

T. J. LITZELMAN.  
HAND PRUNER.  
APPLICATION FILED FEB. 26, 1908.

907,064.

Patented Dec. 15, 1908.

Fig. 1.

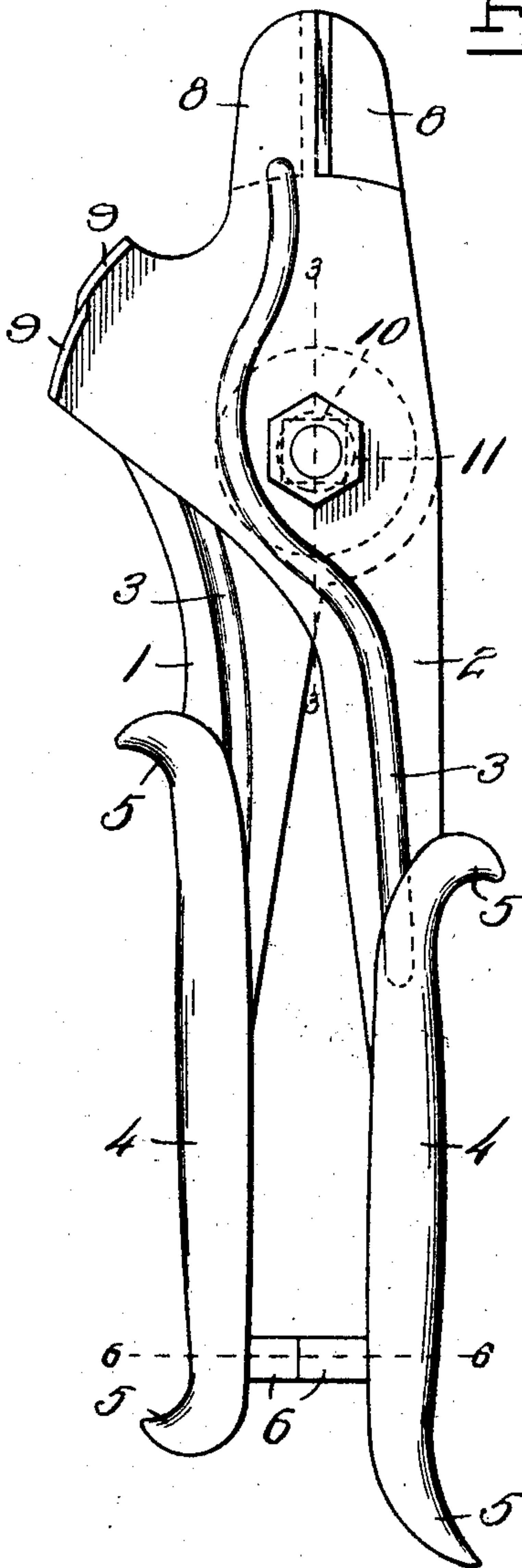


Fig. 3.

