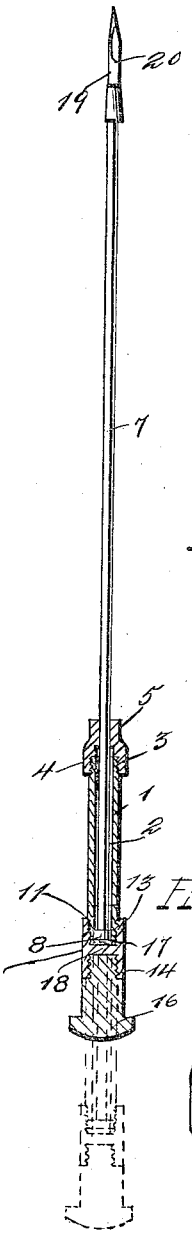


Fig. 4.

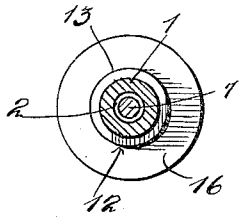
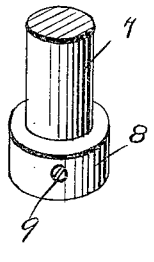


Fig. 5.



Witnesses

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TREE-PRUNER.

1,174,785. Specification of Letters Patent. Patented Mar. 7, 1916.

Application filed September 24, 1914. Serial No. 863,344.

To all whom it may concern:

Be it known that I, DAVID H. WATTS, a citizen of the United States of America, residing at Kerrmoor, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in Tree-Pruners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a tree pruner and has for its principal object the production of a device having a reciprocating head mounted upon a stationary rod so as to allow the head to impart direct blows upon the end of the rod for causing the blade carried by this rod to easily sever twigs or limbs of a tree.

Another object of this invention is the production of a tree pruner having a reciprocal head mounted upon a stationary rod, this head being so formed as to normally remain in engagement with the end of the rod but which may be easily detached from the rod when desired whereby the direct blows upon the rod may cause the same to sever a twig or a limb without danger of the several portions becoming accidentally disengaged.

With these and other objects in view this invention consists of certain novel combinations, constructions, and arrangements of parts as will be hereinafter fully described and claimed.

Referring to the accompanying drawing: Figure 1 is a detailed perspective view of the assembled tree pruner illustrating the manner in which the head thereof is reciprocated. Fig. 2 is a side elevation of the stationary rod and blade showing the reciprocal head in section. Fig. 3 is an enlarged longitudinal section taken through the reciprocal head showing the manner in which the end of the stationary rod is engaged. Fig. 4 is a section taken on the line 4—4 of Fig. 3 looking in the direction of the arrow. Fig. 5 is a fragmentary detailed perspective view of the inner end of the stationary rod showing the ferrule detachably carried thereby.

Referring to the accompanying drawing by numerals 1 designates the hollow tubing having the enlarged central bore 2 extending therethrough. The threaded end 3 of the tubing 1 carries the cap 4 having a reduced end 5. This reduced end 5 has a reduced opening 6 formed therein through which the stationary rod 7 passes. This rod 7 is provided at its inner end with a ferrule 8 which is held in position by means of the screw 9. This ferrule 8 is positioned within the bore 2 of the hollow tubing 1 so as to allow the tubing to easily reciprocate thereon since the bore 2 is of sufficient size to accommodate the ferrule 8. Since the cap 4 is provided with a pocket 10 of the same size as the diameter of the ferrule 8, the ferrule may pass thereinto but the movement of the head in one direction upon the rod 7 will be limited. The opposite end of the tubing 1 is provided with a threaded portion 11 upon which the double-ended collar 12 is detachably carried. The end 13 of the collar 12 engages the threaded end 11 of the tubing 1 while the opposite end 14 of the collar receives the reduced threaded neck 15 of the wooden handle 16. By the use of this wooden handle 16 it will be seen that the tree pruner may be easily held so as to cause the reciprocal head to impart a direct blow with a considerable force upon the inner end of the rod 7 without injury to the person's hands who is using the device. In order to deaden the impact caused when the reciprocal head imparts a blow to the inner end of the rod 7 there is provided a comparatively thin washer 17 which is formed of leather or other suitable material which bears upon the central body 18 of the double-ended collar 12. This washer is for the purpose of deadening the impact caused when the reciprocal head directs or imparts a blow to the inner end of the rod 7 thereby preventing injury to the several portions of the device.

A blade 19 having a beveled outer end 20 is mounted upon the rod 7 and is adapted to be positioned in engagement with a twig or a limb when it is desired to operate the device. When the blow is imparted to the rod 7 the force will drive the chisel through the twig or limb thereby severing the same.

When this device is in use the blade or chisel 19 may be placed in engagement with a twig or limb as disclosed in Fig. 2. The reciprocal head may be thrown over the end portion of the rod as disclosed by the dotted lines in Figs. 1 and 2. By moving the reciprocal head very rapidly upon the rod 7 it will impart a direct blow to the inner end of the rod 7 for driving the chisel 19. This head may be reciprocated several times for cutting a very large limb so that the device

will sever small and large twigs or limbs alike. It is of course obvious that the rod 7 may be removed from the tubing when so desired for the substitution of a different rod having a different size chisel or blade.

From the foregoing description it will be seen that a simple and efficient tree pruner has been produced which is so formed as to engage a single twig or limb for efficiently and quickly severing the same without injury to the adjacent limbs and also which is provided with a simple and efficient reciprocal head which is adapted to impart the blows to the end of the rod.

What I claim is:—

In a tree pruner of the class described, the combination of a stock comprising a hollow tubing, a rod slidably mounted within said tubing and provided with a ferrule upon its inner end, a cap carried upon one end of said tubing for limiting the sliding movement of rod in one direction, a double-ended collar threaded upon the outer portions of the opposite end of said tubing, said collar provided with a central body, a buffer washer carried within said collar and resting upon said body, the inner end of said tubing bearing upon said washer adjacent its outer periphery, whereby said washer will be positively retained in its correct position, said washer being adapted to form a buffer for the inner end of said rod and ferrule for absorbing the jar when the rod moves into said tubing, a gripping handle threaded into engagement with said collar, said stock being adapted to impart direct blows upon the inner end of said rod for driving the same.

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

DAVID H. WATTS.

Witnesses:

B. L. SHEARER,

WILL. SMITH.

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