

No. 746,029.

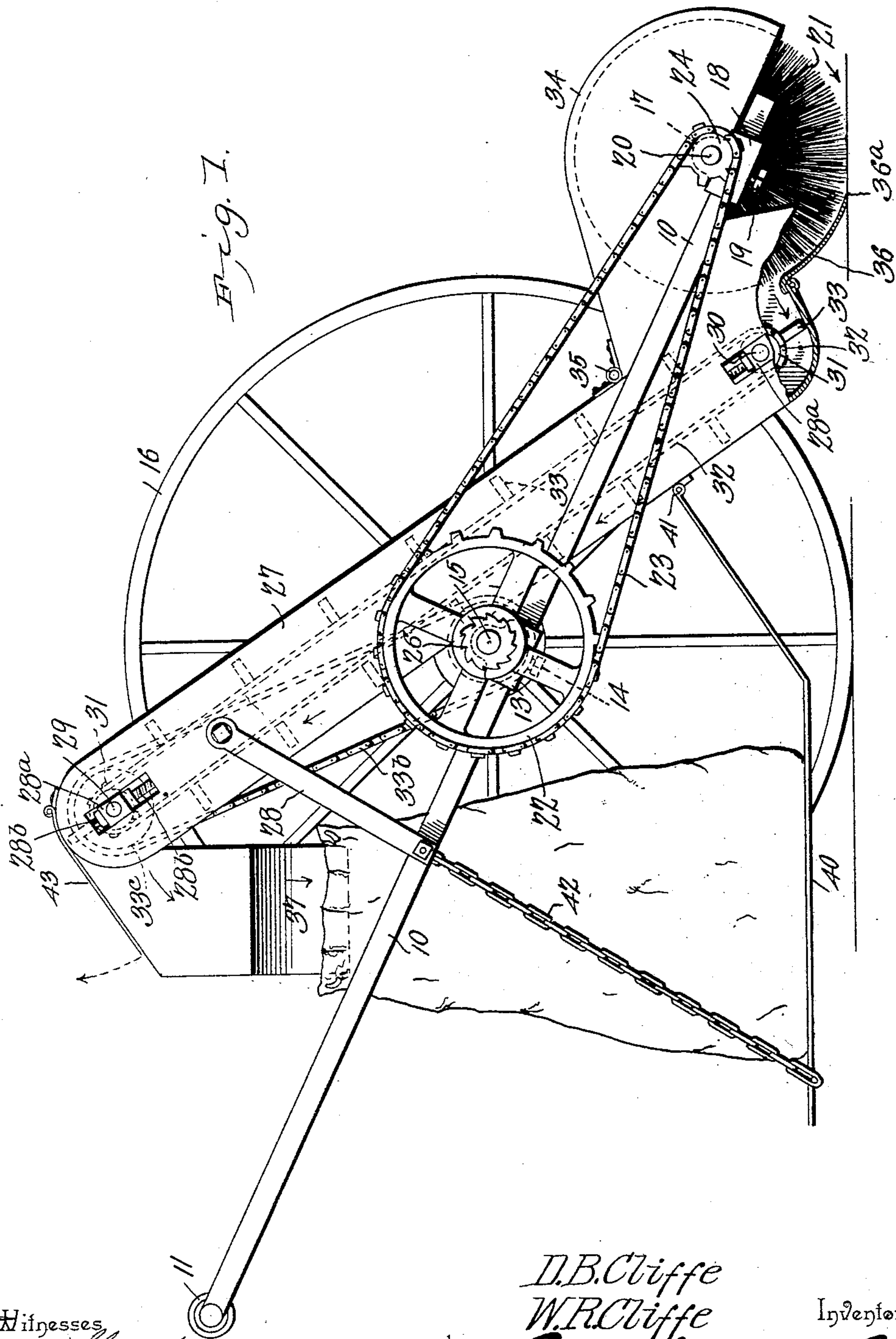
PATENTED DEC. 8, 1903.

D. B. & W. R. CLIFFE.
STREET SWEEPER.

APPLICATION FILED FEB. 18, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
E. C. Stewart
J. V. Jochem, Jr.

