A. B. CHAPMAN.

Pruning Shears.

No. 105,173. Patented July 12, 1870.

Fig. 1

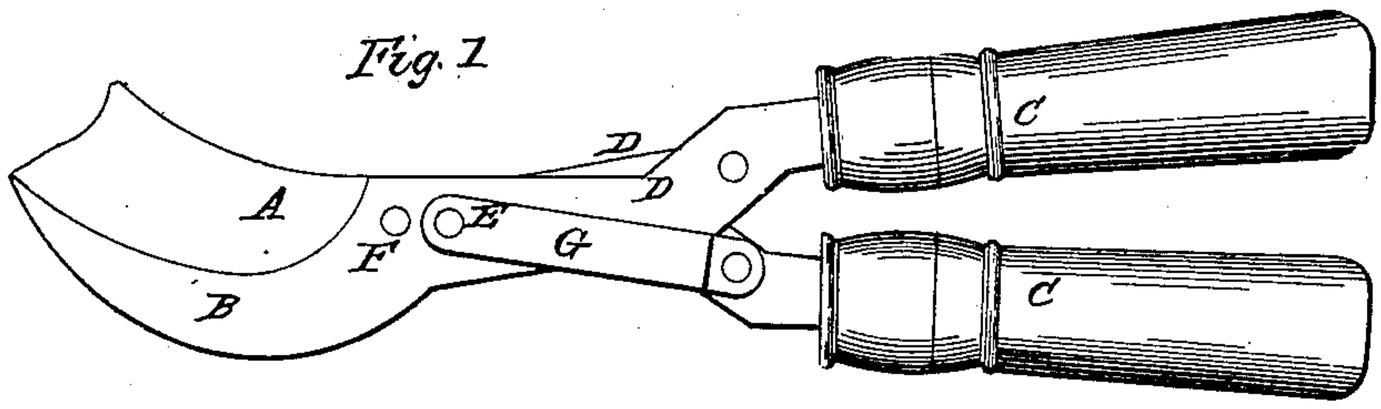


Fig. 2

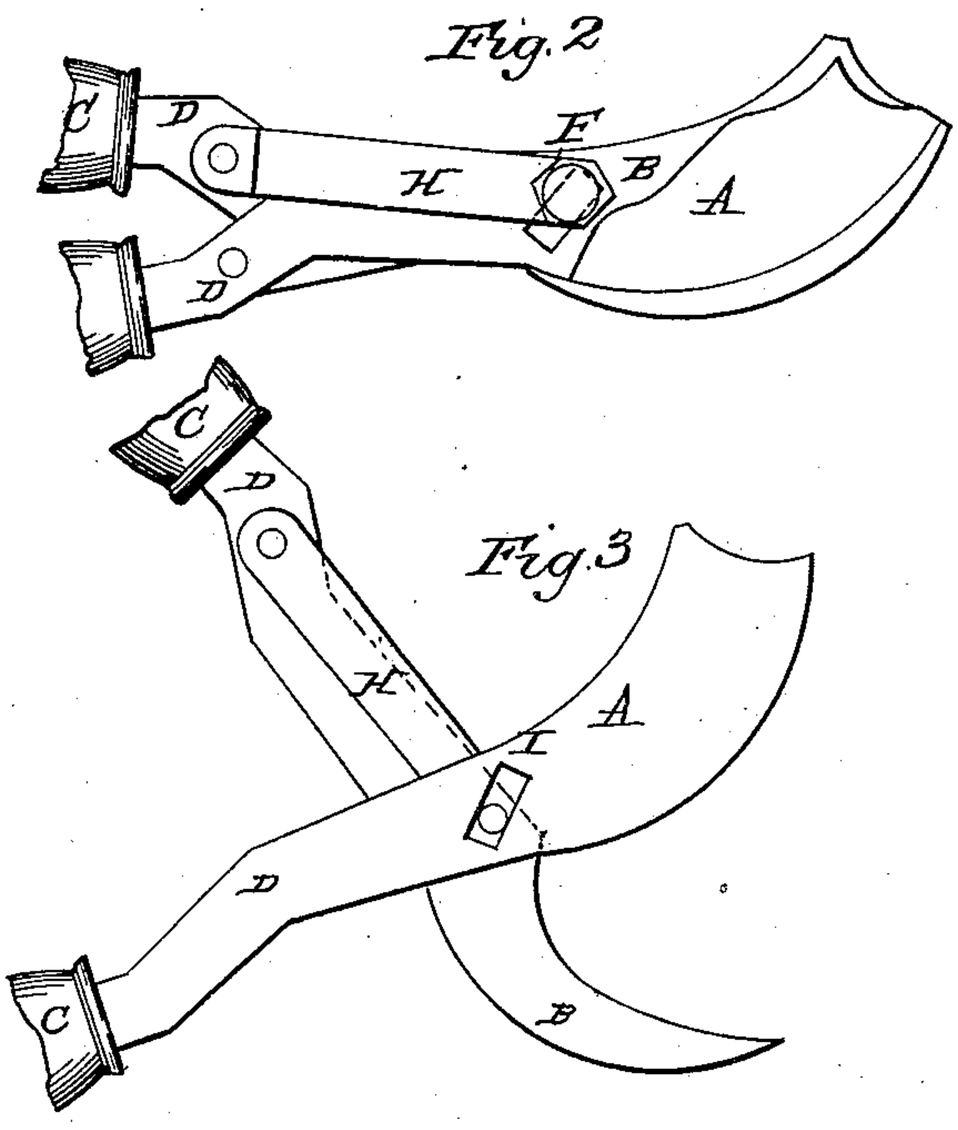
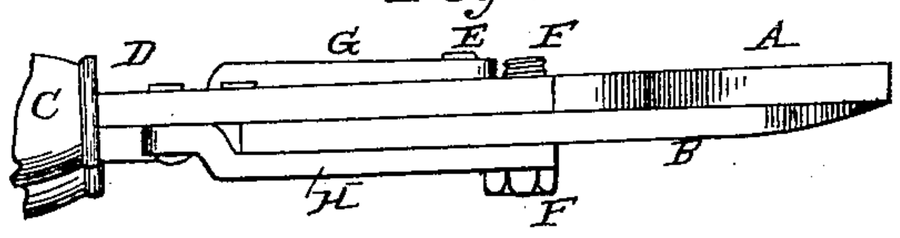


