P. BURDETT.

PRUNING SAW.

APPLICATION FILED DEC. 6, 1907

900,661. Patented Oct. 6, 1908.

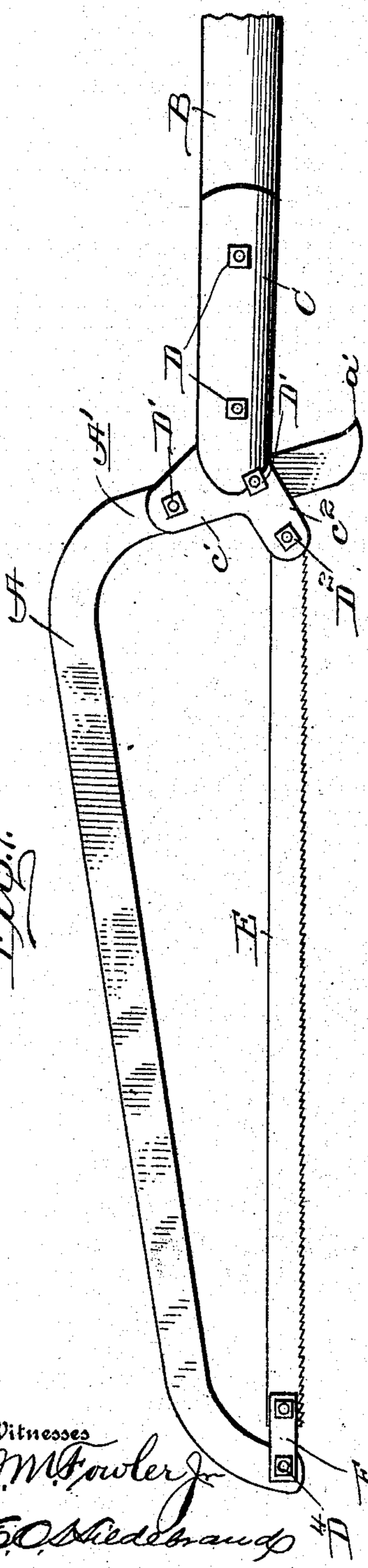

Fig. 1.

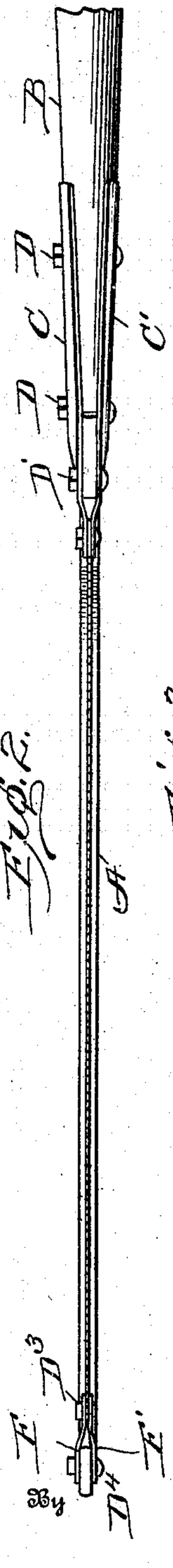

Fig. 2.

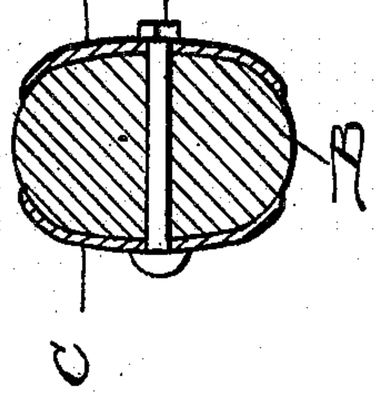

Fig. 3.

Witnesses

J. M. Fowler Jr

E. O. Siddeband

Inventor

Philip Burdett

by Georgii Massie

his Attorneys.

UNITED STATES PATENT OFFICE.

PHILIP BURDETT, OF CLIFTON, NEW YORK, ASSIGNOR TO JOHN F. McAMMOND AND JOHN B. GATENBEE, OF SCOTTSVILLE, NEW YORK.

PRUNING-SAW.

No. 900,661. Specification of Letters Patent. Patented Oct. 6, 1908.

Application filed December 6, 1907. Serial No. 405,397.

To all whom it may concern:

Be it known that I, PHILIP BURDETT, citizen of the United States of America, residing at Clifton, Monroe county, New York, have invented certain new and useful Improvements in Pruning-Saws; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in pruning saws.

The object of my invention is to provide a pruning saw which will be simple in construction, durable, and in which the greater the transverse pressure on the blade in cutting, the greater the tension of the blade.

With these general objects in view my invention consists in the features, details of construction and combination of parts which will first be described in connection with the accompanying drawings and particularly pointed out in the claims.

In the drawings,—Figure 1 is an elevation of a saw embodying my invention. Fig. 2 a view looking toward the edge of the saw blade. Fig. 3 a section through the socket device.

Referring to the drawings, Fig. 1, A is a frame formed of a piece of bar iron or steel having its two ends bent as shown, one end, A′, being longer than the other and having its extreme point formed as a hook as indicated at *a′*, which may be used in pulling from the tree any branches sawed off which may lodge in the tree.