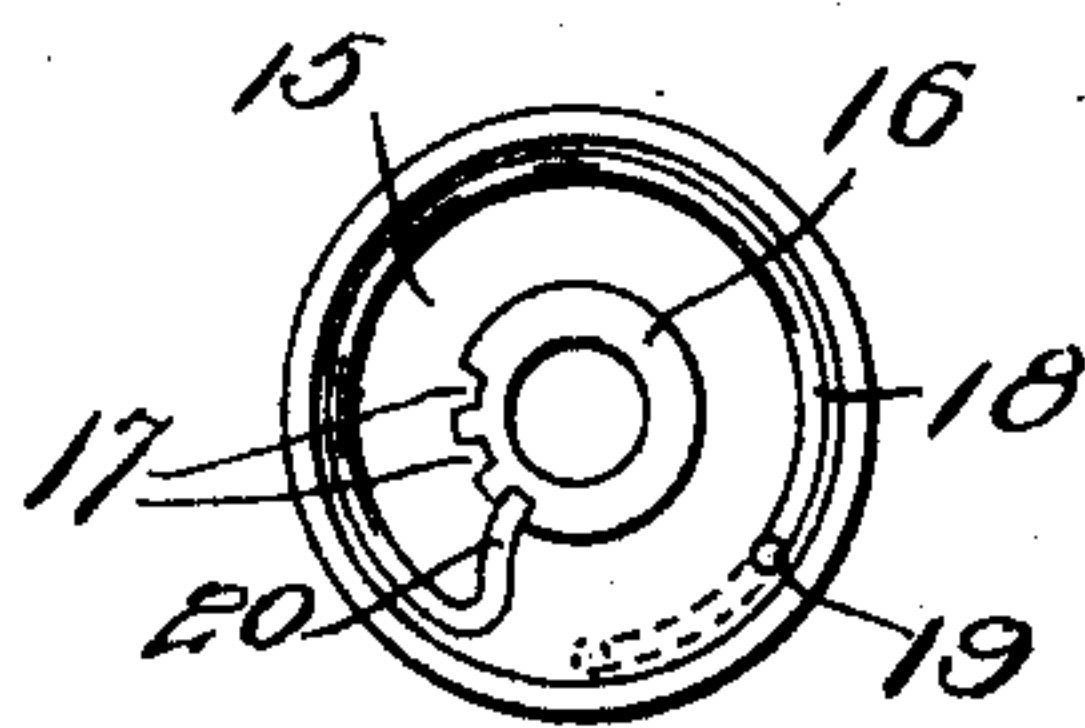
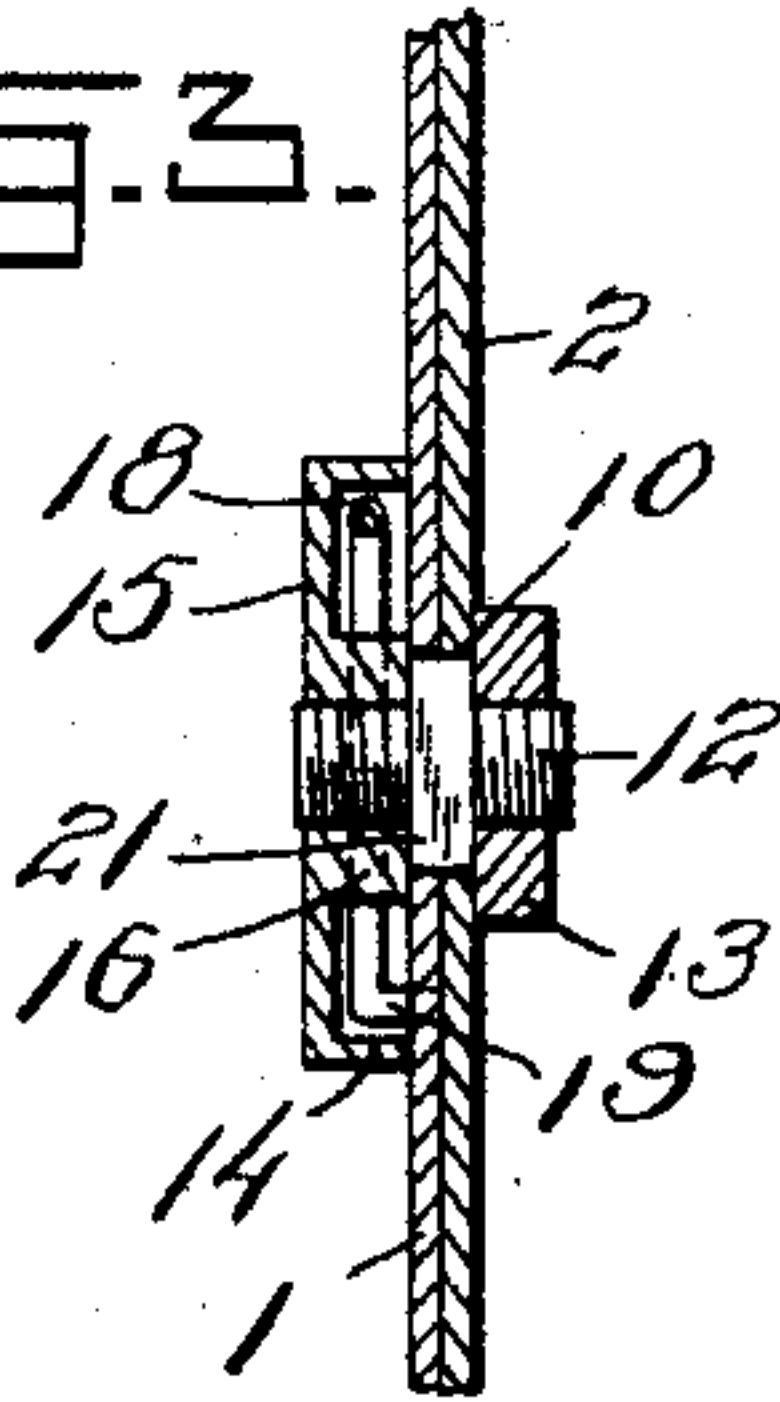


