I. D. GUEST.

PRUNING IMPLEMENT.

APPLICATION FILED JUNE 8, 1909.

960,540. Patented June 7, 1910.

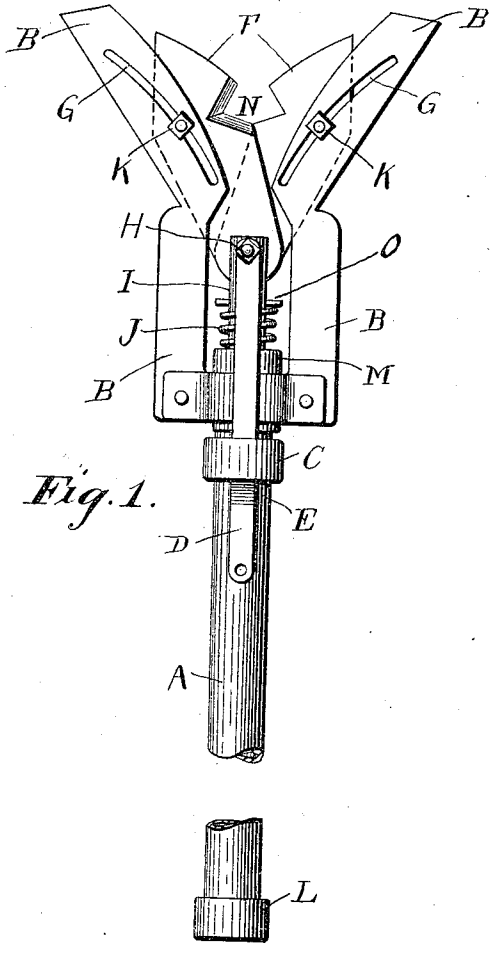


Fig. 1.

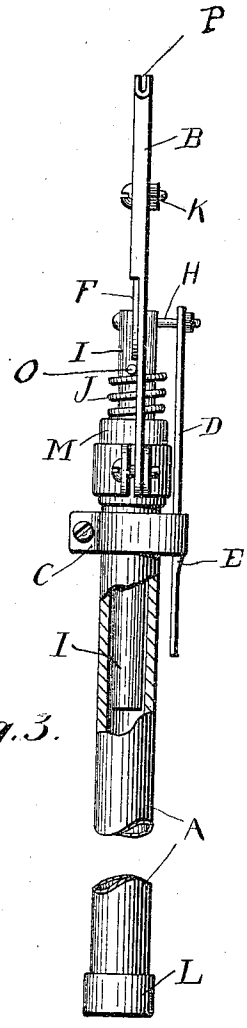
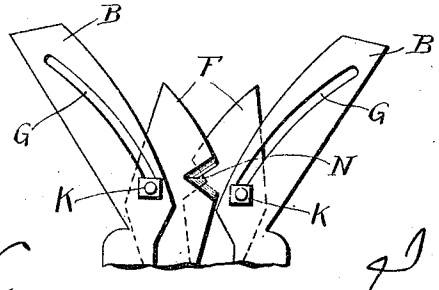


Fig. 3.

Fig. 2.



Witnesses:

J. C. Livesay

Henry D. Nelson.

Inventor:

I. D. Guest

UNITED STATES PATENT OFFICE.

ISAAC D. GUEST, OF TELLES, TERRITORY OF NEW MEXICO.

PRUNING IMPLEMENT.

960,540. Specification of Letters Patent. Patented June 7, 1910.

Application filed June 8, 1909. Serial No. 500,981.

To all whom it may concern:

Be it known that I, ISAAC D. GUEST, a citizen of the Territory of New Mexico, residing at Telles, Dona Ana county, Territory of New Mexico, in the United States of America, have invented a new and useful Pruning Implement.

My invention relates to the improvement of pruning knives, the way the power is applied to cut and the angle of the cutting surface of the same. I obtain these objects by the mechanism illustrated by the accompanying drawings in which—

Figure 1 is an end elevation of the pruner open with the latch side to view. Fig. 2 shows the blades closed and Fig. 3 a side view of same showing cylindrical handle with a broken away portion.

A, is a cylindrical handle which may be extended to adjust it for trimming different heights of trees.

I is a plunger, adapted to reciprocate in the cylindrical handle A, and extends beyond the upper end of said handle, as and for the purposes hereinafter described.

M is a sleeve, suitably secured by bolts to the cylindrical handle A, near its top, and adapted to secure and retain in operative position the spiral coil spring J and the cams B B.

