No. 720,706. PATENTED FEB. 17, 1903.

A. M. LAMB.

TREE TRIMMER.

APPLICATION FILED JULY 10, 1902.

NO MODEL.

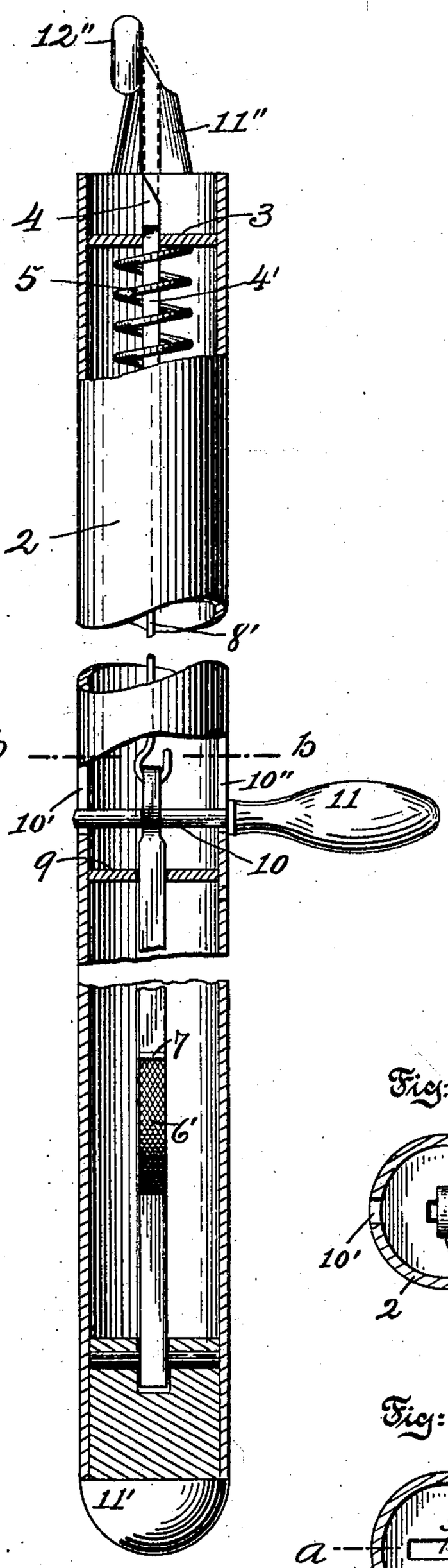


Fig: 1,

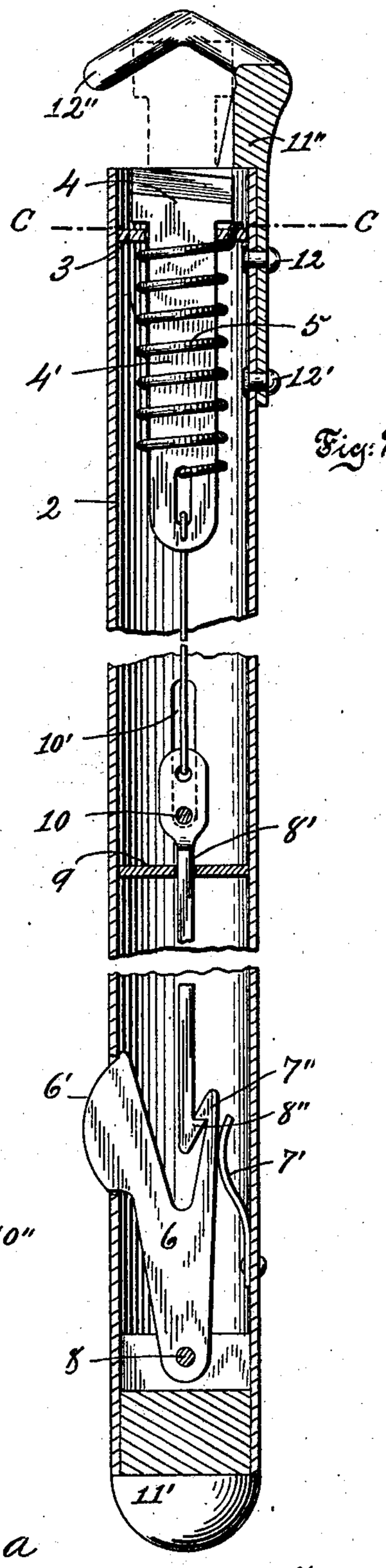


Fig: 2,

Fig: 3,

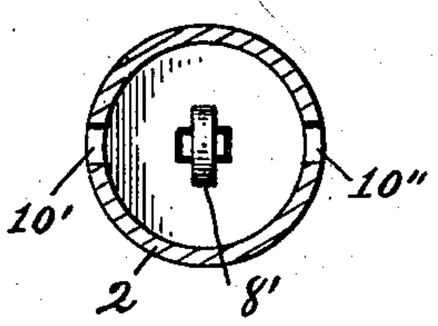
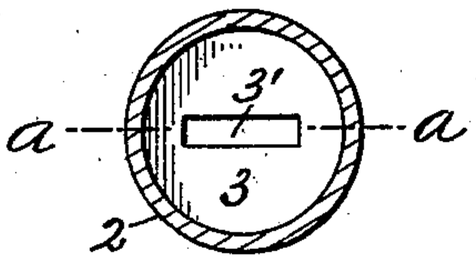


Fig: 4.



