

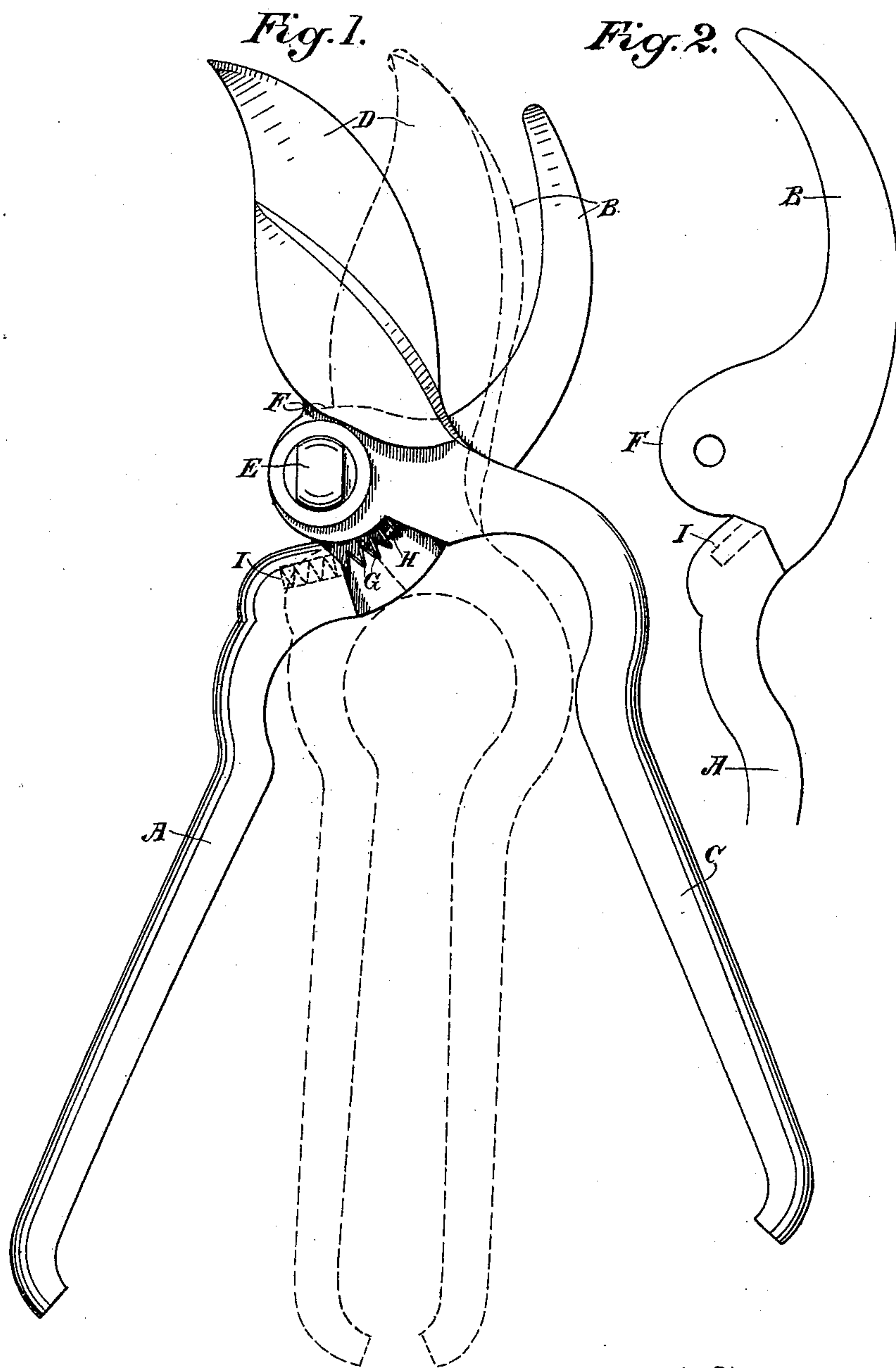
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J. SIMON.
PRUNING SHEARS.

