Feb. 26, 1924. 1,484,944

C. C. HANSEN

ROAD SURFACING MACHINE

Filed May 14, 1923 2 Sheets-Sheet 1

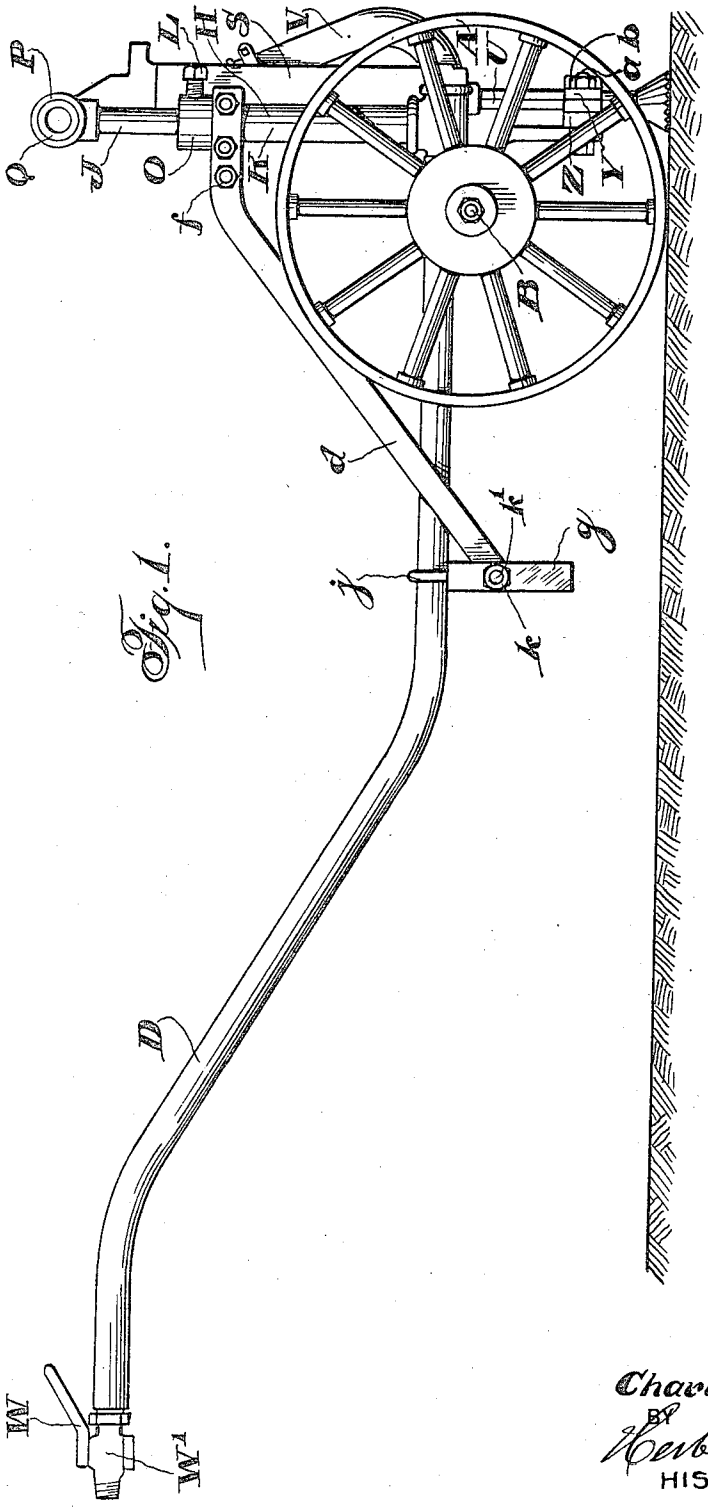


Fig. 1.

INVENTOR
Charles C. Hansen
BY
Herbert L. Ogden
HIS ATTORNEY

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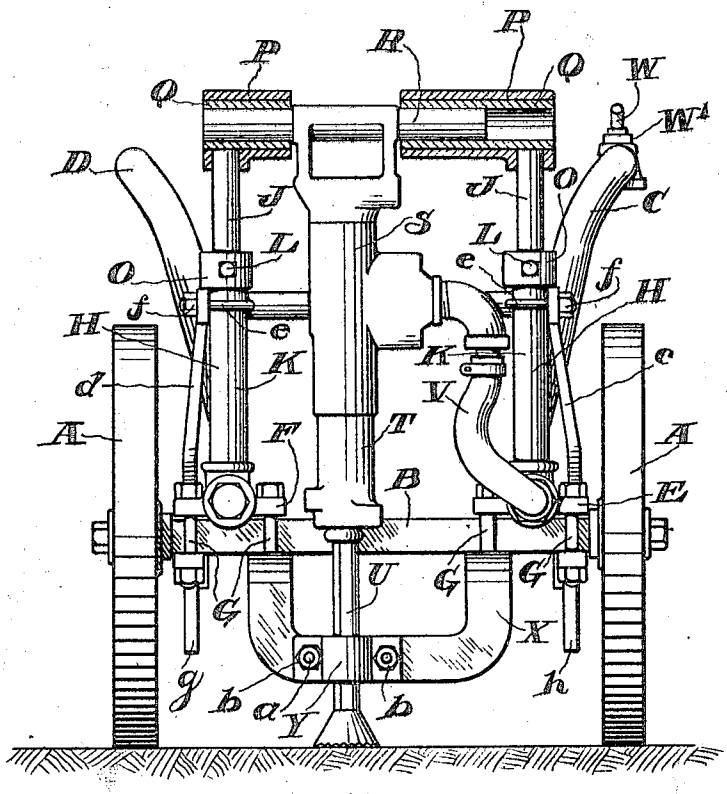


Fig. 2.