B is a handle or pole usually of wood and of any desired length or shape.

The frame A is held to the handle B by a combined socket and blade-holder which serves as a means for attaching the frame to the handle and also has a part projecting forward of the end A′ of the frame and arranged to be attached to the saw-blade.

In the construction shown the socket and blade holder is composed of two scales C, C¹, pressed or stamped from sheet metal, each scale having a portion C curved in cross-section which receives the handle, a portion C¹ which is spread laterally to form a good bearing on the frame A, and a portion *c²* which extends forward of the end A′ of the frame and engages with the saw blade. The scales are clamped to the handle B, by bolts D, and to the frame A, by bolts D¹.

E is a saw blade preferably arranged with its teeth pointing toward the handle, so as to cut when pulled toward the operator. The heel of the blade is held between the two portions *c²* of the scales C C¹, being clamped by a bolt D², passing through said portions *c²* and through the saw-blade.

The point of the blade E, is attached to the front end of the frame A, by a link device formed of two plates F, F¹, which are bent so as to approach each other where they engage the saw-blade, to which they are secured by a bolt D³, passing through said plates and through the saw-blade, the forward ends of the plates engaging the blade on each side of the forward end of the frame A, to which they are secured by a bolt D⁴.

It will be observed that by my construction the frame A can be made simply and economically from a piece of flat bar iron or steel, and the scales C, C¹ are merely stamped from sheet metal, while at the same time the complete device is strong and fully as efficient as more complicated and expensive constructions heretofore employed.

The saw-blade is arranged at a slight angle to the axis of the handle, that is to say, the cutting edge of the saw is not exactly parallel to the axis of the handle, but is closer to said axis at the heel of the saw than at its front end. Consequently, as the teeth of the saw are arranged usually to cut when pulling down on the handle, the saw runs gradually deeper in the cut, thus avoiding the necessity of maintaining a heavy lateral pressure on the handle to cause the saw to feed up to its work. Also, by the use of the link device at the point of the saw, a part of the pressure tranverse to the saw, which arises in the operation of sawing is converted into a longitudinal tension on the blade so that the greater the pressure of feeding the blade to its work the less the chance of breaking the saw, this being due to the fact that as the blade tends to press inward toward the back of the frame, it tends to turn the link device, or plates F, F¹, about the bolt D⁴, which puts an increased longitudinal strain upon the saw-blade.

Practice has demonstrated that a pruning saw in which the saw-blade and frame are made to fit each other properly when new does not require any additional tensioning device to strain the blade strongly for the operation of cutting as the link-device ar-

ranged at the point of the saw, forms an automatic tensioning means sufficient for all practical purposes. Moreover, by arranging this link-device at the point of the saw, instead of at the heel, the full length of the cutting edge is brought closer to the handle and the pull on the blade in cutting comes as a tension strain on the link-device, whereby the latter can be of light material without danger of breaking.

Having thus fully described my invention what I claim is,

1. In a saw, the combination, with a frame, a saw-blade and means for attaching the blade to the frame at its front end, of a handle, and a socket device arranged to secure the handle and frame together said socket device being provided with means for securing the heel of the saw-blade.

2. In a saw, the combination, with a frame, a saw-blade, and means for attaching the blade to the frame at its end, of a handle, a pair of scales arranged one on each side of the handle and frame, each of said scales having a portion projecting forward of the rear portion of the frame, between which the heel of the saw-blade is inserted, and means for securing the scales to the handle, the frame and the saw-blade.

3. In a saw, the combination, with a frame having its rear end provided with hook, a saw-blade and means for attaching the blade to the frame at its front end, of a handle, a socket-device attached to the handle and extending across the frame on each side, the hook of the frame projecting outside the socket-device, said socket-device being provided with a portion projecting forward of the rear end of the frame and arranged to engage the heel of the saw-blade and means for securing said blade to said projecting portion.

4. In a saw, the combination, with a frame having its rear end provided with a hook, a saw-blade, and means for attaching the blade to the frame at its front end, of a handle, and a pair of scales located one on each side of the handle, the frame, and the heel of the saw-blade, and means for clamping said scales together and to the handle, the frame and the saw-blade respectively, the hook of the frame extending beyond the scales, substantially as described.

5. In a saw, the combination with a frame, a saw blade, a handle and means for securing the same together of a link-device connected loosely to the point of the saw and to the front of the frame, so as to be capable of angular movement during the operation of the saw.

6. In a saw, the combination, with a frame, a saw-blade and a handle, of a pair of sheet metal scales arranged on each side of the handle, the frame and the heel of the saw-blade, bolts passing through the scales, the handle, the frame and the saw, substantially as described and a pair of plates secured to the front end of the frame and to the point of the saw.

7. In a saw, the combination, with a frame, a saw-blade, and means for attaching the blade to the frame at its front end, of a handle, a pair of scales connected to the handle and arranged one on each side of the frame, each of said scales having a portion projecting forward of the rear portion of the frame, and means for securing said scales to the frame and to the saw-blade.

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

PHILIP BURDETT.

Witnesses:
W. E. VOKES,
FRED M. WINDY.