

No. 769,189.

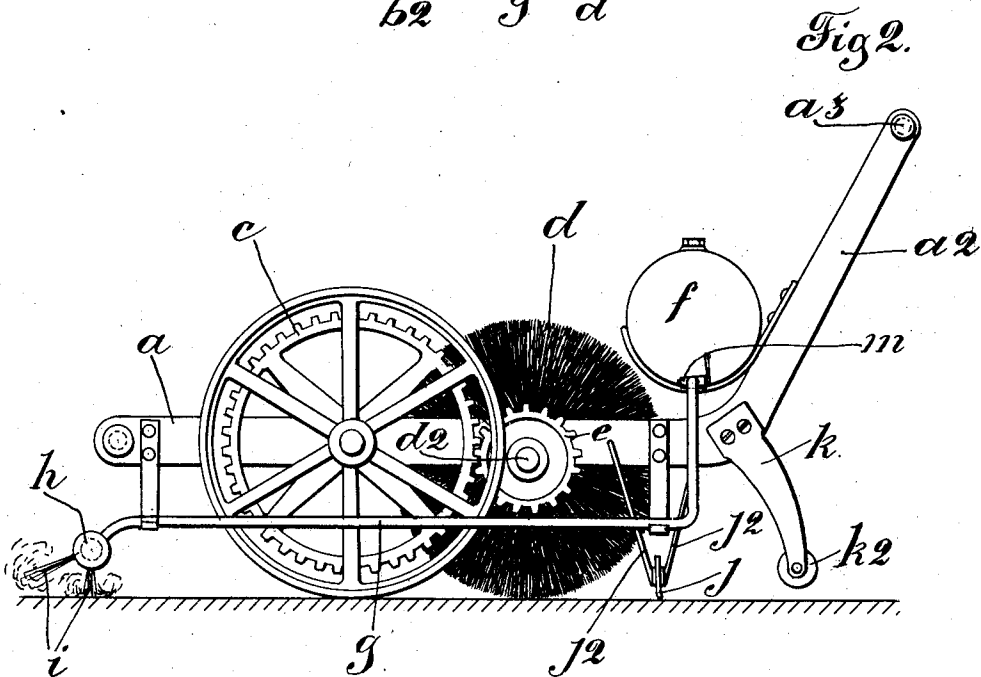
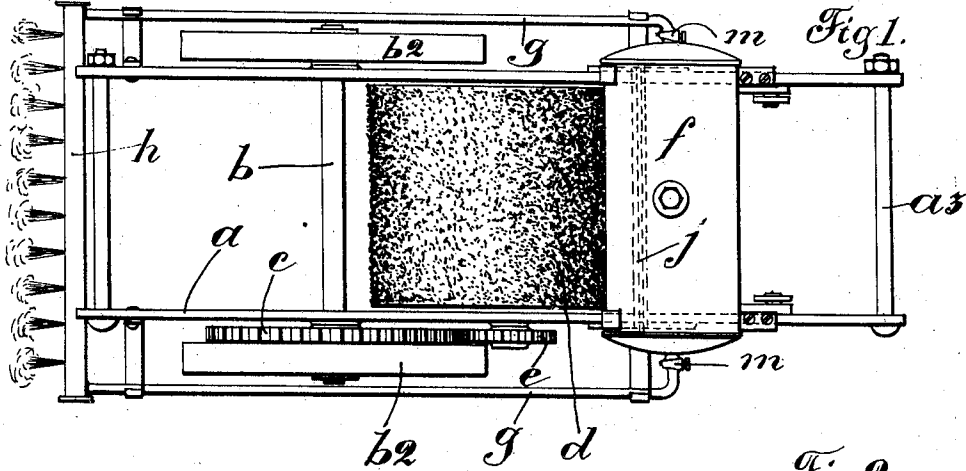
PATENTED SEPT. 6, 1904.

G. SIBBALD.

DEVICE FOR REMOVING SNOW AND ICE FROM PAVEMENTS.

APPLICATION FILED FEB. 24, 1904.

NO MODEL.



WITNESSES
J. A. Stewart
C. J. Klein

INVENTOR
George Sibbald
BY *Edgar Tate & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE SIBBALD, OF NEW YORK, N. Y.

DEVICE FOR REMOVING SNOW AND ICE FROM PAVEMENTS.

SPECIFICATION forming part of Letters Patent No. 769,189, dated September 6, 1904.

Application filed February 24, 1904. Serial No. 195,036. (No model.)

