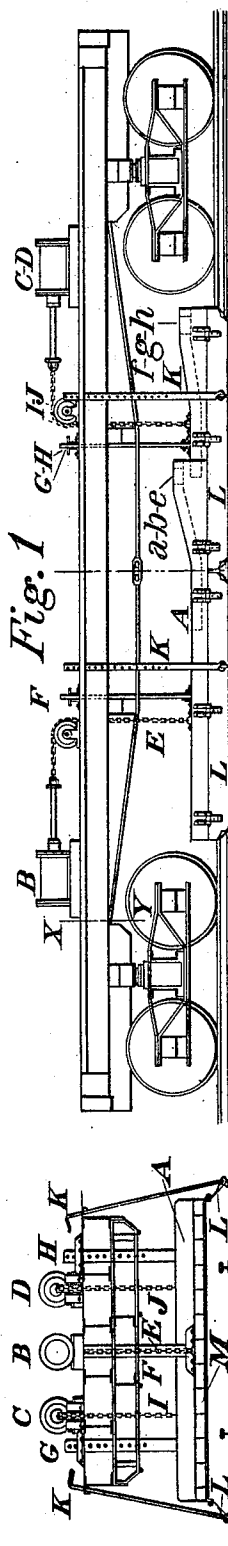
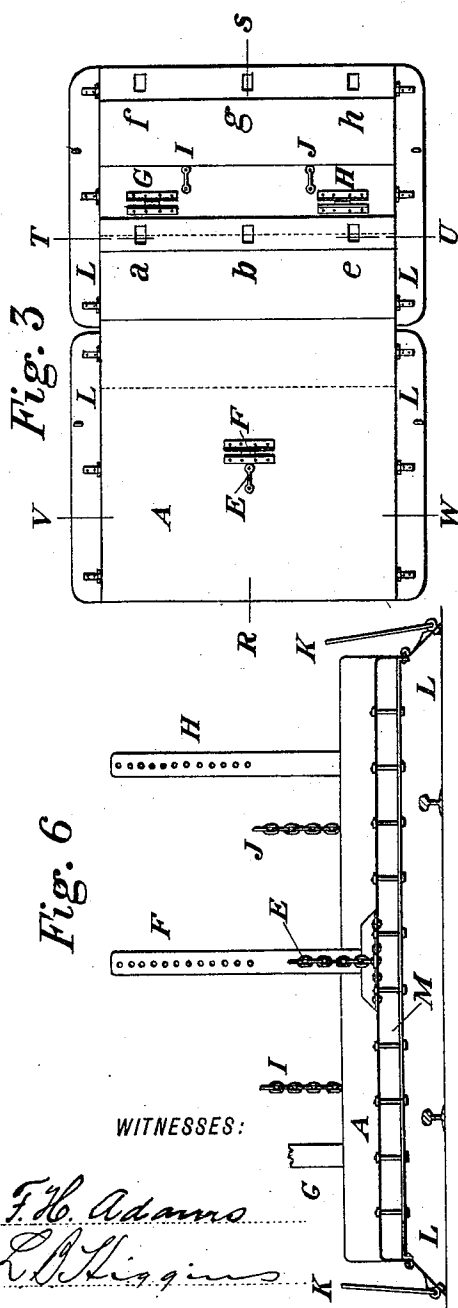


(No Model.)

G. A. HANCOCK.
RAILROAD WEED BURNER.

No. 582,420.

Patented May 11, 1897.



UNITED STATES PATENT OFFICE.

GEORGE A. HANCOCK, OF GALVESTON, TEXAS.

RAILROAD WEED-BURNER

SPECIFICATION forming part of Letters Patent No. 582,420, dated May 11, 1897.

Application filed July 20, 1896. Serial No. 599,900. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. HANCOCK, a citizen of the United States, residing at Galveston, county of Galveston, State of Texas, have invented a new and useful Railroad Weed-Burning Machine, of which the following is a specification.

My invention relates to an improvement in a railroad weed-burning device in which a large sheet-iron shield is suspended underneath and between the trucks of any ordinary railroad-car (preferably of iron) for the purpose of confining the flame and heat produced by oil-atomizing burners or other means to direct and maintain continued contact of flame with grass and weeds on the ground between and along the outside of the rails.