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UNITED STATES PATENT OFFICE.

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TREE-TRIMMER.

SPECIFICATION forming part of Letters Patent No. 720,706, dated February 17, 1903.

Application filed July 10, 1902. Serial No. 115,013. (No model.)

To all whom it may concern:

Be it known that I, ALOYSIUS M. LAMB, a citizen of the United States, and a resident of New York, Brooklyn borough, in the county of Kings and State of New York, have invented certain new and useful Improvements in Tree-Trimmers, which improvements are fully set forth in the following specification.

This invention relates to improvements in devices of that class quite generally employed in severing small branches from trees, shrubbery, and the like, the same being commonly known as "tree-trimmers."

The object of this invention is to provide a tree-trimmer of the character above indicated which shall be simple, inexpensive, and novel as regards construction, which shall insure marked convenience to the user in applying the same to practical purposes, which shall be positive, durable, and reliable in operation, and which shall possess certain well-defined advantages over prior analogous structures.

The invention consists in the employment of certain parts novel as to form, in the novel disposition and arrangement of the various parts thereof, in certain combinations of the latter, and in certain details of construction, all of which will be specifically referred to hereinafter and set forth in the appended claims.

The invention is clearly illustrated in the accompanying drawings, wherein similar reference-numerals denote corresponding parts throughout the several views, and as to said drawings—

Figure 1 illustrates in elevation a tree-trimmer constructed in accordance with my invention. Fig. 2 is a central longitudinal section along the line *a a* of Fig. 4. Fig. 3 is a cross-section along the line *b b* of Fig. 1. Fig. 4 is a cross-section along the line *c c* of Fig. 2.

In a general sense my improved trimmer comprises a staff having a keeper connected therewith, a severing member movable longitudinally along the staff and coöperating with the keeper aforenamed, means for directly actuating the severing member, and parts for temporarily locking the severing member against direct action, and whereby said member may be released for severing action at the will of the user.

Having reference to the accompanying drawings as there illustrated, my improved tree-trimmer comprises a staff 2, of metal tubing by preference, and of any suitable length. Within the staff 2, near the service end thereof, I fix a horizontal guide 3, having a suitable central opening 3′.

4 denotes the severing member of my improved trimmer, this severing member being here shown in the form of a flat piece of metal, having a suitable cutting edge at its upper extremity and having an extension 4′ projecting interiorly along the staff 2 and through the guide 3 by way of the opening in the latter, said extension accordingly having a sliding engagement with the guide 3 and the latter serving to maintain the severing member 4, with its extension 4′, in axial alinement with respect to the staff 2 in the practical operation of the device.

For actuating the severing member 4 or thrusting the same outwardly from the staff 2, and which movement of said member will be hereinafter referred to as its "severing action," I ordinarily make use of a spiral spring 5, connected at one end to the lower extremity of the extension 4′ and at its opposite end to the guide 3.

For temporarily locking the severing member 4 at the limit of its reverse action against the tendency of its actuating-spring 5, which position said severing member is indicated in full lines in Fig. 2 as occupying, I employ a controller 6, adapted to be operated by thumb or finger pressure by preference.

The controller 6 has a portion 6′, which normally protrudes somewhat from the staff 2 by way of a suitable opening, as 7, formed in said staff. The portion 6′ is at all times, under normal conditions of the parts, readily accessible to the user and may be milled or otherwise roughened for a more satisfactory frictional effect in operation, if deemed advisable.

The controller 6 is here shown as working on a pivot 8, which extends transversely through the staff 2, and said controller is held yieldingly to the limit of its movement in one

direction on the pivot 8 by means of an elastic element 7′, preferably taking the form of a leaf-spring, as illustrated in the drawings.

The extension 4′ is employed to secure a more satisfactory disposition and operation of the parts, and said extension is ordinarily encircled by the actuating-spring 5.

It will be understood that the staff 2 may vary in the matter of length, as in some instances a staff of considerable length is desirable, while in other instances a staff of much less length will answer all requirements. Where a staff of considerable length is employed, I purpose to make use of a connection 8′, adapted to have a locking engagement with the controller 6 when the parts are brought, respectively, into the positions which they are indicated as occupying in Fig. 2. Accordingly one end of the connection 8′ may have an offset 8″, and said controller may have a catch 7″ adapted to take over and grasp the offset 8″ with a locking effect under conditions which prevail when the parts are brought to the positions last referred to, and likewise it will be seen that application of pressure to the portion 6′ of the controller 6 will result in liberation of the connection 8′, thus leaving the severing member 4 free to undergo its severing action under impulse received from the actuating-spring 5. The connection 8′ may be formed integral from any suitable material, as metal, or may consist of interconnected sections, as shown in the drawings.