Fig. 4.

Fig. 5.

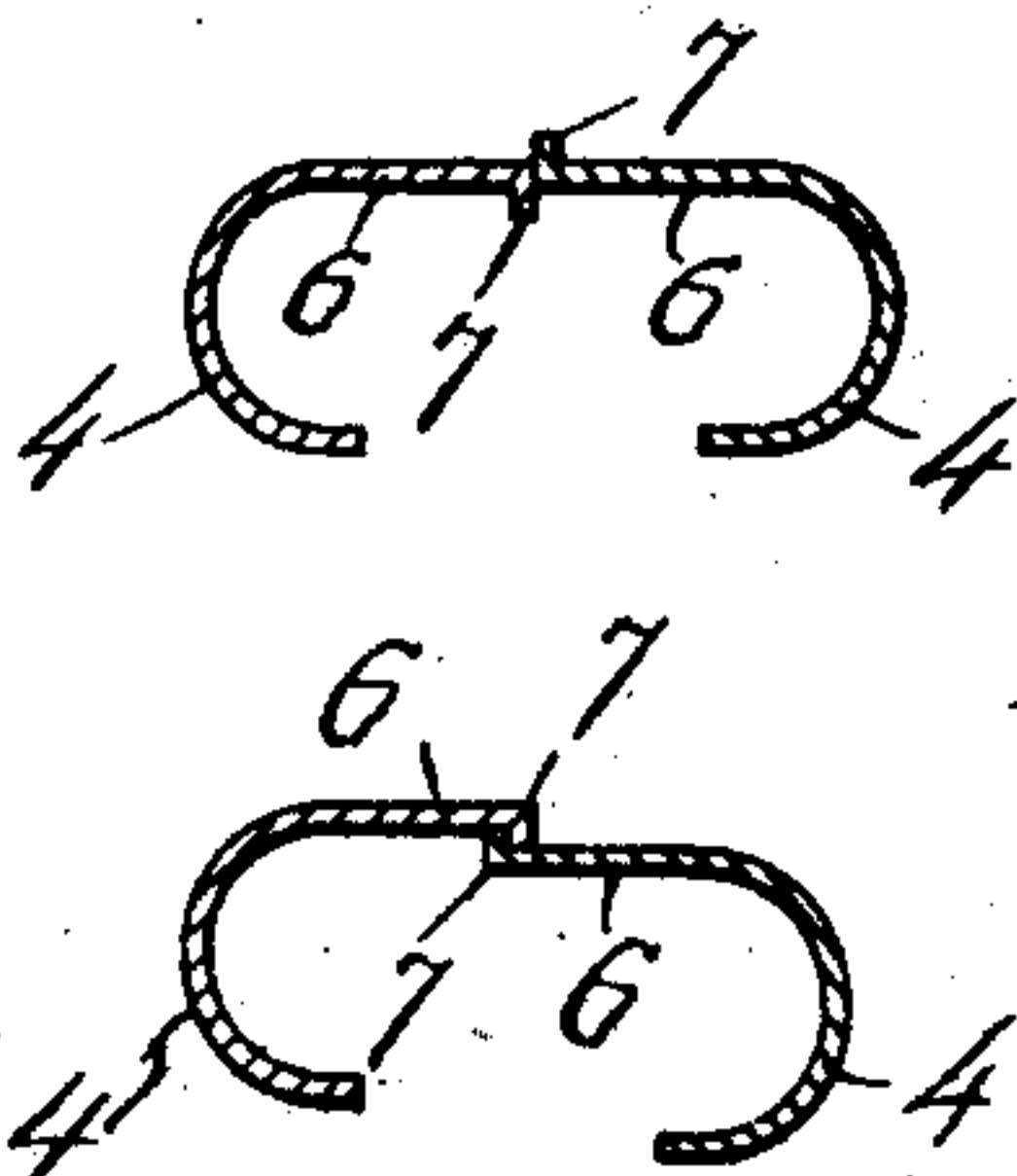


Fig. 6.

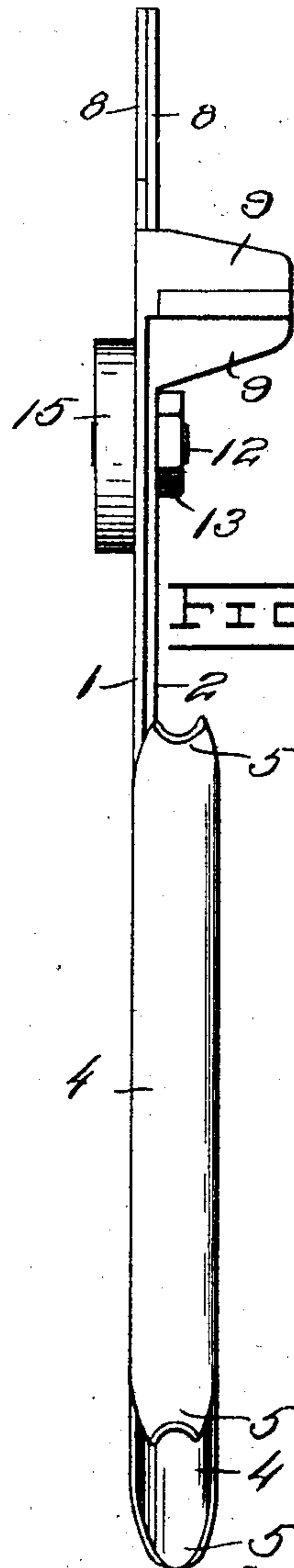


Fig. 2.

Witnesses  
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# UNITED STATES PATENT OFFICE.

THADDEUS J. LITZELMAN, OF WILLIAMSPORT, PENNSYLVANIA.

## HAND-PRUNER.

No. 907,064.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed February 26, 1908. Serial No. 417,866.

*To all whom it may concern:*

Be it known that I, THADDEUS J. LITZELMAN, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Improvement in Hand-Pruners, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

This invention relates to certain new and useful improvements in pruners and it has for its objects among others to provide a simple yet durable and efficient hand pruner composed of few parts, preferably of sheet metal, and having provision for adjustment as to strength. The blades are disposed at such angles as to give the least resistance to the operator and the duplex knives being set at an angle to the handle and at right angles to the plane of the levers enables the operator to cut bushes or branches close to the ground without stooping or twisting the wrist. The levers are provided with projections extending toward each other and adapted to serve as stops for the levers when hard pressed together in cutting off a limb, and further when pressed past each other to interlock and hold the levers together or in their closed position.

The pruner is constructed to cut branches from both sides, thereby giving a clean unbruised cut which enables the branch to heal quickly. The construction is such that the user can cut off either vertical or horizontal branches with the wrist in a natural position, thus enabling him to do more work with less fatigue.

