(No Model.)

T. J. ROBERTSON.

STREET SWEEPER.

No. 568,958. Patented Oct. 6, 1896.

Fig. 3.

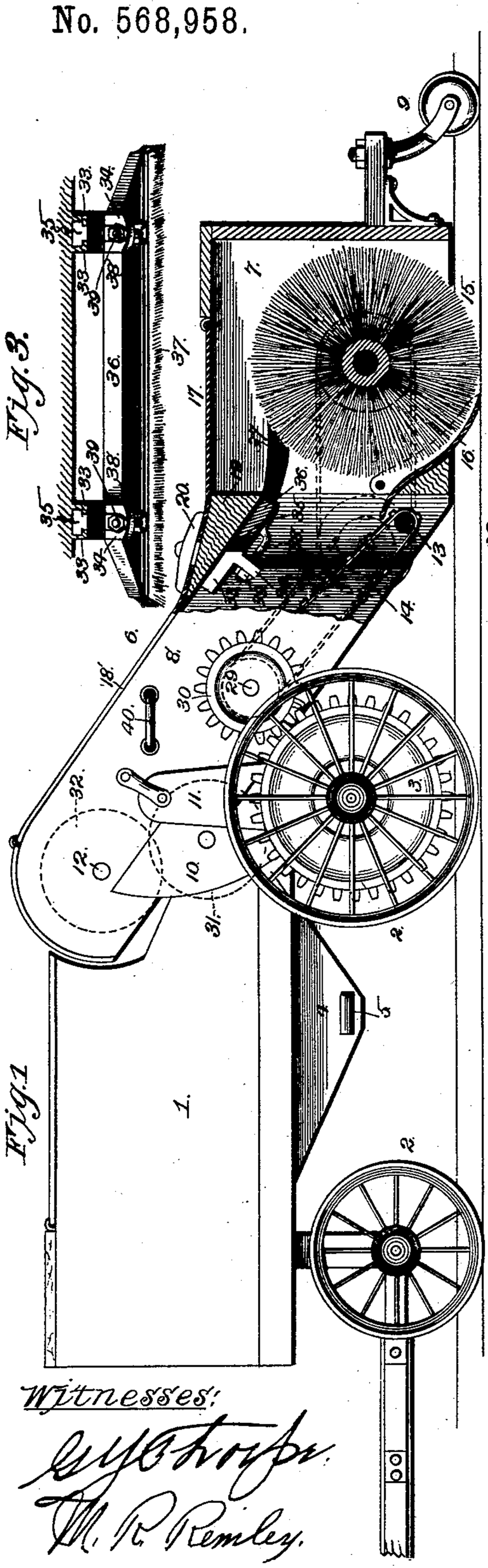

Fig. 2.

