

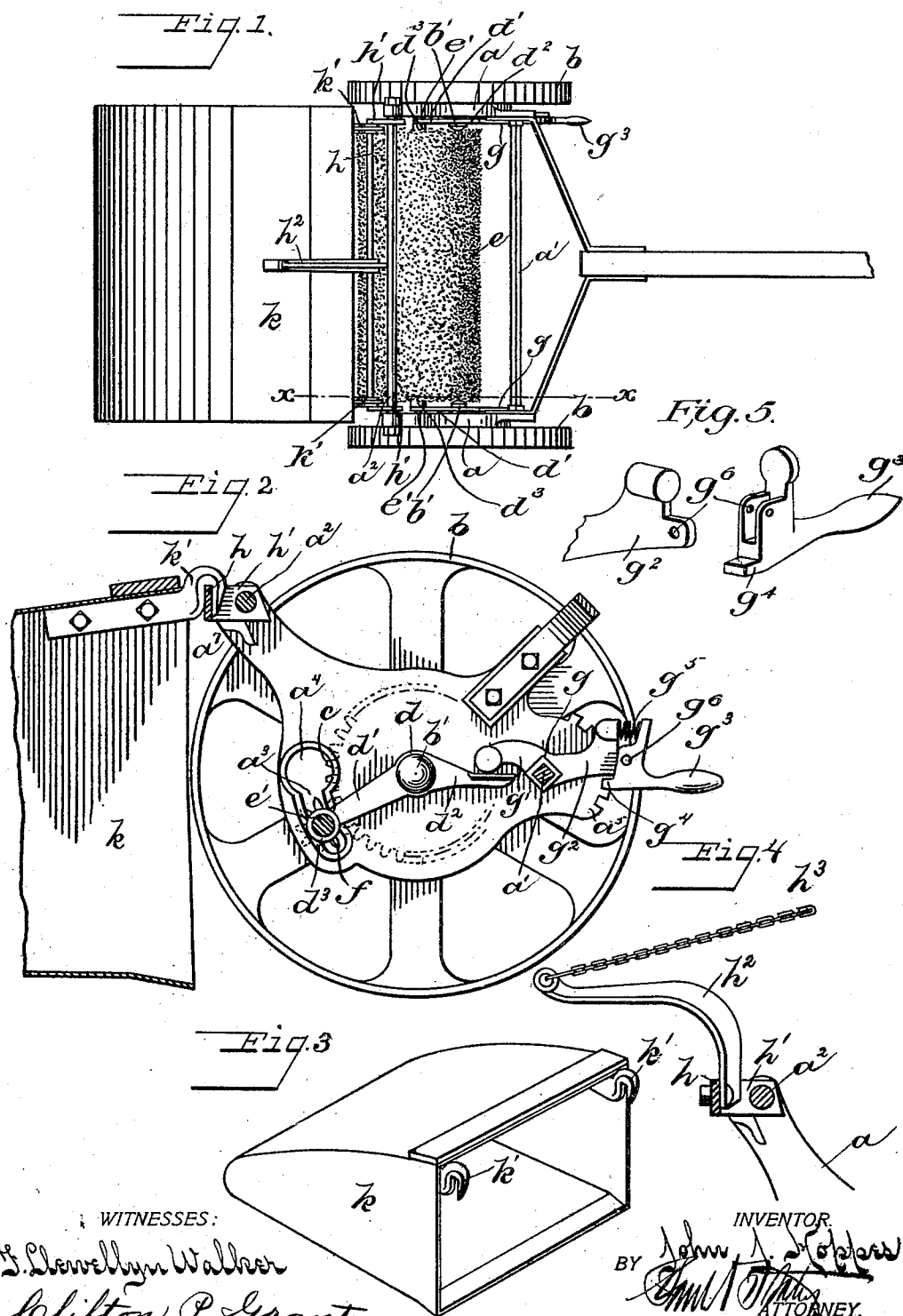
No. 696,443.

Patented Apr. 1, 1902.

J. J. HOPPES.
ROTARY SWEEPER.

(Application filed June 19, 1901.)

(No Model.)



UNITED STATES PATENT OFFICE.

JOHN J. HOPPEs, OF SPRINGFIELD, OHIO.

ROTARY SWEEPER.

SPECIFICATION forming part of Letters Patent No. 696,443, dated April 1, 1902.

Application filed June 19, 1901. Serial No. 65,102. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. HOPPEs, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Rotary Sweepers, of which the following is a specification.

My invention relates to a rotary sweeper, and more especially to improvements on the construction shown in the Patent No. 586,513, heretofore granted to Geo. M. Warfel, July 13, 1897, for improvements in lawn-sweepers.

The object of my invention is to provide improved means for raising and lowering the sweeper and dumping the receptacle and making the receptacle removable.

Machines of this class are generally operated by unskilled and careless labor; and a further object of my invention is to provide a simple and strong construction not liable to get out of order and that can be adjusted and operated by inexperienced help.

