(No Model.)

W. BARRY.

WILLOW STRIPPING MACHINE.

No. 306,210. Patented Oct. 7, 1884.

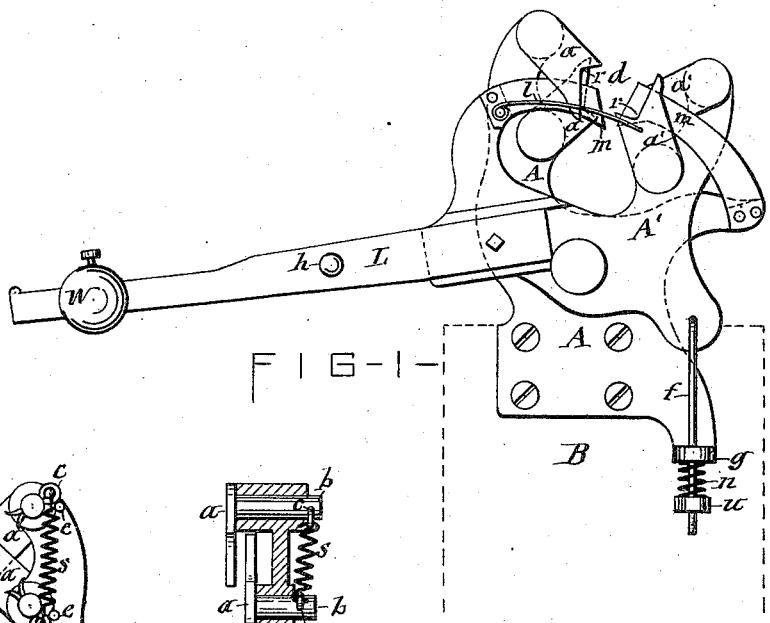

FIG-1-

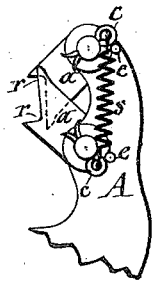

FIG-3-

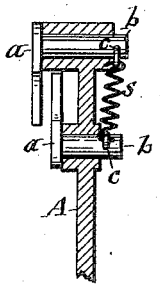

FIG-4-

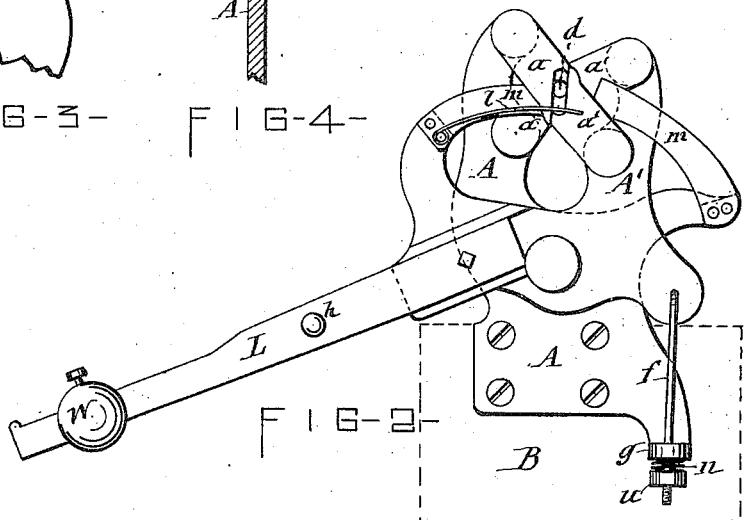

FIG-2-

WITNESSES—

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per Duell, Lass & Hey

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UNITED STATES PATENT OFFICE.

WILLIAM BARRY, OF SYRACUSE, NEW YORK.

WILLOW-STRIPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 306,210, dated October 7, 1884.

Application filed July 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BARRY, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Willow-Stripping Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to that class of willow-stripping machines in which the stripping or scraping blades are arranged centripetally around the passage of the willow.

My invention consists in an improved construction of the stripping-blades and in certain novel means for operating the same, the whole constituting a machine which is capable of stripping willows in a most expeditious, effective, and convenient manner, all as hereinafter more fully described, and specifically set forth in the claims.

The invention is fully illustrated in the annexed drawings, wherein Figures 1 and 2 are front views of my improved willow-stripping machine, showing the same respectively in its dormant and operative positions. Fig. 3 is a rear face view of one of the stripper-actuating jaws, and Fig. 4 is a vertical transverse section of the same.

Similar letters of reference indicate corresponding parts.

A represents a jaw which is bolted or otherwise rigidly secured in an upright position on a suitable support, B, and A′ is a jaw pivoted on the aforesaid stationary jaw. To the upper part of each of said jaws is pivoted a set or pair of the scraper or stripper blades, *a a′*, fixed, respectively, to gudgeons or pins *b*, which are journaled in the jaw and protrude at the back thereof, where they are secured by a split key, *c*, passing transversely through them. All of the stripper-blades stand convergently with their free ends toward the passage *d* of the willow to be operated on, and are allowed a limited oscillating movement, in one of the extremes of which movement they are yieldingly held by tractile springs *s s*, connected, respectively, with one end of the two split keys *c c* of each set of stripper-blades, the draft on said split keys causing the free ends of the two sets of stripper-blades to be turned partly out of their true radial positions, their divergence being controlled by stops *e e*, which the ends of the split keys encounter in the turning of the gudgeons of the stripper-blades. The free ends of the stripper-blades overlap each other, as shown, and are formed with a recess, *r*, in their end edge, so that when they are brought to bear on the willow introduced between them they will conjointly encircle the willow more effectually, as hereinafter more fully explained.

l represents a guard in the form of a wire or bar, secured to the movable jaw and extended across the lower part of the passage *d*, for the willow to be operated on, for the purpose of preventing from going below the said passage the willow, which is introduced from the top.

m m designate cleaner-plates connected to the two jaws, and have their free end extended between the stripper-blades.