The levers are constructed to be of different lengths, the right hand lever being longer at the handle end than the left hand lever. These levers are formed with hand rests which are not disposed exactly opposite, the one on the right hand lever being further away from the axial bolt than the other, for the purpose of convenience in grasping the device in the right hand.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings which, with the numerals of reference marked thereon, form a part of this invention and in which—

Figure 1 is a side elevation of the improved pruner. Fig. 2 is an edge view thereof. Fig. 3 is a vertical section on the

line 3—3 of Fig. 1. Fig. 4 is a detail of the spring and its inclosing casing, showing the notched hub of said casing for adjustable engagement with one end of the spring. Fig. 5 is a cross section of the handle-end of the pruner. Fig. 6 is a cross section on the line 6—6 of Fig. 1.

Like numerals of reference indicate like parts throughout the several views.

Referring to the drawings 1 designates one of the members and 2 the other. These are preferably constructed of sheet metal, usually steel, cut out and formed by the use of dies, as will be understood upon reference to the drawings particularly Figs. 5 and 6. Each member is shown in this instance as provided with a struck-up reinforcing or strengthening rib 3 and with a hand rest 4. The hand rest on the right hand member 2 is disposed farther from the pivotal bolt of the device than is the hand rest on the member 1, as seen clearly in Figs. 1 and 2. The hand rests are provided at opposite ends with the curved portions 5 to better receive the hand and prevent slipping thereof longitudinally of the members. As seen best in Fig. 1, these hand rests are not disposed exactly opposite each other, the one being, as above stated, in a plane farther away from the pivotal bolt for the purpose of convenience in grasping the device in the right hand. In the use of a device of this character the axis of the device is not at right angles with the arm, the hand while grasping the levers or members 1 and 2 being or resting in an oblique or slanting position across the levers. This being the case, the hand rest 4 of the member 2 must be a good deal nearer the operator than the hand rest of the other lever or member 1.

Between the hand rests near the end of the pruner, each member is provided with an inwardly extending portion 6, the said portions extending toward each other, as is evident from Figs. 1, 5 and 6, and the free end of each is provided with a right angled portion or hook 7, as seen best in Figs. 5 and 6. When not in use, these two hooks are engaged or interlocked, as seen in Fig. 6, this being accomplished by a slight springing apart laterally or sidewise of the free ends of the members 1 and 2 and then forcing them toward each other until the hooks engage. When ready for use, the hooks are disengaged, as seen in Fig. 5, and in the use of the device the hook portions abut, performing



the function of stops for the levers when hard pressed together in cutting off a limb.

Each member is provided with a cutting blade 8, the overlapping edges of which are sufficiently beveled or sharpened, these blades extending in the general direction of the length of the members, and, as seen in Fig. 1, the reinforcing rib 3 extends to or slightly beyond the point of junction of the blade with the member proper to give greater strength at such point. Each member or lever is also formed at substantially right angles to the blades 8 with a blade 9, which blades 9 also extend at right angles to the planes of the members or levers, as seen clearly in Figs. 1 and 2, whereby two sets of cutting blades are provided at substantially right angles to each other and designed to cut in planes at right angles to each other, one plane being at right angles to the levers. These blades are sufficiently beveled or sharpened, as shown, to perform the necessary cutting, and, as seen in Fig. 1, are so disposed with relation to each other that when the levers are closed and interlocked by their interlocking hooks the cutting edges are overlapped and pass each other further than is necessary to sever the limb being cut off.

The two levers or members 1 and 2 are pivotally connected as follows:—The right hand member has a polygonal hole 10 and the left hand member 1 a circular opening 11, as indicated best by dotted lines in Fig. 1. A screw-threaded pivot bolt 12 is employed provided with a nut 13. This nut rests against the right hand lever or member 2, the nut and the bolt both turning with the said member. Upon the opposite side of the device and bearing against the member 1 is the flange 14 of the circular casing 15, which casing is provided with a hub 16 provided upon its periphery with a plurality of notches 17. Within this casing is a spring 18, as seen clearly in Figs. 3 and 4, said spring being practically circular and coaxial with the casing. One end of said spring is turned abruptly, as seen at 19, and is engaged in an opening in the left hand member 1. The inner end of this spring is turned inward toward the hub, as seen at 20, and occupying one of the said peripheral notches 17, as is indicated clearly in Fig. 4. The housing or casing 15 is screw-threaded onto the bolt 12, its hub being turned up tightly against a shoulder 21 on the bolt and turns with said bolt, the bolt, the nut and the casing all turning with the right hand lever or member 2. By adjustment of the inturning end 20 of the spring into one or the other of the peripheral notches 17, the tension of said spring is varied and the amount of pressure necessary to operate the pruner correspondingly regulated.

