Oct. 20, 1931. H. M. REINKING 1,828,681

ROAD PLANING MACHINE

Filed Nov. 13, 1930

Fig. 1.

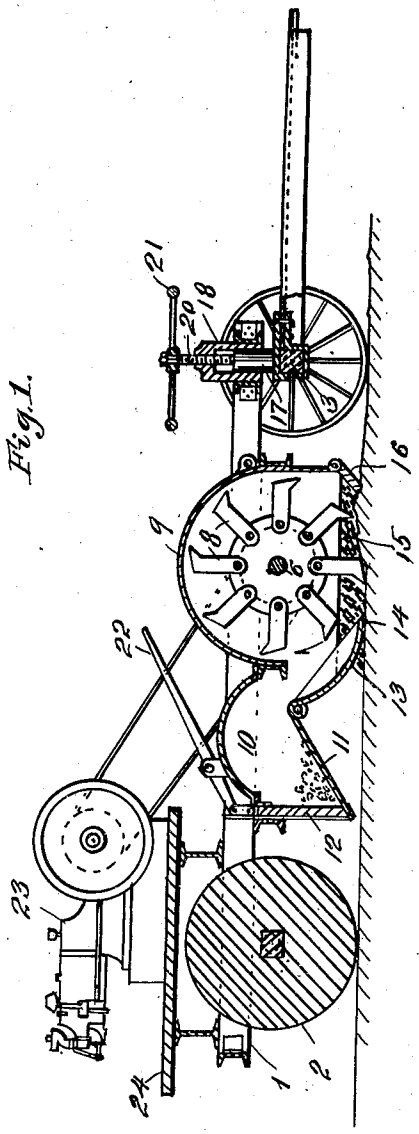
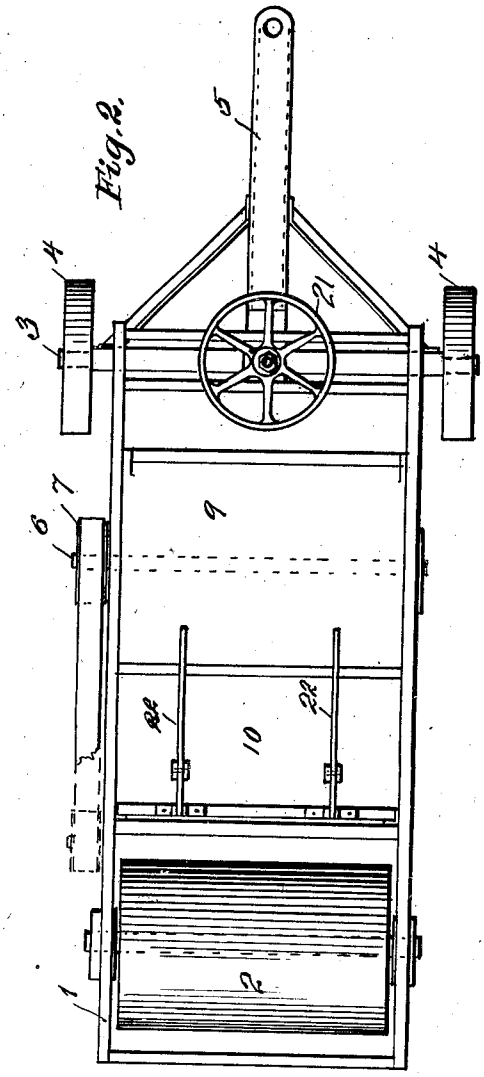


Fig. 2.



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UNITED STATES PATENT OFFICE

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ROAD PLANING MACHINE

Application filed November 13, 1930. Serial No. 495,342.

This invention relates to certain new and useful improvements in road planing machines, the peculiarities of which will be hereinafter fully described and claimed.

The main objects of my invention are to adapt a rock crusher having rotary pivoted hammers to travel along the road with the hammers adjacent thereto so as to plane off the rock and other material projecting therefrom; second, to mount such a rotor in a portable carrying frame adapted to allow adjustment of said rotor to and from the road; third, to provide such a rotor with a covering casing having its edges automatically adjustable to contact with the road to guide the removed material and deliver it to a rear roller mounted in said frame; fourth, to adjust the front end of such a frame so as to vary cutting action of said hammers on the road; fifth, to provide such a rotor with a storage box adapted to receive and deliver the removed material in front of the rear roller; sixth, to provide driving means for said rotor so mounted on the carrying frame as to increase the weight on the rear roller; and seventh, other points of construction hereinafter described and claimed.

In the process of road making, rocks and other obstructions are sometimes found which can not be removed with the ordinary road scrapers and scarifying machines used in making roads.