In operating the movable jaw the free end of the plate *m* connected therewith is carried past the ends of the stripper-blades connected with the stationary jaw, and at the same time the stripper-blades of the movable jaw are retracted, so as to cause the end of the plate *m* on the stationary jaw to project over the end of the last-mentioned stripper-blades. This movement of the plates *m m* in proximity to the sides and over the ends of the stripper-blades, scrapes from the latter any bark that may tend to adhere to them.

To the movable jaw A′ is connected a lever, L, on which is hung a weight, W, adapted to be fastened at different points in the length of the lever, and thus exert greater or less power on the same, as may be required. A handle, *h*, is attached to the said lever, to allow the operator to conveniently lift the same when required. The movement of the lever L operates the movable jaw, as hereinafter described. The automatic action imparted to the said jaw by the gravitating lever L is limited by a rod, *f*, pendent from the jaw at the opposite side of the pivot thereof, and passing through a lug, *g*, on the base of the stationary jaw, at the under side of which lug said rod is provided with a nut, *u*, between which and the lug an expansive spring, *n*, or

other elastic cushion is interposed, to counteract excessive force and concussion incident to the drop of the weighted lever. The action of the aforesaid cushioned stop can be regulated by moving the nut *u* on the rod *f*.

The operation of my invention is as follows: The two jaws A A′ are held normally in a closed or compressed position by the weighted lever L, as shown in Fig. 2 of the drawings. By taking hold of the handle *h* and lifting the lever L the jaws are opened or distended, as illustrated in Fig. 1 of the drawings. This allows the willow to be introduced between the two jaws, which is effected by carrying from the top of the passage *d* down to the guard *l* the end of the willow near the hand by which the operator grasps the willow. The willow being thus in position, the operator releases the handle *h*, and thereby allows the lever L to drop. The descent of the lever throws the movable jaw toward the stationary jaw, and in so doing the free ends of the stripper-blades *a a a′ a′* are forced against the interposed willow, the cushioned stop-rod *f* preventing excessive gripping on said willow.

In the attack of the stripper-blades on the willow the former overlap each other at their free ends, and obtain conjointly four separate and distinct bearings on the willow at different points of the circumference thereof, and in pressing them against the willow the free ends of the stripper-blades yield laterally until the recesses of the scraping-edges of the blades are brought to bear on the willow, and thus made to completely encompass the same. While the willow is thus engaged the operator draws the same endwise out of the passage *d*.

In the approach of the thinner end of the willow to the stripper-blades the descending lever receives increased counter-pressure by the further compression of the cushion *n*, and the grip of the stripper-blades on the willow is gradually reduced as the thinner and more easily stripped portion of the willow is carried to the stripper-blades. In drawing out the willow as aforesaid the stripper-blades scrape and effectually strip the bark from said willow. When this is accomplished, the operator lifts the lever by means of the handle *h*, and thereby swings the movable jaw away from the stationary jaw. This opens the passage *d* for the reception of another willow to be stripped, and at the same causes the cleaner-plates *m m* to scrape from the stripper-blades any bark that may cling to them.

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

1. In a willow-stripping machine, stripper-blades pivoted at opposite sides of the passage of the willow, and having overlapping scraping-edges presenting conjointly four separate and distinct laterally-yielding points of attack on the willow to be stripped, substantially as set forth.

2. In combination with the actuating-jaws adapted to receive between them the willow to be stripped, scraping-blades pivoted on said jaws and held yieldingly with their free end convergent toward the passage of the willow, substantially as set forth.

3. In combination with the actuating-jaws, scraping-blades pivoted thereon and having their free end formed with a recessed edge, and springs holding the free ends of the scraping-blades toward the passage of the willow, substantially as specified.

4. In combination with the actuating-jaws, adapted to receive between them the willows to be stripped, scraping-blades pivoted on the respective jaws, springs holding the free ends of the scraping-blades toward the passage of the willow, and stops for limiting the oscillation of the scraping-blades, substantially as set forth.

5. The combination, with the actuating-jaws and scraping-blades connected therewith and held with their free end toward the passage of the willow, as shown, of cleaning-blades connected with the jaws and standing with their free end between the scraping-blades, substantially as and for the purpose set forth.

6. In combination with the actuating-jaws and willow-strippers pivoted on the respective jaws, a guard extended across the lower part of the passage of the willows, as and for the purpose set forth.

7. In combination with the actuating-jaws, two sets of strippers pivoted, respectively, on said jaws, springs for yieldingly sustaining said strippers in their retracted position, stops for limiting the movement of the same, a lever for operating the movable jaw, a stop for limiting said movement, and a cushion applied to said stop, substantially as described and shown, for the purpose set forth.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 9th day of July, 1883.

WILLIAM BARRY. [L. S.]

Witnesses:
FREDERICK H. GIBBS,
WILLIAM C. RAYMOND.