G. S. WEBSTER.

RAILWAY TRACK WEED CUTTER.

APPLICATION FILED FEB. 11, 1916.

1,238,855.

Patented Sept. 4, 1917.

3 SHEETS—SHEET 1.

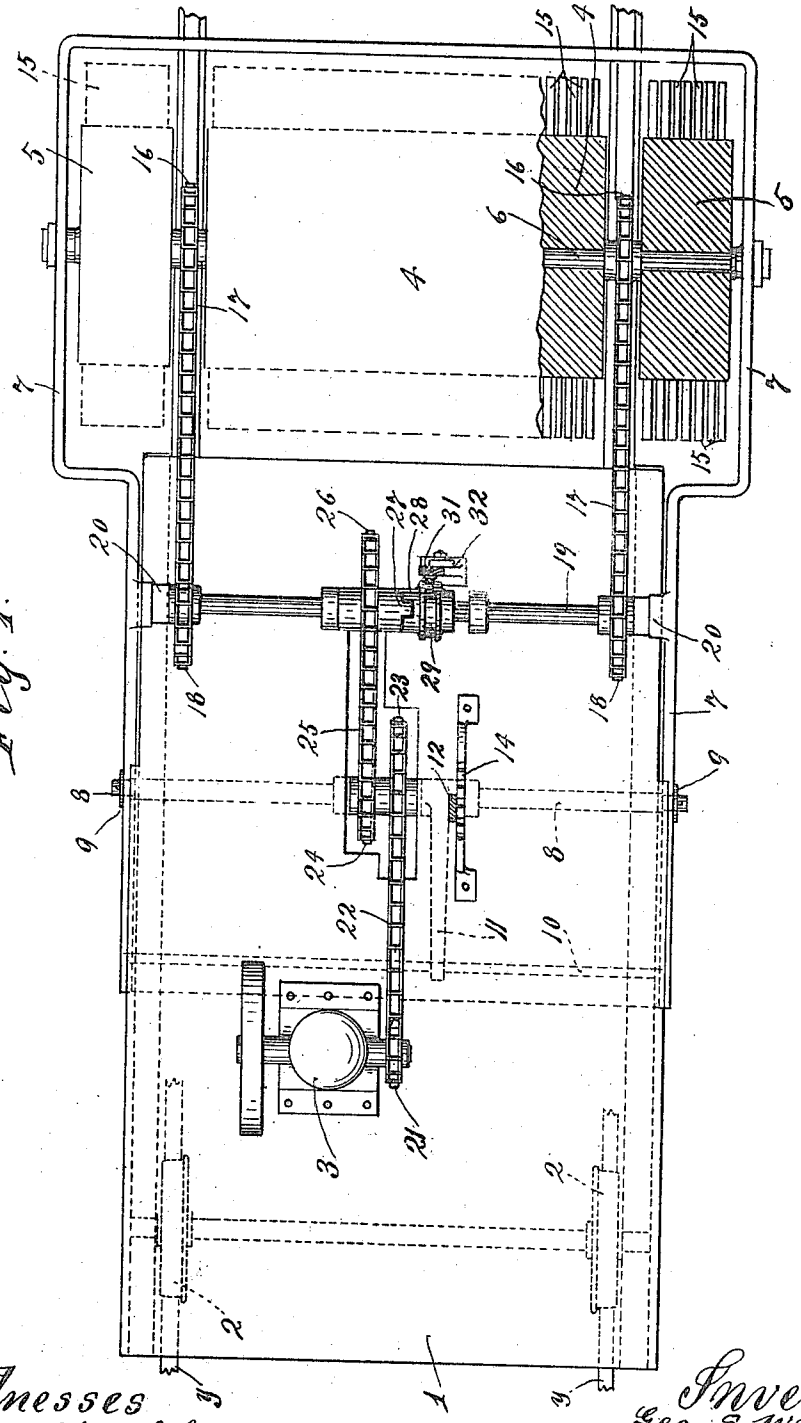


Fig. 1.