(Application filed Apr. 8, 1898.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOSEPH SIMON, OF SANTA ROSA, CALIFORNIA.

PRUNING-SHEARS.

SPECIFICATION forming part of Letters Patent No. 613,870, dated November 8, 1898.

Application filed April 8, 1898. Serial No. 676,910. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH SIMON, a citizen of the United States, residing at Santa Rosa, county of Sonoma, State of California, have invented an Improvement in Pruning-Shears; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in shears such as are used for pruning purposes.

It consists of the parts and the construction and combination of parts forming the improved shears hereinafter described and claimed.

Figure 1 is a view of the shears. Fig. 2 is a detail view of the jaw B.

In the usual construction of this class of shears the handles are separated either by flat or other springs arranged between the handles at such a point that it takes considerable power to overcome the tension of these springs and the hands of the operator become very tired after using them for a short while.

The object of my invention is to construct a pruning-shears in such a manner that a positive drawing cut of the blade may be produced, while the strength of the pivot-joint is increased, and in conjunction with this to provide an automatic opening or separating device for the cutters which will not be hard and tiring upon the hands of the operator.

In my invention, A is one of the handles, having a concaved curved jaw B. C is the other handle, having the blade D fixed to it, with a convex curvature of the cutting edge, which is essentially coincident with the concavity of the opposite jaw.

In order to produce a drawing cut of the blade across the concave opposing jaw, the pivot-pin E, by which the two jaws and their handles are united, is located at one side of a line passing centrally through the blade and between the handles when the latter are closed. This is effected by forming the two handles and jaws with lugs F, which project, respectively, from the rear side of the handle which carries the blade and from the opposite side of the one which carries the opposing jaw. By thus locating the center of motion

at one side the closing of the handles will cause the cutting edge of the blade to pass the concaved edge of the opposing jaw with a shearing or draw cut, which is very effective in severing the limbs when pruning is being done.

In order to open the jaws whenever the handles are released without any necessity of pressure by the hands and at the same time to relieve the hands of the undue strain caused by heavy springs interposed between the handles, I have shown a small coil-spring G, one end of which fits over a stud H, projecting from the handle C at a point close to the hinge-lug. This stud retains the end of the spring in proper position, and the opposite end of the spring fits into a socket or chamber I, which is formed upon the back of the handle A and close to its pivot-lug. The spring is thus supported between the two jaws, having a curvature corresponding to the exterior curvature of the pivot-lugs, and when the handles are closed together the compression of the spring carries it into the chamber, in which one end fits, the stud also following it into the chamber, so that the handles may be closed tight together, and the spring is all taken up and concealed within the cavity. Whenever the handles are released by relaxation of the hand, the elasticity of the spring is sufficient to separate them and open the cutting-jaws ready for another cut.

The leverage and the peculiar drawing action of the cutting-blade, by reason of the location of the fulcrum-pin out of line with the handles and blades, make it easy for the operator and prevent the tiring of the hands as rapidly as with the ordinary construction.

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

A pruning-shears consisting of a convex cutting-blade and an opposing concave jaw with extensions forming handles which cross each other rearwardly therefrom, a lug projecting from one side of the concave jaw, a corresponding lug projecting from the back of the cutting-blade superposed upon and coincident with the first-named lug, a pivot-pin

passing through said lugs forming a fulcrum
to one side of the blade and jaw, a socket
formed in the handle of the jaw, a spiral
spring fitting and compressible within the
5 socket, and a stud upon the opposing handle
fitting the opposite end of the spring whereby
said spring lies between the handles close to
and concentric with the fulcrum pivot-lugs

and is inclosed and concealed within the
socket when the handles are closed together. 10

In witness whereof I have hereunto set my
hand.

JOSEPH SIMON.

Witnesses:

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