The objects of my improvement are, first, to provide a shield large enough and of such design and construction as to facilitate perfect and uniform combustion under the whole surface and confine the flame and heat close to the ground during the whole process of combustion; second, to afford a convenient and ready method of suspending and adjusting the height of shield from the ground. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of complete arrangement. Fig. 2 is a section of Fig. 1 on line X Y with trucks removed, showing end elevation of shield. Fig. 3 is a plan of shield. Fig. 4 is a section through Fig. 3 on line R S. Fig. 5 is a section through Fig. 3 on line T U. Fig. 6 is a section through Fig. 3 on line V W.

Similar letters refer to similar parts throughout the several views.

The shield A is made of heavy boiler-iron and is suspended from car by three flat iron hangers F G H, provided with holes at convenient distances, through which a pin may be passed to support the shield A at any desired height. Three chains E I J are secured to upper surface of shield A and pass up through deck of car, over sheaves, and connect with cylinders B C D, respectively, which are operated by compressed air and provide a convenient and ready means of raising and lowering shield A to the desired height.

Part of the under surface of shield A is lined with fire-brick M N O Q, which are supported by straps of iron bolted to shield A, substantially as shown.

Apertures are cut through shield A and fire-brick at *a b e* and *f g h* for the introduction of oil-atomizing burners, which throw a spray against the inclined fire-brick M, as shown in Fig. 4. It is not intended that burners shall be used in all these apertures at one time, but only when they can be used to advantage, those not used serving for the admission of air naturally or by artificial means to aid combustion. When burners are first started, they must be lighted by torch, but after burning a few minutes the inclined fire-brick M become so hot that they serve the triple purpose of lighting an extinguished burner, aiding combustion, and directing the flame and heat downward, all of which are advantages claimed for this shield.

To the sides of shield A are attached hinged wind-sheets L, which have their corners slightly turned up, so that when resting on the ground they will slide over obstacles the same as a sleigh-runner does. These wind-sheets L are provided with lifting-rods K, which have holes spaced at convenient distances, through which pins may be passed to support them at proper heights. The object of these wind-sheets is to prevent side winds from affecting flame and heat under the shield A.

While I have described my invention with more or less minuteness as regards details and as being embodied in certain precise forms, I do not desire to be limited thereto unduly no more than is pointed out in the claims. On the contrary, I contemplate all proper changes in form, construction, and arrangements, the omission of immaterial elements, and the substitution of equivalents, as circumstances may suggest or render expedient.

I claim—

1. In mechanism of the class described, the combination of a movable car, a shield adjustably secured thereto and supported in proximity to the ground, means for raising and lowering the shield, and a set of burners arranged in the space between the shield and the ground, substantially as and for the purpose described.

2. In mechanism of the class described, the combination of a movable car, a shield provided with several perforated hangers by which it is adjustably supported by the car in proximity to the ground, and a set of burners arranged in the space between the shield and the ground, substantially as and for the purpose described.

3. In mechanism of the class described, the combination of a movable car, a shield for confining heat and combustion in contact with the ground adjustably supported by the car, fluid-pressure cylinders on such car, chain mechanism connecting the fluid-pressure cylinders with the shield to raise and lower the same, and a set of burners arranged in the space between the shield and the ground, substantially as and for the purpose described.

4. In mechanism of the class described, the combination of a movable car, a shield secured to the car for confining heat and combustion in contact with the ground, an inner

lining of refractory material such as fire-brick to store up heat and assist in combustion, and a set of burners arranged in the space between the shield and the ground, substantially as and for the purpose described.

5. In mechanism of the class described, the combination of a movable car, a shield secured to the car in proximity to the ground to confine heat and combustion in contact with the ground, an inner lining of refractory material such as fire-brick adapted to act as a reservoir for heat and aid combustion a part of which is arranged at an angle to the ground, and a set of burners arranged in the space between the shield and the ground so as to deliver fuel against the angular fire-brick wall, substantially as and for the purpose described.

GEO. A. HANCOCK.

Witnesses:

F. H. ADAMS,

L. D. HIGGINS.