J. S. DOAK.

GRASS CUTTER.

APPLICATION FILED JULY 18, 1913. RENEWED SEPT. 13, 1915.

1,167,051.

Patented Jan. 4, 1916.

FIG. 1

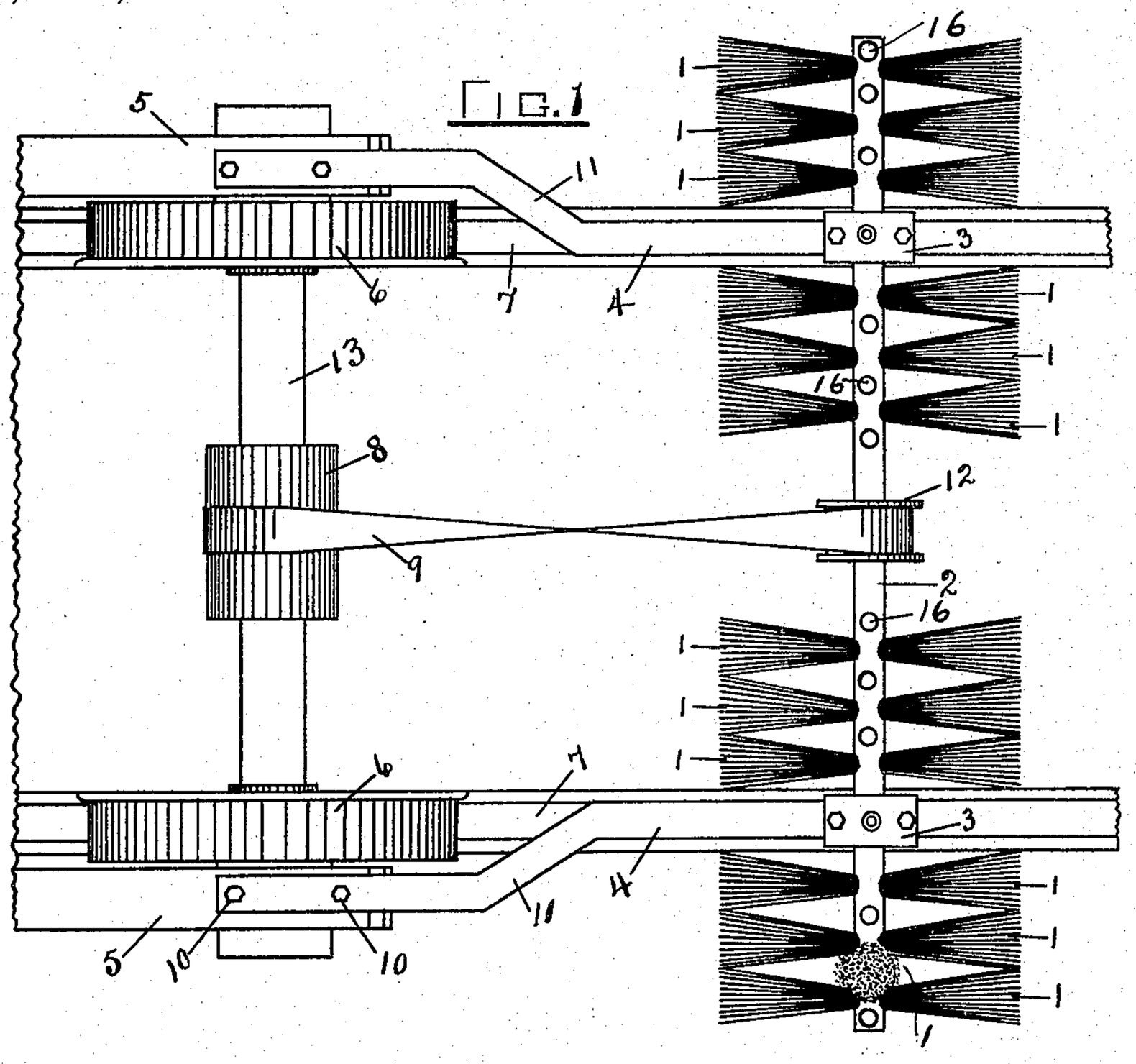
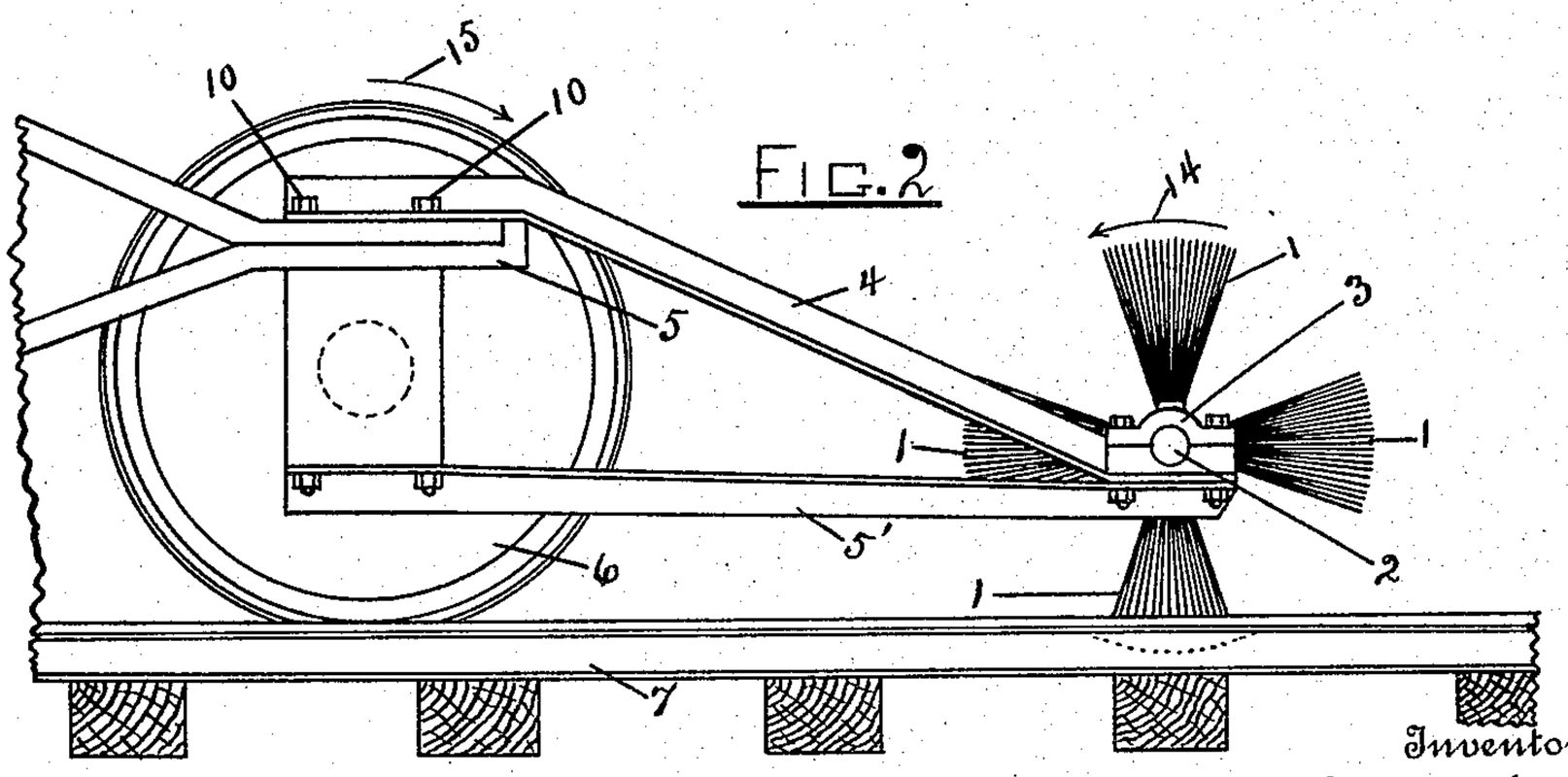