My invention provides a rotor with pivoted hammers and portably mounted and adjustable to and from the road, so that such rock or other obstruction can be planed off to the desired grade. Also I provide a rear roller in such a portable frame, and guide the removed material to the front of said roller to fill the hollow that is generally adjacent to such a projection. In other words, I adapt a regular rock crusher with rotary pivoted hammers to dress down rock or other obstructions in the grade of an old worn or a new road so as to quickly bring it to the desired grade.

In the accompanying drawings in which like reference numerals indicate the corresponding parts,

Fig. 1 represents a vertical central section through a machine exemplifying my invention; and

Fig. 2, a plan view of the same with the engine removed to show the construction.

Referring to the drawings, numeral 1 represents a rectangular frame of channels or other rolled sections, having mounted near its rear end a roller 2. The front end is adjustably supported upon a front axle 3 provided with carrying wheels 4 and a guiding tongue 5 securely braced and tied to said axle and adapted to be connected to a tractor or other machine to haul the frame along the road.

Adjacent to said axle is mounted a rotor comprising a horizontal shaft 6 having a driving pulley 7 and provided with rotary pivoted hammers 8 enclosed in a suitable casing 9, open at the bottom, so as to allow said hammers to come in contact with the road.

Between the rear roller and the rotor is preferably located a delivery box 10 having an inclined bottom 11 and adjustable door 12 to deliver the received material in front of the roller 2. A curved apron 13 is pivotally connected at its upper end to said box, and its front end 14 rides upon the graded surface at the rear of the operating hammers, and is thus automatically adjustable so as to receive and guide the removed material to said box 10.

The sides of said rotor casing 9 are provided with adjustable extensions to contact with the variable road surface and prevent the rock and other removed material from flying out laterally, and to guide it to the receiving apron 13. Such extensions may be of a series of chain links 15, or other means that will automatically ride upon the road surface and form a guard at the sides of said casing. The front of said casing has a similar guarding extension, in the form of a pivoted wall 16, or other suitable means.

The vertical adjustment of these rotary pivoted hammers with regard to the road is accomplished in any suitable manner, such as providing a pivot piston 17 mounted on the center of the front axle, and engaging a vertical cylinder 18 in the top of which is a vertical screw 20 having its end in contact

with the top of said piston and rotated by a hand wheel 21, or otherwise, so as to raise and lower the cylinder and front end of the said frame 1, and thus adjust the pivoted hammers with regard to the road surface.

The door 12 in the delivery box is adjustable by levers 22 or otherwise, so as to deliver the received material when required in front of the rear roller.

Driving means for said rotor is shown as a gas engine 23 belted to the pulley 7 of the rotor or otherwise operatively connected. This engine is mounted on a platform 24 at the rear end of the frame 1 so as to add its weight to the roller 2 and promote the rolling action upon the material as the roller travels over it. The engine or other driving means may be otherwise located if desired.

I do not limit myself to the exact construction and arrangement of parts shown to illustrate my invention, except by the following claims.

I claim:

1. A road planing machine comprising a portable carrying frame having front carrying wheels and a rear roller, a rotor comprising pivoted hammers, means to drive said rotor, a covering casing for the rotor open at the bottom, means to adjust said hammers to and from the road, and a delivery box located between the rotor and rear roller and having an automatically adjustable apron adjacent to the operating hammers to receive the road material and allow its deposit in front of said roller.

2. A road planing machine comprising a portable carrying frame provided with a front axle with carrying wheels and a rear roller, a rotor comprising pivoted hammers, means to drive said rotor, a casing for the rotor open at the bottom, means to direct the road material removed by the hammers to the rear roller, and means to adjust the hammers to and from the road comprising a vertical cylinder mounted on the front end of said frame, a piston mounted on the front axle, and a vertical screw adapted to raise and lower said cylinder and front end of the frame, substantially as described.

3. A road planing machine comprising a portable carrying frame provided with front guiding wheels and a rear roller, a rotor comprising pivoted hammers mounted in said frame in front of said roller, means to direct the road material removed by said hammers to said roller, an engine to drive said rotor mounted on said frame above the roller to increase the roller action on the road material, and means to vary the height of the front end of said frame to vary the cutting action of said hammers, substantially as described.

4. A road planing machine comprising a horizontal rectangular frame, a roller mounted near the rear end of said frame, a front axle having a guide tongue and provided with carrying wheels, means to raise and lower the frame with respect to said wheels, a rotor mounted near said axle, a covering casing therefor open at the bottom and provided at its sides with guarding chains variably engaging the road, a delivery box mounted between said rotor and rear roller and provided with a curved pivoted apron having its front edge riding on the road adjacent to the operating hammers to guide the removed material into said box, a door to discharge the received material in front of said roller, and driving means for said rotor mounted on said frame.

In testimony whereof I have affixed my signature.

HENRY M. REINKING.