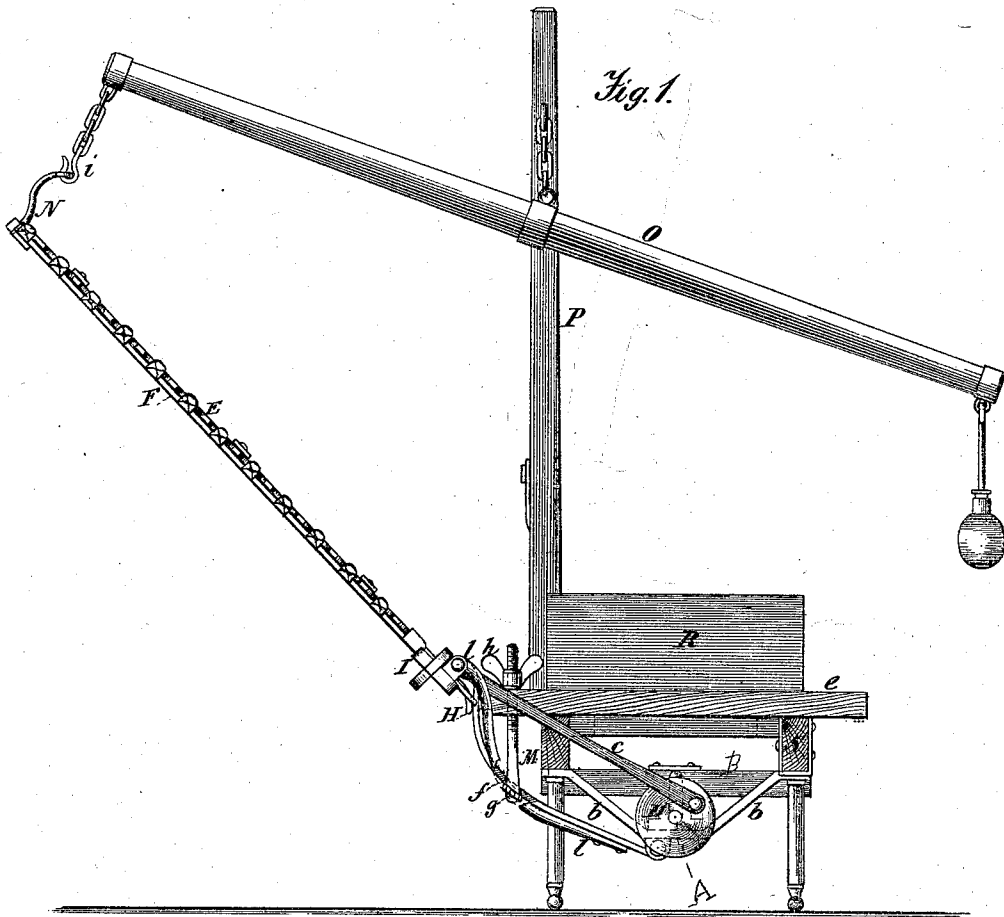


S. B. TURNER.
Hedge Trimmers.

No. 138,106.

Patented April 22, 1873.



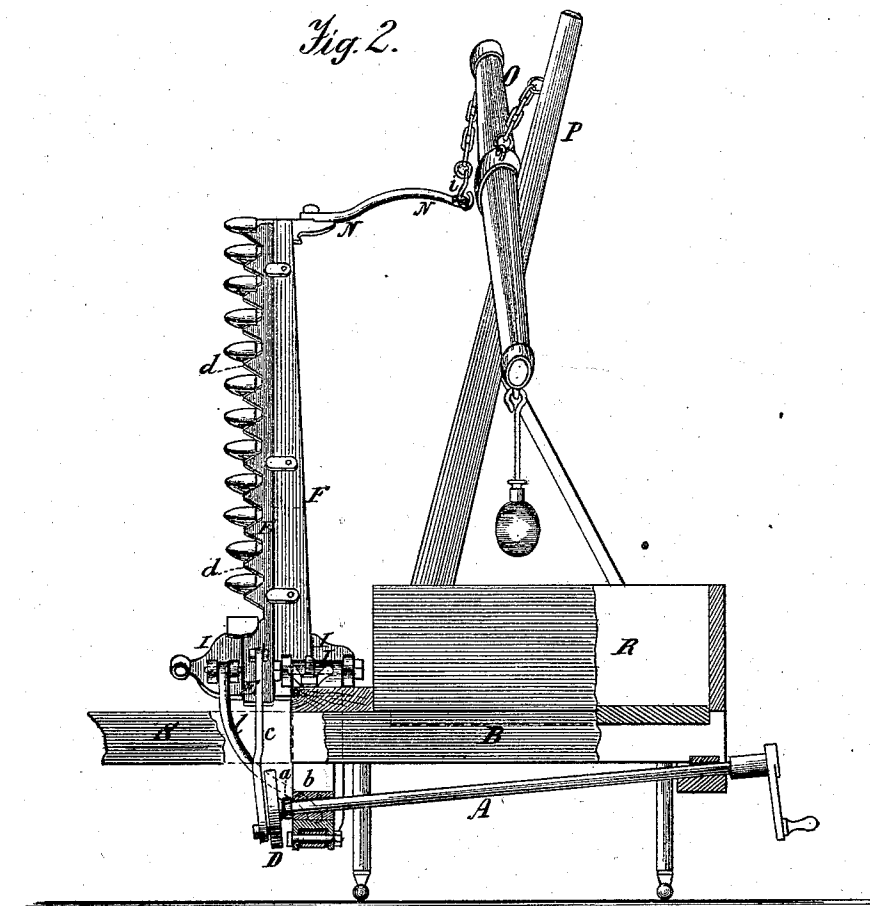
Witnesses.
A. Ruppert.
R. W. Harkness.