D. B. Cliffe
W. R. Cliffe Inventors
by *C. A. Snow & Co.* Attorneys

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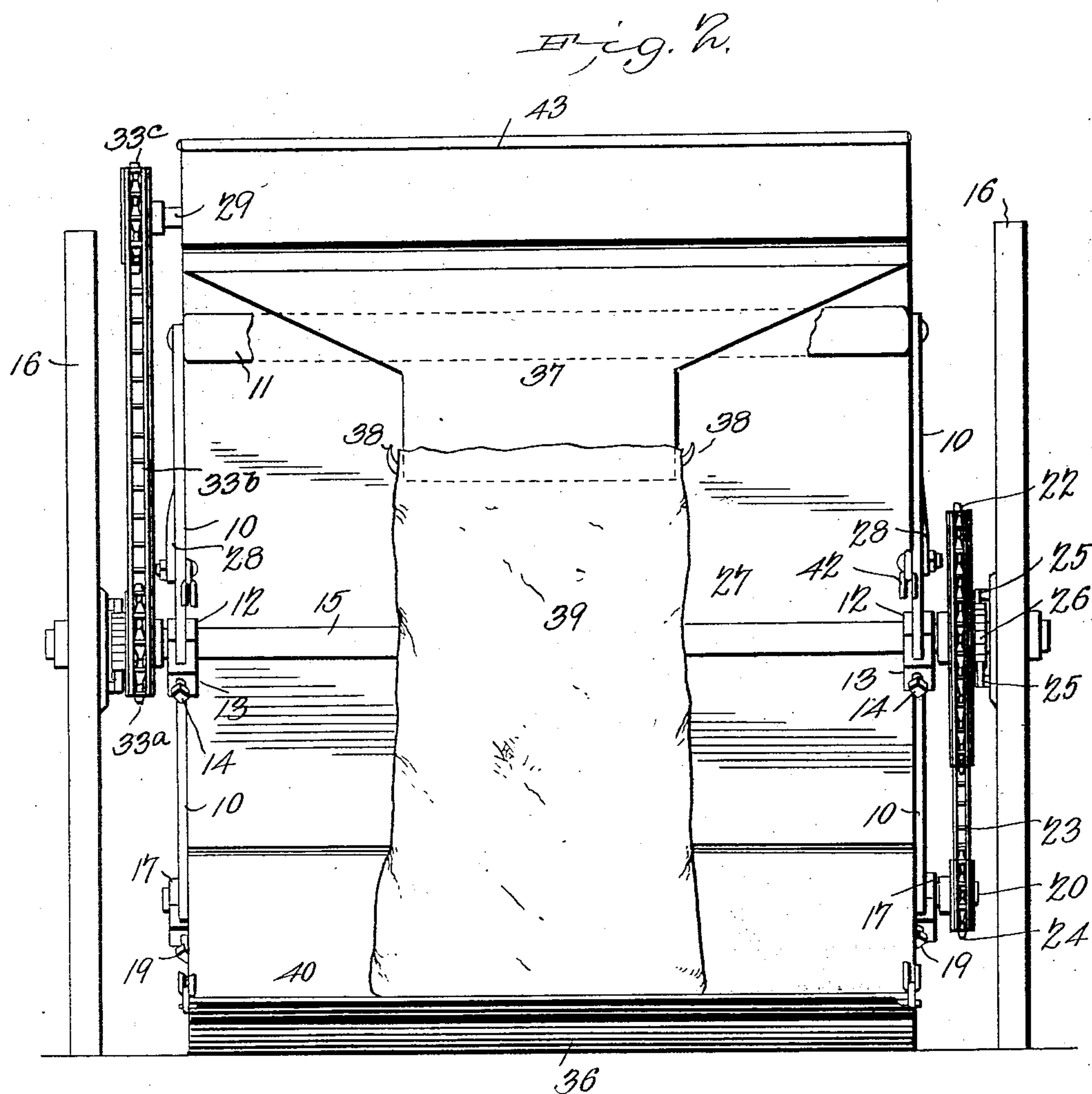
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2 SHEETS—SHEET 2.



Witnesses
E. J. McSwain
J. V. Jochem, Jr.

D. B. Cliffe
W. R. Cliffe
by *C. A. Snow & Co.*
Attorneys
Inventors

UNITED STATES PATENT OFFICE.

DANIEL B. CLIFFE AND WILLIAM R. CLIFFE, OF MARION, OHIO.

STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 746,029, dated December 8, 1903.

Application filed February 18, 1903. Serial No. 143,948. (No model.)

To all whom it may concern:

Be it known that we, DANIEL B. CLIFFE and WILLIAM R. CLIFFE, citizens of the United States, residing at Marion, in the county of Marion and State of Ohio, have invented a new and useful Street-Sweeper, of which the following is a specification.