B B are cams rigidly secured at their base to the sleeve M, in vertical position, and provided with slots G G extending longitudinally in a curved direction and adapted to engage the lateral bolts K K, provided on the blades F F. These cams B B are also provided with grooves P, extending along their interior edge and adapted to slidably retain the backs of the blades F F, in their ascending or descending in the operation of the device, thereby preventing their wavering or oscillating, and giving solidity to the blades.

F F are blades, each provided with a dual cutting-faced angle N, in the face thereof, and lateral bolt K, approximately central, adapted to travel along the slots G G in the cams B B when the mechanism is in operation, thereby opening or closing the said blades as the bolt K follows the direction of the slots G G. These blades F F are pivotally connected at their lower ends, to the upper end of the plunger I by bolt H, and are thereby movable up or down by the raising or lowering of the plunger.

J is a spiral coil spring, conveniently adjusted in the sleeve M, its upper portion projecting sufficiently above the said sleeve to engage the pin O, which is a pin extending transversely from the plunger I, in such manner as to retain and contract the said spiral coil spring J when the cylindrical handle A is pressed upward.

D is a handle bar, pivotally attached to the upper end of the plunger I at the bolt H, and its lower end extending downwardly along the cylindrical handle A, passing through the collar C, suitably attached to the cylindrical handle, where it is provided with a clutch E, adapted to retain said handle bar in a desired position in the manipulation of the blades F F.

L is an ordinary coupling joint by which the cylindrical handle A may be extended or reduced in length, by the addition of other sections.

Having described the construction of my invention its operation in the pruning or trimming of trees, is as follows:—The limb to be cut is caught in the dual cutting-faced angles N, in the blades F F, when a pressure by the operator upon the cylindrical handle A, causes the spiral coil spring J to strike the transverse pin O, in the plunger I, thereby contracting said spiral coil spring, and the limb pressing upon the blades F F, forces them downward, their lateral pins K K descending the slots G G in the cams B B, bringing the blades F F and their dual cutting-faced angles N together, which bearing strongly upon the limb severs it. Upon releasing the cylindrical handle A, and the pressure from the limb upon the blades F F being removed by the severing of the limb, the resiliency of the spiral coil spring J forces the plunger I upward, causing the bolts K K to ascend the slots G G in the cams B B, separating the blades F F as they return to their original position, when the implement is ready for a similar operation. In the trimming or pruning of plants, and the like, the dual cutting-faced angles N are placed over the portion to be cut and the operator by pulling the handle bar D, contracts the spiral coil spring J and draws the blades F F downward, when the same movement occurs as in the case of the cutting of a limb, the only difference being that the mechanism is operated by the handle bar D, in place of the pressure of the limb upon the blades F F and the cylindrical handle A.

The novel construction of the blades, pre-

sents four cutting faces, while the mechanism by which they are operated furnishes greatly increased power with a minimum amount of energy. The grooves give stability to the blades and prevent striking the object to be cut at an angle, forcing the blades directly against it with a straight cut.

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

1. A pruning implement, comprising a cylindrical handle and a plunger adapted to reciprocate therein; a pair of blades each provided with a dual cutting-faced portion, and a lateral bolt adapted to travel in cam slots, said blades having pivotal connection at their lower extremities with the plunger; a sleeve rigidly mounted on the cylindrical handle and a spiral coil spring adapted to the interior thereof; a pair of cams vertically secured in said sleeve and provided with longitudinal slots adapted to the lateral bolts of the blades in giving direction thereto, and further provided with grooves on their interior edges, adapted to the movement of the said blades; a handle bar pivotally attached to the plunger and blades and provided with a clutch; and a collar mounted on the cylindrical handle in which the said handle bar vertically moves, all substantially as set forth.

2. The combination of a cylindrical handle with a plunger adapted to reciprocate therein; a pair of blades, each provided with a dual cutting-faced portion and a lateral bolt adapted to travel in cam slots, said blades having pivotal connection at their lower extremities with the plunger, coacting therewith in its reciprocal movement; a sleeve rigidly mounted on the cylindrical handle, and a spiral coil spring mounted therein; a pair of cams adjusted in said sleeve and provided with slots adapted to engage the lateral bolts of the blades, imparting a circular movement thereto in the operation of the mechanism, and further provided with grooves on their interior edges adapted to the rear of the blades in their movement ascending or descending; a handle bar provided with a clutch and pivotally attached to the plunger and blades at their point of pivotal union and coacting therewith; a collar mounted on the cylindrical handle adapted to retain the handle bar longitudinally therewith; and a transverse pin in the upper end of the plunger, coöperating with the spiral coil spring in the operation of the mechanism, as and for the purposes set forth.

I. D. GUEST

Witnesses:
HARRY D. NELSON,
JOSEPH R. LIVESAY.