Inventor.
Samuel B. Turner
by his attys.
Cox and Cox

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A. Rupprecht
W. H. Arkness,

Inventor.
Samuel B. Finney
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UNITED STATES PATENT OFFICE.

SAMUEL B. TURNER, OF ADAMS COUNTY, ILLINOIS.

IMPROVEMENT IN HEDGE-TRIMMERS.

Specification forming part of Letters Patent No. **138,106**, dated April 22, 1873; application filed October 5, 1872.

To all whom it may concern:

Be it known that I, SAMUEL B. TURNER, of Adams county, in the State of Illinois, have invented certain new and useful Improvements in Hedge-Trimmers, of which the following is a specification, reference being had to the accompanying drawing.

Nature and Objects of the Invention.

The invention consists in an oscillating weighted lever suspended to a standard attached to a box or frame, and having one end connected to an arm secured to the outer end of a sickle-bar. The object of the invention is to provide a means of elevating or lowering the sickle-bar, as well as a means of regulating the general angle at which it operates during the cutting operation.

Description of the Accompanying Drawing.

Figure 1 is a front elevation of a device embodying my invention. Fig. 2 is a side elevation of the same, partly in section.

General Description.

A in the accompanying drawing is a driving-shaft of ordinary construction, which is secured to the frame B, and operated in any suitable manner—as by means of a beveled gear-wheel engaging a corresponding wheel upon the axle upon which the frame B is mounted. The front extremity of the driving-shaft A is provided with the balance crank-wheel D, having a washer, *a*, to prevent its coming in contact with the outer edge of the hanger *b*. The pitman-rod *c* is properly pivoted near the circumference of the balance-crank D, and is operated thereby, giving the rod *c* a reciprocating movement. The other extremity of the rod *c* is pivoted in the usual manner to a sickle, E, the teeth *d* having flat or blunt extremities. The sickle-bar F is of known construction, save that it is tapered from its base to its extremity, in order to lessen its weight. The rest H secured to the shoe I is curved or bent outward in such manner that its convex surface, coming in contact with the coupling-bar L, serves to sustain the sickle-bar F at an angle of about forty-five degrees, (45°.) The coupling-bar is hinged below the center of the hanger *b*, so as to have a vertical movement,

and is provided with a brace, *l*, one end of which is rigidly attached to the under side of the coupling-bar L, the other being pivoted between ears on the shoe I. The outer extremity of the coupling-bar is connected by pivoting to the sickle-bar in the ordinary manner, and is so inclined or curved upward that, when the rest H is in contact with lower surface of the coupling-bar L, the sickle-bar shall incline at an angle of about forty-five degrees, (45°.) At a proper point below the end of the front brace of the frame B the coupling-bar L is provided with an elongated slot, *f*, through which one end of the rod M projects, its extremity being provided with a pin, *g*, to prevent its passing upward through the slot *f*. The upper end of the rod M projects above the brace *e*, is threaded, and provided with a flanged nut, *h*, by means of which the coupling-bar L is elevated or lowered. An arm, N, is properly secured to the rear side of the end of the sickle-bar, its extremity having a loop, through which passes a hook, *i*, on the end of a chain secured to one extremity of a lever, O, which is suspended properly by a chain or other suitable means at about its longitudinal center of gravity to the front edge of the standard P, the opposite end of the lever O being so weighted as to overcome the tendency of the sickle-bar F. The standard P is secured in a properly-inclined position to the box R mounted upon the frame B and attached thereto in any proper manner. On the side of the frame B opposite that adjacent to the sickle-bar is provided the bar S, to which a tongue or thills may be attached in any desired manner.

Operation.

The device being mounted upon an axle so provided with a gear-wheel as when rotated to communicate movement to the driving-shaft A, provided with a similar gearing, the propelling power is attached to the bar S, the weighted end of the lever O elevated, thus lowering the sickle-bar F. The machine is now moved along one side of a hedge in such relation thereto that the sickle shall operate upon it; thus, as the sickle, being in rapid motion, comes in contact with the stalks of the hedge, they are instantly severed, falling

in the rear of the sickle-bar. A repetition of the above operation upon the other side of the hedge completes the trimming, leaving that portion of the hedge above the level of the lower finger cut downward on each side to an angle of about forty-five degrees, (45°.)

Whenever it is desired to elevate the sickle so as to prevent its coming in contact with any old wood or other material in the hedge, whereby it might be injured, the weighted end of the lever O is allowed to descend, thus elevating the sickle above the obstacle, said end of the lever being instantly elevated when the obstacle is passed.

The stroke of the sickle may be lowered or elevated by operating the flanged nut *h*. The teeth of the sickle, being flat or obtuse upon

their extremities, are not bent or curved by coming in contact with the hedge.

Claim.

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

The arm N, weighted lever O, and standard P, in combination with the swinging sickle-bar E, substantially as shown and described.

In testimony that I claim the foregoing improvements in hedge-trimmers, as above described, I have hereunto set my hand and seal this 26th day of September, 1872.

SAML. B. TURNER. [L. S.]

Witnesses:

E. G. BALDWIN,
WM. H. CHANNON.