The mode of use will be apparent from the

foregoing description, especially when taken in connection with the annexed drawings, and a further detailed description thereof does not seem necessary. It may be added that the presence of the inwardly extending portions 6 with their interlocking hooks 7 dispenses with the employment of rings or notches, the handles being kept fastened together when the device is not in use by simply pressing the one hook by the other, the spring whose normal tendency is to throw the handle ends of the levers far apart and open the two pairs of cutting blades ready to receive the branch, acts to perform this function as soon as the hooks are disengaged.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages. For instance, as seen in Fig. 4, the spring 18 may be of greater length and adapted to engage in another opening in the left hand member or lever 1, when it is desired to provide greater tension or stronger spring. This and like changes would be considered as coming within the scope of the appended claims.

What is claimed as new is:—

1. A hand pruner having pivotally united members with two pairs of cutting blades, one in a horizontal plane and the other in a vertical plane, the blades of each pair having their cutting edges overlapped, and each member having a hand rest disposed at different distances from the pivot of said members.

2. A hand pruner having pivotally united members with two sets of cutting blades, one extending in the general direction of the length of the members and the other at substantially right angles to such length and to the first-mentioned blades, the blades of each pair having their cutting edges overlapped and each member formed with a hand rest, said rest being disposed at different distances from the pivot of said members.

3. A hand pruner having pivotally united members with two sets of cutting blades, one extending in the general direction of the length of the members and the other at substantially right angles to such length and to the first-mentioned blades, the blades of each pair having their cutting edges overlapped and each member formed with a hand rest, said rest being disposed at different distances from the pivot of said members and provided with inwardly extending interengaging stops.

4. A hand pruner having pivotally united members with two sets of cutting blades, one extending in the general direction of the length of the members and the other at substantially right angles to such length and to the first-mentioned blades, the blades of each pair having their cutting edges overlapped and each member formed with a hand rest, said rest being disposed at different distances from the pivot of said members and pro-



vided with inwardly extending interengaging stops, said members being formed of sheet metal with said stops integral therewith.

5 5. A hand pruner having pivotally united members with two sets of cutting blades, one extending in the general direction of the length of the members and the other at substantially right angles to such length and to the first-mentioned blades, the blades of each  
10 pair having their cutting edges overlapped and each member formed with a hand rest, said rest being disposed at different distances from the pivot of said members and provided with inwardly extending interengaging  
15 stops, said members being formed of sheet metal with said stops integral therewith, and each member provided with a struck-up reinforcing rib extending in the general direction of the length of the member.

20 6. A hand pruner having pivotally united members each formed with a hand rest, said rests being disposed at different distances from the pivot of said members and provided with inwardly extending members forming  
25 stops, said members having hooked ends adapted to engage each other.

7. In a hand pruner two pivotally united members having cutting blades, a casing on

the pivot of said members and a spring within said casing about the pivot of said members, and means about the pivot of said  
30 members for adjustment of said spring to vary its tension.

8. In hand pruners, two pivotally united members having cutting blades, a casing  
35 threaded on the pivot of said members and having a hub bearing against a shoulder on the pivot, and a spring in said casing engaging said hub and one of the members.

9. In hand pruners, two pivotally united  
40 members having cutting blades, a casing threaded on the pivot of said members and having a hub bearing against a shoulder on the pivot, and a spring in said casing engaging said hub and one of the members, said  
45 hub having a plurality of notches with which one end of said spring may be adjustably engaged.

In witness whereof, I have hereunto set my hand this 10th day of February, 1908, in  
50 the presence of two subscribing witnesses.

THADDEUS J. LITZELMAN.

Witnesses:

A. H. STEAD,

E. J. HANDLOSER.