FIG. 2



Witnesses

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UNITED STATES PATENT OFFICE.

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GRASS-CUTTER.

1,167,051. Specification of Letters Patent. Patented Jan. 4, 1916.

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To all whom it may concern:

Be it known that I, JOHN S. DOAK, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Grass-Cutters, of which the following is a specification.

This invention relates to grass cutters and more particularly to a grass cutter adapted to be mounted on some part of a train of cars.

The object is to provide a cutter which will cut the grass from railway tracks and to adapt the device for easily attaching the same to a truck of the car.

The device has been practically used on the truck of a tender in a train of cars.

The object is to provide a device which will be operated automatically by the moving of the train and to gear the same to a car axle so that the cutter will be operated while the train is running.

Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application.

Figure 1 is a plan view of the complete device and part of a railway car truck and the rails. Fig. 2 is a side elevation of the same.

Similar characters of reference are used to indicate the same parts throughout the several views.

For the purpose of illustrating this invention a part of a car truck is shown with two wheels mounted on rails.

The invention includes cutting devices 1 which consists of stiff wires which are mounted in an axle 2 by projecting the wires through the axle and then spreading the wires on each side of the axle as shown in the drawings. Any suitable stiff wire will answer the purpose. It is preferable to insert about one-half dozen bunches of wires in close proximity to each other and to arrange such a group or bunch of wires on each side of each rail. The object is to cut the grass away from the rails of a railway track. A bunch 1 of wires is inserted diametrically through an axle 2 and the next bunch of wires is inserted diametrically through the axle 2 at right angles to the first bunch of wires. This arrangement will make proper distribution of the wires to strike through all of the spaces on each side of the railway rail. The axle 2 is journaled in bearings 3 which are carried on arms 4 and 5′. The arms 4 are arranged on top of the truck 5 and the arms 5′ are arranged under the bottom of the truck 5 and suitable bolts 10 are used to bind the arms 4 and 5′ on the truck 5. The arms 4 and 5′ are offset at 11 in order to bring the bearings 3 directly in front of the wheels 6 of the truck and directly over the rails 7 of the railway track. The shaft 2 is driven by a pulley 12 which is mounted rigidly on the axle 2 and by a belt 9 and a pulley 8 which is mounted on the car axle 13. The pulley 8 is made of a considerable width so that the belt 9 cannot be displaced from the pulley 8 during operation. The belt 9 must be crossed so that the cutter wires will be revolved in the opposite direction to the revolving of the car wheels 6. The arrow 14 indicates the direction of the turning of the cutter and the arrow 15 indicates the direction of the turning of the car wheels. The turning of the cutter in the opposite direction of the running of the car wheels is necessary in operation for the cutting of the grass. It is not necessary that the wires 1 which form the cutter be straight. They may be bent to irregular positions and serve for the purpose of cutting grass.

The mounting of the axle 2 can be accomplished in various ways. The form shown in the drawings for the arms 4 and 5′ have been demonstrated to be entirely satisfactory.

Various changes may be made in the construction and arrangement of the several parts without departing from my invention.

In Fig. 1, the wires 1 are omitted from the holes 16 for clearness of illustration.

What I claim, is,—

1. The combination with a railway car truck, of a grass cutter carried thereby, said cutter comprising a rotary shaft extending horizontally at substantial right angles to the track and projecting beyond the same at each side thereof, bearings in which said shaft is journaled, arms attached to the upper and lower sides of the truck frame for positioning said bearings in front of the truck and over the track, a plurality of tufts of stiff radially disposed wires carried by said shaft on each side of said bearings and striking on each side of the rails, and

projecting below the tops of the railway rails, and a crossed belt directly connecting said shaft with a truck axle, whereby the former is driven by the latter.

2. A grass cutter comprising a shaft, tufts of stiff wire projecting radially therefrom and permanently secured to said shaft and bearings for said shaft, arms for carrying said bearings attached to a railway truck and offset inwardly to bring said bearings directly over the rails of the track and means for driving said shaft consisting of a pulley rigid with said shaft, a pulley rigid with the car axle and a belt running on said pulleys.

3. The combination with a railway car truck, of a grass cutter carried thereby, said cutter comprising a rotary shaft, bearings for said shaft, arms attached to the upper and lower sides of the truck and off-set inwardly for carrying said bearings directly over the railway rails, a plurality of tufts of relative stiff resilient radially disposed wires carried by said shaft on each side of said bearings and reaching below the tops of the rails of the railway track, and means for driving said shaft in front of the truck consisting of a pulley rigid with a car axle, a pulley rigid with said shaft, and a crossed belt engaging said pulleys and driven by the pulley on the car axle.

In testimony whereof, I set my hand in the presence of two witnesses, this 15th day of July, 1913.

JOHN S. DOAK.

Witnesses:
A. L. JACKSON,
L. T. KNIGHT.