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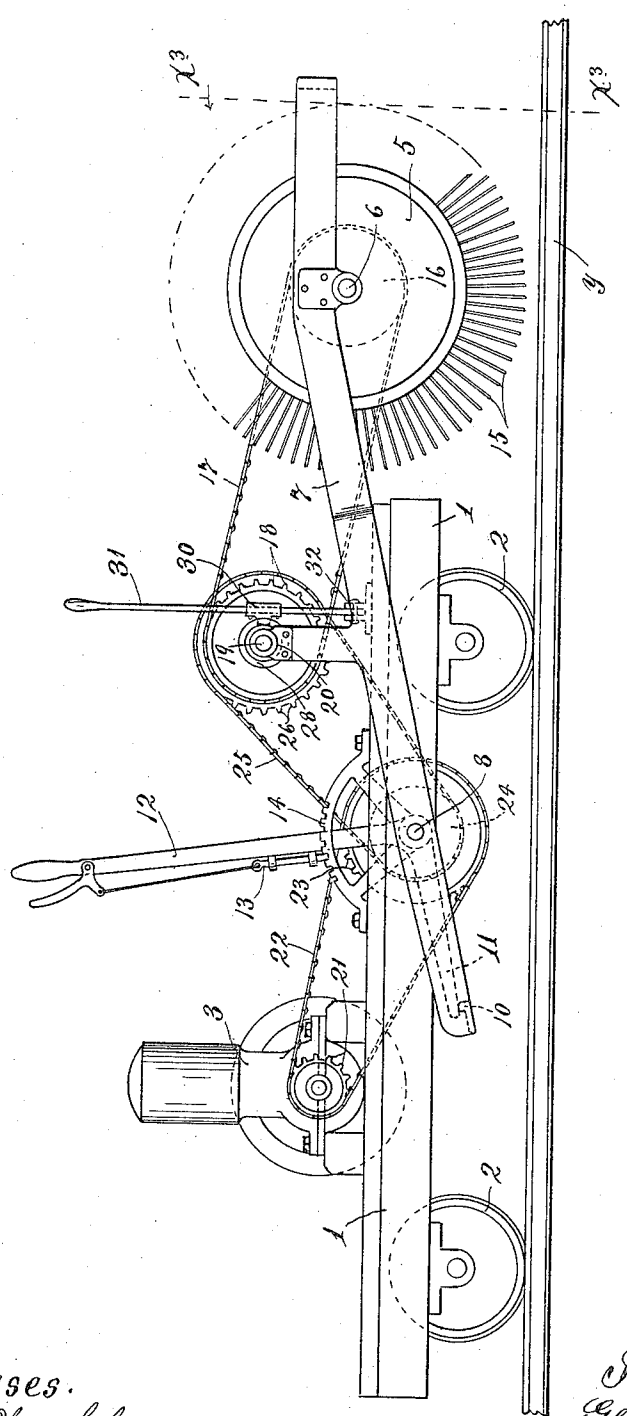
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3 SHEETS—SHEET 2.

Fig. 2



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3 SHEETS—SHEET 3.