To overcome the difficulties met with by encountering obstacles in the path of the sweeper, I mount it in such a way as to automatically pass over such obstructions. Furthermore, the receptacle heretofore has been attached to the machine, which made it necessary to dump the sweepings on the ground, and while I provide improved means for this purpose by my further improvements the receptacle may be removed and the contents emptied into a wheelbarrow or other proper conveyance.

My invention consists in the constructions and combinations of parts hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a plan view of a machine embodying my invention. Fig. 2 is a transverse view on the line $x x$ in Fig. 1. Fig. 3 is a perspective view of the receptacle. Fig. 4 is a detail of the lifting device for the receptacle, and Fig. 5 is a detail showing attachment of handle to operating-lever.

Like parts are represented by similar letters of reference in the several views.

The main structure or frame of the machine consists of the side pieces a , bound together by the cross-bars a' and a'' . Said side pieces are mounted on the spindles b' of the carry-

ing-wheels b and are recessed to form casings for the gears c , mounted on the spindles, the carrying-wheels being provided with webs to cover said gears on the opposite sides to said casings, and any suitable connection, such as a ratchet and pawl, may be used between said gears and driving-wheels to drive the gears in one direction only. On each of the spindles b' I journal the tilting levers d , having the oppositely-extending arms d' and d'' . The arms d' are formed at their ends with the bearings d^3 , in which are journaled the respective ends of the shaft e' , which carries the rotary brush or sweeper e . On the shaft e' , adjacent to the bearings d^3 , but within the casings of the side pieces a , I fix the pinions f , adapted to mesh with the gears c , and I provide the slot a^3 in the casing of said side pieces for the movement of said shaft in raising and lowering the brush by the tilting lever, in which it is journaled, said slot being enlarged at a^4 to take the pinion in and out of the casing. Adjacent to each of the side pieces a I rigidly attach to the bar a' the operating-levers g , having the arms g' , adapted to engage the upper side of the arms d'' of the tilting levers d , and the operating-lever g at one side of the machine also has the arm g^2 , to the end of which is pivoted at g^6 the handle g^3 , with the pawl g^4 to engage the notched segment a^5 of that side of the frame, the spring g^5 holding said pawl normally in engagement with said segment.

It will be seen that by journaling the rotary sweeper in one end of the tilting levers and pivoting the operating-levers so as to loosely engage the other ends that the sweeper is free to rise over obstructions in its path and that by means of the handle on one of the operating-levers both are operated to engage the tilting levers so as to raise and lower the sweeper, the pawl engaging with the notched segment to hold the sweeper in its adjusted position.

The flat bar h is journaled, through the perforations in its L-shaped ends h' , to the bar a^2 of the frame, the projections a^7 of the frame limiting the movement of the bar h by its ends h' contacting with said projection.

The receptacle k is provided with the hooks k' to engage the carrying-bar h , said bar be-

ing provided with the upwardly and laterally extending arm h^2 and the chain h^3 , by which said receptacle may be turned up to discharge its contents; but as it is sometimes more desirable to dump the sweepings into a wheelbarrow or other conveyance I have provided for the ready removal of the receptacle from the machine so that this can be accomplished instead of leaving the sweepings in piles on the ground where the sweeping is being done. It will be seen that by means of the hooks the receptacle is easily removable and can be readily and quickly attached and detached for the purpose mentioned.

Having thus described my invention, I claim—

1. The combination with the supporting-wheels and their spindles and tilting levers, of a rotary sweeper mounted in said levers, and operating-levers, having an adjusting-handle, to contact said tilting levers and limit their movement in one direction only, to adjust the height of said sweeper and leave it free to rise over obstructions, substantially as specified.

2. The combination with the supporting-wheels and their spindles and tilting levers, of a rotary sweeper mounted in one end of said levers, adjusting, operating-levers independent of but adapted to contact with the upper side of the end of said tilting levers opposite said sweeper, to limit the movement of said tilting levers in one direction only, and means to hold the operating-lever in different positions to adjust the height of said

sweeper, while leaving it free to rise over obstructions, substantially as specified.

3. The combination with the supporting and driving wheels and their spindles, spur-gears and tilting levers mounted on said spindles, of a shaft journaled in one end of each of said levers, a rotary sweeper and pinions attached to said shaft, said pinions being adapted to mesh with said spur-gears, and an adjustable operating-lever independent of and adapted to engage the other ends of said tilting levers to limit their movement in one direction only, whereby the height of the sweeper is adjusted while leaving it free to rise over obstructions, substantially as specified.

4. The combination with the frame and a flat bar pivoted at its ends in front of said frame, of a receptacle having flat hooks to engage said bar, and means to turn said bar to lift and dump said receptacle, substantially as specified.

5. The combination with the frame having a flat bar pivoted at its ends extending across the front of said frame, of a receptacle having flat hooks to engage said bar and a laterally-extending lever rigidly attached to said bar to turn said bar and thereby lift and dump said receptacle, substantially as specified.

In testimony whereof I have hereunto set my hand this 14th day of June, A. D. 1901.

JOHN J. HOPPES.

Witnesses:

PERCY NORTON,
CLIFTON P. GRANT.