To all whom it may concern:

Be it known that I, GEORGE SIBBALD, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Devices for Removing Snow and Ice from Pavements, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved device or apparatus for removing snow and ice from pavements; and with this and other objects in view the invention consists in a device or apparatus of the class specified constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a plan view of my improvement, and Fig. 2 a side view thereof.

In the practice of my invention I provide a rectangular frame *a*, provided at the rear end with upwardly and backwardly directed arms *a*², connected by a cross-rod *a*³, which forms a handle for the manipulation of the apparatus.

Mounted in the frame *a*, preferably forward of the transverse middle thereof, is an axle *b*, provided with wheels *b*², one of which is provided on its inner side with a large gear-wheel *c* of less diameter than the wheel *b*², with which it is preferably connected. The gear-wheel *c* may, however, be secured to the axle *b*, as may also the wheels *b*², in which event the axle would turn with said wheels, or the gear-wheel *c* may be connected with one of the wheels *b*², in which event the wheels *b*² may turn on the axle *b*.

Rearwardly of the axle *b* is mounted a cylindrical brush *d*, having a central shaft or axle *d*², provided with a gear-wheel *e*, which meshes with the gear or gear-wheel *c*, and the relative diameters of the wheel *e* and the gear or gear-wheel *c* are preferably such that the brush *d* will make four revolutions for each revolution of the gear-wheel *c*; and the brush *d*

moves in a direction opposite to that of the gear-wheel *c* and of the wheels *b*², and said brush is adapted to bear on the surface of the pavement to be cleaned.

Mounted on the frame *a*, and preferably over the rear portion thereof, is a hydrocarbon-tank *f*, with the opposite ends of which are connected tubes *g*, which extend forwardly to the front end of the frame *a* and are connected with a transverse burner or burner-tube *h* of any suitable construction, and in practice the tank *f* is filled with any suitable hydrocarbon liquid, which is fed through the pipes *g* to the burner or burner-tube *h*, and the flame from said burner or burner-tube is directed downwardly onto the pavement, as shown at *i*.

I also preferably provide a scraper *j*, which is supported rearwardly of the brush *d* by hangers *j*² and which extends transversely of the frame *a* and is also adapted to bear on the pavement, and this scraper is preferably made of soft rubber or other similar material.

The rear portion of the frame *a* is also preferably provided with downwardly-directed arms *k*, which support rollers *k*²; but in the normal position of the frame these rollers do not rest on the pavement; but pressure applied to the handle *a*³ will cause the rollers *k*² to rest on the pavement and cause the scraper *j* and brush *d* to bear more firmly on the surface of the pavement.

In the form of construction shown the tubes *g* are arranged outside of the wheels *b*²; but these tubes may be arranged in any desired manner, and the tank *f* may also be supported or may be arranged forwardly of the brush *d*, and any suitable form of a vapor or hydrocarbon burner may be employed.

The pipes *g* in the form of construction shown are also provided with valves *m*, by means of which the flow of oil or hydrocarbon therethrough may be regulated, and any other suitable means may be provided to accomplish this result.

This apparatus is simple in construction and operation and perfectly adapted to accomplish the result for which it is intended, and it will be apparent that the same may be moved over

a pavement by means of the handle a^3 in any direction, and by means thereof snow and ice may be quickly melted and removed from a pavement. It will also be apparent that when
5 snow alone is to be removed from a pavement the brush d will accomplish this object under certain circumstances without the use of the burner h , and various changes in and modifications of the construction described may be
10 made without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

15 1. An apparatus of the class described, comprising a frame, an axle mounted therein and provided with wheels, a brush mounted rearwardly of the axle and geared in connection therewith so as to turn in a direction opposite
20 thereto, a hydrocarbon-tank supported above said frame, a transverse burner-tube arranged forwardly of the axle and below the same and provided with downwardly-directed burners and a handle connected with the rear end of
25 the frame and by means of which the appa-

ratus may be operated, substantially as shown and described.

2. An apparatus of the class described, comprising a frame, an axle mounted therein and provided with wheels, a brush mounted rearwardly of the axle and geared in connection therewith so as to turn in a direction opposite thereto, a hydrocarbon-tank supported above said frame, a transverse burner-tube arranged forwardly of the axle and below the same and
35 provided with downwardly-directed burners and a handle connected with the rear end of the frame and by means of which the apparatus may be operated, said frame being also provided rearwardly of the brush with a
40 scraper which is suspended therefrom, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 23d day
45 of February, 1904.

GEORGE SIBBALD.

Witnesses:

F. A. STEWART,
C. J. KLEIN.