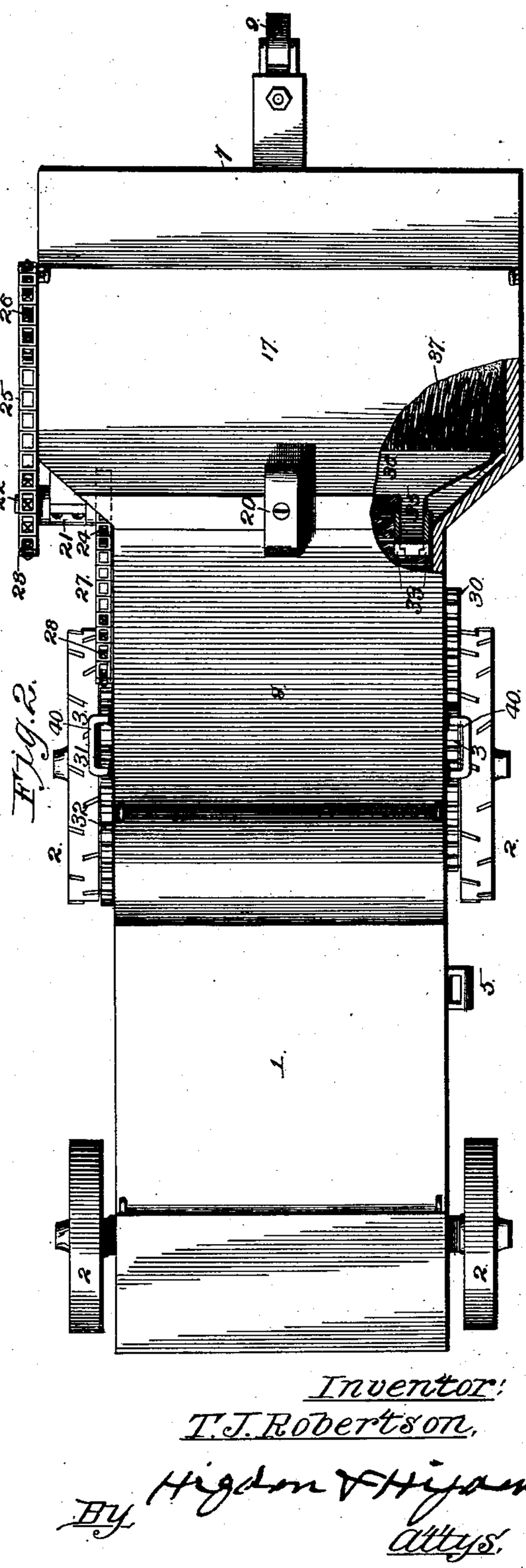

Fig. 1.

Witnesses:

W. G. Troop Jr.

M. R. Remley.

Inventor:

T. J. Robertson,

By Higdon & Higdon

Attys.

UNITED STATES PATENT OFFICE.

THOMAS J. ROBERTSON, OF GOLDEN, MISSOURI.

STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 568,958, dated October 6, 1896.

Application filed January 13, 1896. Serial No. 575,193. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. ROBERTSON, or Golden, Barry county, Missouri, have invented certain new and useful Improvements in Street-Sweepers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to street-sweeping machines, and more particularly to improvements in that class of sweepers which elevate and deposit the dirt into a wheeled receptacle, from which it may be discharged at suitable times and places. The present structure is designed more particularly as an improvement over a similar machine patented by me on February 18, 1896, and numbered 554,732.

In order that the invention may be fully understood, reference is to be had to the accompanying drawings, in which—

Figure 1 represents a view, partly in side elevation and partly in vertical longitudinal section, of a street-sweeper embodying my invention. Fig. 2 represents a plan view of the same, partly broken away. Fig. 3 represents in section the bridge-bar of the machine and the manner of adjustably securing to it the auxiliary brush or rake.

In the said drawings, 1 designates the dirt-receptacle; 2, the wheels thereof; 3, the master gear-wheels secured to the rear wheels; 4, the V-shaped bottom of the receptacle, and 5 the slide-bar for controlling the opening through which the dirt is discharged.

6 designates a sweeper-frame which comprises the brush-casing 7 and the communicating inclined elevator-casing 8. The rear end of this sweeper-casing is mounted upon a caster 9, while at its front end it is provided with depending side plates 10, and 11 designates links to hold the sweeper-casing down in proper position relative to the dirt-receptacle, as illustrated and clearly described in said aforesaid patent, to which reference is herewith made, as such devices form no part of the present invention.

12 designates a shaft which extends transversely through the upper end of the section 8 of the sweeper-casing, and 13 designates a parallel shaft at the lower end and junction of the sections 7 and 8. Rollers are mounted upon said shafts and are connected by the elevator-belt 14.

15 designates the rotary brush for sweeping the dirt from the street up over the dirt-guide 16 and upon said elevator-belt.