Our invention relates to machines for sweeping streets, halls, and the like; and it consists in the various features hereinafter described and claimed.

Figure 1 is a side elevation of one embodiment of our invention, parts being broken away. Fig. 2 is a rear elevation looking from the left in Fig. 1.

Similar characters indicate like parts throughout both figures of the drawings.

The numeral 10 designates inclined side bars connected at their upper end by a cross-bar 11, these members forming the main frame of the machine. At opposite intermediate points upon each bar are mounted bearings 12 by supporting members 13 encircling the bars and adjustably retained in position by set-screws 14, threaded through the supports and taking into the bars. In the bearings 12 is journaled a transverse shaft 15, having fast upon its opposite ends outside the bars 10 a pair of supporting and driving wheels 16 16. At or near the lower end of each bar is a bearing 17, with supports 18 and set-screw 19, similar to those above described, and in these bearings is journaled a shaft 20 of a generally cylindrical brush 21, operating with its lower side in contact with the surface to be swept. At one end of the shaft 15 outside the side bar is loosely mounted a sprocket-wheel 22, connected by a chain 23 with a sprocket 24, fast upon the brush-shaft. The size of the sprockets is such that the brush will be rotated at a high speed relatively to the movement of the sweeper-wheels over the ground. A pawl 25, pivoted on one of the wheels 16, coacts with a ratchet-wheel 26, secured to the sprocket-wheel 22, and, while compelling rotation of the brush in the direction indicated by the arrow thereon in Fig. 1, prevents it in the opposite direction.

Mounted between the side bars in an inclined position is an elevator-casing 27, con-

veniently stayed to said bars at 28 upon each side, extending at its lower end into proximity with the brush and at its upper end to a convenient distance from the ground. At the top and bottom of the casing in bearings 28^a, preferably adjustably mounted in slots therein between pairs of screws 28^b 28^b, are journaled transverse shafts 29 30, respectively, each carrying near the opposite inner sides of the casing pairs of sprockets 31 31, over which extend chains 32 32. Connecting the chains are a suitable number of sweeps or conveying members 33, working closely to the curved lower end or boot of the casing and along its lower inclined side, up which they travel. The conveyer is driven at a suitable speed from a sprocket 33^a, oppositely situated upon the shaft 15 from the brush-sprocket 22 by a chain 33^b, extending over a sprocket 33^c on the shaft 29.

The brush is preferably guarded by a curved hood 34, pivoted to the conveyer-casing at 35. A pan 36 extends from the casing, to which it is hinged at 36^a to a point close to the line of contact between the brush and ground and serves to direct sweepings into the boot. From the top of the casing opens a funnel 37, into which the conveyer members deliver the material they raise. To the contracted portion of the funnel are attached hooks 38 to support a bag or other suitable receptacle 39. An additional support is provided for the lower end of the bag by a platform 40, hinged at 41 to the underside of the elevator-casing and supported at its outer end from the side bars by chains or members 42. A hinged section 43 at the top of the elevator-casing gives access thereto for cleaning and repairs.

In operation the bearings are adjusted along the side bars and in the casing to give the proper relation of parts as regards brush contact and relation to the pan and chain tension. The machine is then advanced by the operator pushing upon the cross-bar 11 or by other suitable motive power, so that the brush rotates in the direction of the arrow to sweep up material and deliver it along the pan to the elevator. The conveyer members raise the sweepings to the upper end of the

casing and drop them through the funnel into the receptacle below, from which they may be removed as desired. -

5 The pawl-and-ratchet-wheel connections between the driving-wheels and sprocket permit the machine to be backed without producing a rotation of the brush in the reverse direction.

10 The machine is so proportioned that the weight of the parts will cause the brush to rest upon the ground with sufficient force to give proper operative contact, and by varying the position of the brush and driving-wheels along the side bars the pressure may
15 be changed to meet different conditions.

Having thus described the invention, we claim—

1. In a sweeper the combination with a

frame, of driving-wheels, a brush, and means for adjusting the wheels and brush along the 20 frame.

2. In a sweeper, the combination with a frame, of opposite side bars, pairs of supports movably mounted upon the bars, set-screws taking through the supports and engaging the 25 bars, bearings carried by the supports, and wheels and a brush journaled in the bearings.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses. 30

DANIEL B. CLIFFE.

WILLIAM R. CLIFFE.

Witnesses:

ELISHA B. DURFEE,

PATRICK J. MONAHAN.