Fig. 3

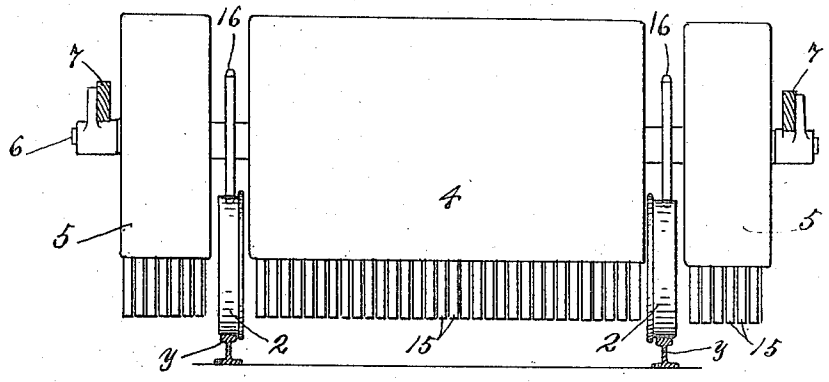
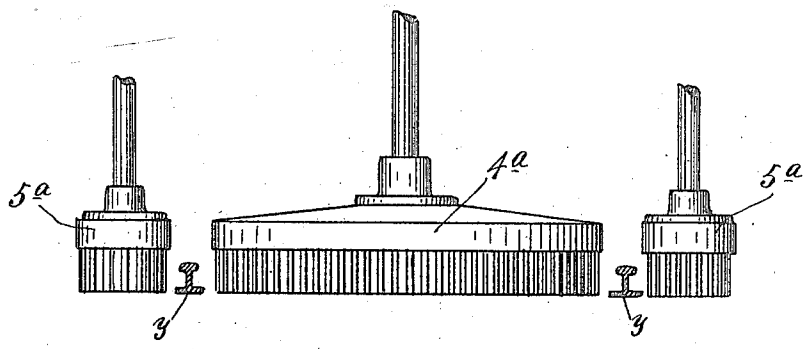


Fig. 4



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UNITED STATES PATENT OFFICE.

GEORGE S. WEBSTER, OF MASON CITY, IOWA.

RAILWAY-TRACK WEED-CUTTER.

1,238,855. Specification of Letters Patent. Patented Sept. 4, 1917.

Application filed February 11, 1916. Serial No. 77,608.

To all whom it may concern:

Be it known that I, GEORGE S. WEBSTER, a citizen of the United States, residing at Mason City, in the county of Cerro Gordo and State of Iowa, have invented certain new and useful Improvements in Railway-Track Weed-Cutters; 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 has for its object to provide a simple and highly efficient railway track weed cutter and destroyer; and to such ends, generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

It is a well known fact that weeds growing close to the rails of a railway track will get upon the rails and when crushed by passing trains, will make the track slippery, so that it is often difficult for the engine to pull its load. My invention provides a device which will rapidly cut and destroy weeds that grow along the track, to-wit, between the rails and for some distance outside of the rails. The invention utilizes heavy rotary brushes equipped with strong spring teeth preferably made of what is known as flat steel brush wire about one-sixteenth to one-fourth of an inch in cross section. When these brushes are rotated in contact with the ground, they will cut off the weeds, grass, and like vegetable growth, and will uproot most thereof, thus destroying the same. When such a brush is mounted on a motor-propelled car and is motor driven, it will destroy weeds and like growth along the track very rapidly, and at very small cost per mile.

In the accompanying drawings which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Figure 1 is a plan view illustrating the preferred form of my weed cutter, some parts being diagrammatically indicated by dotted lines only;

Fig. 2 is a side elevation of the same, some parts being indicated by dotted lines only;

Fig. 3 is a section taken approximately on the line x^3 x^3 of Fig. 2; and

Fig. 4 is a fragmentary view illustrating a modified arrangement of the brushes.

The numeral 1 indicates the body of a car or truck which is mounted on wheels 2 and carries a motor, as shown, in the form of an explosive engine 3. This truck may be driven from the motor or it may be hitched to an engine. As shown, the motor is used only to drive the brushes.

In the preferred form of the invention, I employ three cylindrical brushes, to-wit, an intermediate brush 4 and two outside brushes 5, all mounted on a common transverse shaft 6 which, at its ends, is journaled in the sides of a heavy bail-like supporting frame 7 that is pivotally connected to the sides of the truck frame 1, as shown, by a transverse shaft 8 arranged to run in suitable bearings in the sides of the truck frame 1, and is held against lateral spreading movements by coöperating pairs of washers 9. The frame 1 operates as a lever and the rear ends of the sides thereof, are connected by a transverse bar 10 that is engaged by the rearwardly projected arms 11 of a large lever 12 that is pivoted on the intermediate portion of the shaft 8 and has a ratchet 13 for locking it in different positions to a lock segment 14, on the platform of the truck 1. The teeth of the brushes 4 and 5 are indicated by the numeral 15 and are preferably of the character above described. Fixed to the brush shaft 6 in the space between the brushes 4 and 5 are sprockets 16. Sprocket chains 17 run over the sprockets 16 and over sprockets 18 on the counter shaft 19 that is journaled in bearings 20 on the sides of the lever frame 7.