All of the structure so far described is the same as that disclosed in my aforesaid patent, and reference is herewith made to said patent for a more perfect understanding of the detail construction and the connection between the upper end of the section 8 of the sweeper-casing and the dirt-receptacle. In this structure the hinged cover 17 of the section 7 and the hinged cover 18 of section 8 rest at their free ends upon the bridge-bar 19, which connects the side walls of the casing at the junction of said sections. The said covers are fastened in their closed position by an ordinary turn-button 20. In this structure I have made a change in the connections for transmitting motion from the master gear-wheels to the rotary brush from that disclosed in the patent hereinbefore referred to. In this case at one side I secure externally of the sweeper-casing the bearing 21 and journal therein the short shaft 22. Upon opposite ends of said shaft are the comparatively large and small sprocket-wheels 23 and 24. The sprocket-wheel 23 is connected by a chain 25 with the sprocket-wheel 26 upon the brush-shaft, and the sprocket-wheel 24 is connected by a chain 27 with the sprocket-wheel 28, mounted upon one end of the shaft 29, which is journaled in and extends transversely of the casing. Upon its opposite end is mounted the gear-wheel 30, which meshes with the adjacent master gear-wheel 3. I transmit motion to the belt as before—that is, I mount the gear-wheel 32 rigidly upon the shaft 12 of the elevator-belt and connect said gear-wheel operatively to the adjacent gear-wheel 3 by means of the interposed idler gear-wheel 31. Thus it will be seen that as the machine is drawn forward by the draft-animals attached to the dirt-receptacle motion is imparted to the elevator-belt and to the rotary brush.

From the foregoing it is apparent that particles of paper, lumps of mud, twigs, &c., which are gathered up by the rotary brush may fail to become detached therefrom at the

proper moment, so as to be delivered upon the elevator, and may instead be carried up by the wheel and become disconnected at such a point as to fall to the rear of the wheel and drop upon the ground in rear of the brush. To prevent any such happening, I employ an auxiliary brush. Said brush is carried by the bridge-bar 19, that is to say: 33 designates angular flanges which extend longitudinally of the machine and depend from the under side of said bar, and projecting downwardly from and connecting the rear ends of said flanges are lugs 34. T-shaped arms 35 of the brush-frame 36 fit slidingly between the flanges 33 and above the lugs 34. Projecting from said frame 36 is the brush 37, which corresponds in width and is in frictional contact with the brush 15 a suitable distance in advance of its vertical center, as shown clearly in Fig. 1. 38 designates bent rods, which are secured to the frame 36 and extend forwardly through the lugs 34. Said rods are screw-threaded, and at their front ends are engaged by nuts 39, whereby the frame 36 may be adjusted toward or from the rotary brush 15, to increase or diminish the frictional contact between said brushes. By this arrangement the frame may be adjusted to accommodate the wear of the brushes, and the frictional contact between the brushes may be made greater or less according to the condition of the streets. It is apparent, of course, that any particles which may adhere to the brush will be disconnected therefrom by the stationary brush 37 and will be carried upward and deposited in the dirt-receptacle. The auxiliary brush, therefore, insures a more thorough cleaning of the streets than could possibly be had if said brush was not employed.

In order to facilitate the connection and disconnection of the sweeper-frame from the dirt-receptacle, I secure to opposite sides of the latter the handle 40, of any suitable or preferred construction.

It is to be understood, of course, that I may employ the structure herein shown for other purposes. For instance, the elevator structure may be employed in connection with a grain threshing or separating machine.

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

1. A street-sweeping machine, comprising a dirt-receptacle and a sweeper-casing, both being wheel-supported, and the latter consisting of a rotary brush, an endless elevator, a dirt-guide interposed between the brush and the elevator, a cross-bar above the receiving end of the elevator and provided with depending angular flanges, a brush-carrying frame provided with arms which fit slidingly between said flanges, and means to clamp said arms at any desired point of adjustment between said flanges, substantially as described.

2. A street-sweeping machine, comprising a dirt-receptacle and a sweeper-casing, both being wheel-supported, and the latter consisting of a rotary brush, an endless elevator, a dirt-guide interposed between the brush and the elevator, a cross-bar above the discharge end of the elevator and provided with depending angular flanges, lugs depending from the rear ends of said flanges, a brush-carrying frame, provided with arms which fit slidingly between said flanges, screw-threaded rods secured to said frame and projecting forwardly through said lugs, and nuts engaging the front ends of said rods, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS J. ROBERTSON.

Witnesses:
R. G. SALYER,
JAS. C. SUMMERS.