Fig. 3

Fig. 4



Witnesses
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ATHANASIUS B. CHAPMAN, OF CLYDE, OHIO.

Letters Patent No. 105,173, *dated July* 12, 1870.

IMPROVEMENT IN PRUNING SHEARS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ATHANASIUS B. CHAPMAN, of Clyde, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Pruning-Shears; and I do hereby declare that the following is a full and complete description of the same, reference being had to the following drawing making a part of this specification, in which—

Figure 1 is a side view of the shears.

Figure 2, a view of the opposite side of fig. 1.

Figure 3, a view of the shears open.

Figure 4, an edge view.

Like letters of reference refer to like parts in the several views.

The nature of this invention relates to the manner of pivoting together the two members of a pair of shears, so that there shall be two pivotal points or fulcrums, and the same being supported by a pair of stays or braces, as hereinafter more fully described.

In fig. 1, A B represent the blades of the shears, which, as will be observed, are curving along their cutting-edge.

C are the handles attached to the shanks D.

The two members of the shears are connected to each other by a pivot, E, and a bolt, F.

It will be observed that the pivot does not pass through both members, but into one only, passing first through the upper end of a brace, G, forming the pivotal point E above referred to, whereas, the lower end of the stay or brace is pivoted to the shank of the companion-blade A.

It will also be seen that the bolt F passes through both members of the shears, first passing through the upper end of the stay or brace H, whereas, the lower end of said brace is pivoted to the shank of the shear or blade B.

It will be observed that the bolt is screwed into the member B, whereas it passes loosely through the member A in a slot, I, fig. 3, and in which the bolt slides on opening and shutting the shears.

In connecting the two members of the shears in the manner as above described, viz: a pivot and bolt, is obtained the advantage of a double fulcrum, whereby is increased the leverage of the shears, and which will therefore cut much easier than when connected in the ordinary way by a single pivot.

On operating the shears, it will be seen that when the blades begin to cut, or are open, as shown in fig. 3, the pivotal point or fulcrum will be at E, but which, as the shears continue to close and cut, the fulcrum is transferred to the bolt working in the slot, which will bring the fulcrum a little nearer to the point directly cutting, thereby increasing the leverage of the shears.

In this instance the bolt receives the strain by its connection with the slot, and said bolt being larger than the pivot E, the shears are therefore stronger in their resistance to the strain of cutting.

The tendency of the blades of this class of shears, when cutting, is to crowd upon its companion-blade. Especially is this the case when used for cutting hard substances.

To assist in preventing the blades from such crowding is one other object of the braces H G.

The braces as above said are placed one on each side of the blades or shanks thereof. The brace H being next to the cutting-blade A, the tendency of which blade while cutting, in consequence of its basil, is to crowd upon the edge of the holding-blade B.

This, however, it is prevented from doing by the brace G, which holds it from turning toward the holding-blade B, but constrains it to move in line with the edge of the blade without crowding thereon.

In the same way the brace G prevents any turning or twisting of the blade B, hence the two will move upon each other without riding their edges.

Claim.

What I claim as my invention, and desire to secure by Letters Patent, is—

A pair of shears, when the two members A B thereof are connected to each other by a pivot, E, bolt F, slot I, and braces H G, substantially in the manner as described, and for the purpose set forth.

A. B. CHAPMAN.

Witnesses:

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