The crank shaft of the engine 3 carries a sprocket 21. A sprocket chain 22 runs over the sprocket 21 and over a sprocket 23 that is loosely journaled on the pivot shaft 8 and works in an opening in the platform of the truck frame 1. A similar sprocket 24 has its hub secured to the hub of the sprocket 23 and rotates therewith. A sprocket chain 25 runs over the sprocket 24 and over a sprocket 26 that is loosely journaled on the counter shaft 19, but may be held against rotating movements thereon. The hub of this sprocket 26 carries a half clutch 27 that is engageable

with a half clutch 28 keyed to rotate with but mounted to slide on the counter shaft 19. The sliding half clutch 28 has a loose collar 29 fastened to a head 30 that is mounted for vertical sliding movements on a shipper lever 31, the lower end of which is pivoted to a bearing 32 on the truck platform.

With the construction above described, it is evident that the brushes may be raised out of action and lowered into action, at will, by manipulation of the lever 12, and it is also evident that when the engine is running, the brushes may be driven, at will, by throwing the half clutch 28 into engagement with the half clutch 27 of the sprocket 26. It is further evident that vertical adjustments of the brushes will not interfere with the brush driving connections, because the slack of the sprocket chains will not be varied by such adjustments.

The space between the teeth of the brushes 4 and 5, it will be understood, will be just sufficient to afford a proper clearance of the track rails *y*. When the brushes are rotated in contact with the roadbed, they will, as indicated, cut the weeds, grass, and the like. There is, however, sufficient flexibility in the teeth of the brushes to prevent the same from being broken by engagement with projecting portions of the ties, or with rocks or like obstructions in the roadbed.

The cylindrical arrangement of the brushes described is preferred, but it might be possible in some cases to successfully use brushes arranged to rotate on vertical axes, as shown in Fig. 4, wherein the intermediate brush is indicated at 4^a and the outside brushes are indicated at 5^a.

What I claim is:

1. A railway track weed cutter comprising a truck, a vertically adjustable brush supporting frame carried by said truck, a brush shaft carried by said frame, cylindrical spring-toothed brushes secured to said shaft, working, one between said rails and the other outside of the rail and adapted to clear the rails, a motor on said truck, a driving element on said brush shaft between said inside and outside brushes, and driving connections between said motor and the said driving element, a portion of the said driving connection overlying one of the rails.

2. A railway track weed cutter comprising a truck, a vertically adjustable brush supporting frame carried by said truck, a vertically movable transverse brush shaft carried by said frame, cylindrical spring toothed brushes secured to said shaft, working, one between the rails, and the other outside of the rails and spaced to clear the rails, sprockets secured to said brush shaft in the spaces between said brushes, a motor, and driving connections between said motor and brush shaft, including sprocket chains running over said sprockets.

3. A railway track weed cutter comprising a truck, a vertically adjustable brush supporting frame carried by said truck, a vertically movable transverse brush shaft carried by said frame, cylindrical spring toothed brushes secured to said shaft, working one between the rails, and the other outside of the rails and spaced to clear the rails, a sprocket secured to said brush shaft in a space between brushes, a counter shaft mounted on said vertically adjustable frame, a sprocket on said counter shaft, a sprocket chain running over the said two noted sprockets, a motor on said truck and connections between said motor and counter shaft including a clutch.

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

GEORGE S. WEBSTER.

Witnesses:
A. CASEY,
J. A. SWEET.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."