INVENTOR
Charles C. Hansen.
BY
Herbert E. Ostrom
HIS ATTORNEY

Patented Feb. 26, 1924.

1,484,944

UNITED STATES PATENT OFFICE.

CHARLES C. HANSEN, OF EASTON, PENNSYLVANIA, ASSIGNOR TO INGERSOLL-RAND COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

ROAD-SURFACING MACHINE.

Application filed May 14, 1923. Serial No. 638,734.

To all whom it may concern:

Be it known that I, CHARLES C. HANSEN, a citizen of the United States, and a resident of Easton, county of Northampton, and State of Pennsylvania, have invented a certain Road-Surfacing Machine, of which the following is a specification, accompanied by drawings.

This invention relates to road surfacing machines. Concrete roads are usually constructed in sections with division lines running cross ways of the road way. Between these division lines a small space or expansion joint is left to allow for expansion and contraction of the concrete, caused by the weather conditions. Metal strips are usually placed longitudinally along the center of the roadway, between the sections to serve as stops for preventing the concrete from flowing beyond the desired limit. When the concrete becomes hard, a roughened surface is left at the edges of the sections. It has formerly been customary for these roughened surfaces to be smoothed off by hand held pavement breakers or rock drills of the "Jackhamer" type, but considerable time and labor must necessarily be expended in this operation.

The primary object of the present invention is to reduce the time and labor required to a minimum in road surfacing operations, by producing a simple machine, which may be conveniently moved along a road, and which will efficiently do the work in a shorter period of time, with a small amount of energy.

Further objects of the invention will hereinafter appear, and to all of these ends, the invention is shown in one of its preferred forms in the accompanying drawings, in which,

Figure 1 is a side elevation of the road surfacing machine, and

Figure 2 is a front end elevation of the machine shown in Figure 1.

Referring to the drawings, a pair of wheels A are mounted on the axle B to which are connected the rearwardly extending tubular bars C and D, bent upwardly to form handles, adapted to be grasped by the operator to move the machine along the roadway. Brackets E and F are connected to the axle B by U-bolts G, and serve to connect the tubular handle bars C and D respectively to the axle.

Frames H having upper telescoping members J and lower telescoping members K are mounted in an upright position in the brackets E and F. Set screws L in the collars O of the lower telescoping members K serve to hold the upper telescoping members J in any desired vertical position.

Inwardly extending supports P, having bushings Q are secured to the upper telescoping members J and are adapted to receive the handle bar R of a fluid actuated percussive tool. In this instance, I have shown a pavement breaker having a cylinder S, and a front head T, adapted to receive the road surfacing implement U. A flexible pipe or tube V serves to admit pressure fluid to the tool from the tubular handle bar C, acting as a supply pipe. A throttle valve W', having a handle W, controls the passage of motive fluid to the tool, and is conveniently located at the end of the bar C, so that the operation of the tool may be easily controlled by the operator. A guide yoke X is connected to the axle B and guides the shank of the surfacing implement U between the plates Y and Z which are connected to the yoke X by bolts *a* and nuts *b*.

In order to brace and support the handle bars C and D braces *c* and *d* are connected to the lower telescoping members K by U-bolts *e* and nuts *f*. Supports or legs *g* and *h* are connected to the tubular handle bars by any suitable means, as by the U-bolts *j* and bolts *k'*, and nuts *k* connect the braces, the supports and U-bolts together.

The weight of the tubular handle bars C and D tends to counter balance the weight of the tool and frame, so that the operator is not hampered by any excessive weight in the operation of the machine along the roadway.

In the operation of the machine, the operator or workman grasps the handle bars C and D and having manipulated the throttle W' to turn on the motive fluid, rolls the machine along the roadway over the crack or roughened surface to be smoothed or surfaced. The surfacing implement U is hammered by the hammer piston of the machine and by this means the roughened surfaces of the road way are reduced and eliminated to form a smooth surface.

I claim:

1. A road surfacing machine adapted to be rolled along a roadway, comprising an

axle and a pair of wheels, handle bars connected to the axle, vertically adjustable frames mounted in up-right position on said axle, supports on said frame adapted to receive the handle bar of a fluid actuated percussive tool, a surfacing implement adapted to receive the hammer blows of said percussive tool, and a guide yoke connected to the axle for guiding the surfacing implement.

2. A road surfacing machine adapted to be rolled along a roadway, comprising an axle and a pair of wheels, tubular handle bars connected to the axle, vertically adjustable frames mounted on the axle, inwardly extending supports on the frame adapted to receive the handle bar of a fluid actuated tool, a surfacing implement adapted to receive the hammer blows of said percussive tool, and a guiding means connected to the axle for the surfacing implement, one of said tubular handle bars being adapted to serve as a passage for the motive fluid for said tool.

3. A road surfacing machine adapted to be rolled along a roadway, comprising an axle, a pair of wheels mounted on the axle, a frame comprising upper and lower telescoping members attached to the axle adjacent each end thereof, a collar on the lower telescoping member, a set screw in the collar whereby the upper telescoping members may be adjusted vertically, inwardly extending supports on the upper telescoping members adapted to receive the handle bar of a fluid actuated tool, tubular handle bars connected to the axle and extending rearwardly therefrom, one of said tubular handle bars being adapted to serve as a passage for the motive fluid for said tool, a surfacing implement adapted to receive the hammer blows of said tool, a guide yoke for the surfacing implement, and supports attached to the said tubular handle bars.

In testimony whereof I have signed this specification.

CHARLES C. HANSEN.