It will be understood that under certain conditions the parts of my improved trimmer may be readily arranged without material variation from the construction hereinbefore described, so that the controller 6 will coöperate directly with the extension 4′ without any intervening connecting element, as the connection 8′. Where the latter is employed, however, it is advisable that means be adopted to control the connection 8′ in its longitudinal movements, and to this end I make use of a secondary horizontal guide 9, located within the staff 2, and through which said connection loosely extends by way of a suitable opening formed in said guide. Thus an operative relation between the offset 8″ and the catch 7″ of the controller 6 is at all times maintained.

It is essential that means be employed whereby the severing member 4 and the parts immediately coöperating therewith may be conveniently brought to their locked positions, as shown in Fig. 2, and to this end I purpose making use of a rod 10, extending transversely through the staff 2, through a suitably-enlarged portion of the connection 8′ and bearing in longitudinal slot-like openings 10′ 10″, formed in the staff 2 at opposite sides thereof. The openings 10′ 10″ accordingly permit the rod 10 to accompany the connection 8′ in the movements of the latter. Rod 10 projects somewhat from the staff 2, and, if desired, may be provided with a handle 11.

Where the staff 2 is formed from tubing, the butt-end thereof may be closed in any approved manner, as by means of a plug 11′.

The keeper, which forms an element of my improved trimmer, comprises a shank 11″, shaped to fit partially around the staff 2, to which it is firmly fastened, as by means of the rivets 12 12′. The shank 11″ projects somewhat beyond the adjacent end of the staff 2 and terminates in a lateral hook-like member 12″, so positioned as to insure its coöperation with the severing member 4 when the latter reaches substantially the limit of its severing action. The member 12″ may, if desired, have a cutting edge along its lower portion to coöperate with the cutting edge of the severing member 4. In any event, however, the member 12″ serves as a medium whereby an object, as the branch of a tree, may be grasped and held in position to be acted upon by the member 4 when the latter undergoes its severing action.

The operation of the device will be apparent from the foregoing description thereof, and it will be seen that the same may be modified to some extent without material departure from the spirit and principle of my invention.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A tree-trimmer comprising a staff; a severing member movable longitudinally along the staff; a keeper carried by the staff and cooperating with said severing member; means for actuating said severing member for severing action; and means whereby the severing member may be locked against severing action and released from such locked position at the will of the user, substantially as herein specified.

2. A tree-trimmer comprising a staff; a severing member movable longitudinally therealong; means for directly actuating said severing member; a controller for temporarily locking said severing member against direct action and whereby the severing member may be released for direct action at the will of the user; a connection between said severing member and said controller; and means for holding an object as the branch of a tree, in the plane of movement of said severing member, substantially as herein specified.

3. A tree-trimmer comprising a hollow staff; a guide within the staff near one end thereof; a severing member having a sliding engagement with said guide and movable longitudinally with respect to the staff; means for directly actuating said severing member; a keeper carried by said staff and coöperating with the severing member aforenamed; a movable controller within the staff, said controller having a portion protruding from the

staff, and being adapted to lock said severing member against direct action, when duly moved; and a connection between the severing member and said controller, substantially as herein specified.

4. A tree-trimmer comprising a spring-actuated severing member; a movable controller adapted to receive finger-pressure; a connection between the severing member and said controller; a keeper coöperating with the severing member, and means for supporting the parts for coöperation in service, substantially as herein specified.

5. A tree-trimmer comprising a spring-actuated severing member; a movable controller provided with a catch, and adapted to receive finger-pressure; a connection between the severing member and said controller, the said connection having an offset coöperating with the catch of said controller, and having a rod 10; a keeper coöperating with the severing member; and means for supporting the parts for coöperation in service, substantially as herein specified.

6. A tree-trimmer comprising a spring-actuated severing member; a movable controller; a connection having a rod 10, and means for supporting the parts for coöperation in service, the said connection leading away from the severing member, and said controller being adapted to grasp said connection under reverse movement of the severing member, and release its grasp on said connection, when duly moved, substantially as herein specified.

7. A tree-trimmer comprising a hollow staff; a spring-actuated severing member, movable longitudinally within the staff at one end thereof, the said staff having openings 10′, 10″; a part connected with said severing member and projecting therefrom longitudinally within the staff, and a rod 10, extending through said part and bearing in said staff at the openings therein, substantially as herein specified.

8. A tree-trimmer comprising a hollow staff; a spring-actuated severing member movable longitudinally within the staff at one end thereof, the said staff having an opening 7; a pivotally-disposed controller within the staff away from the severing member aforenamed, a portion of said controller protruding from said staff by way of the opening therein, under normal conditions; and a connection between said severing member and said controller, substantially as herein specified.

9. A tree-trimmer comprising a staff carrying at one end thereof a hook-like keeper; a spring-actuated severing member slidably supported by said staff and coöperating with said keeper; and a movable controller for temporarily holding the severing member against the tendency of its actuating-spring, the said controller being conjoined with said staff and adapted to be operated by finger-pressure, substantially as herein specified.

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