

(No Model.)

2 Sheets—Sheet 1.

J. JONES & A. GILLIES.
STREET SWEEPER.

No. 471,642.

Patented Mar. 29, 1892.

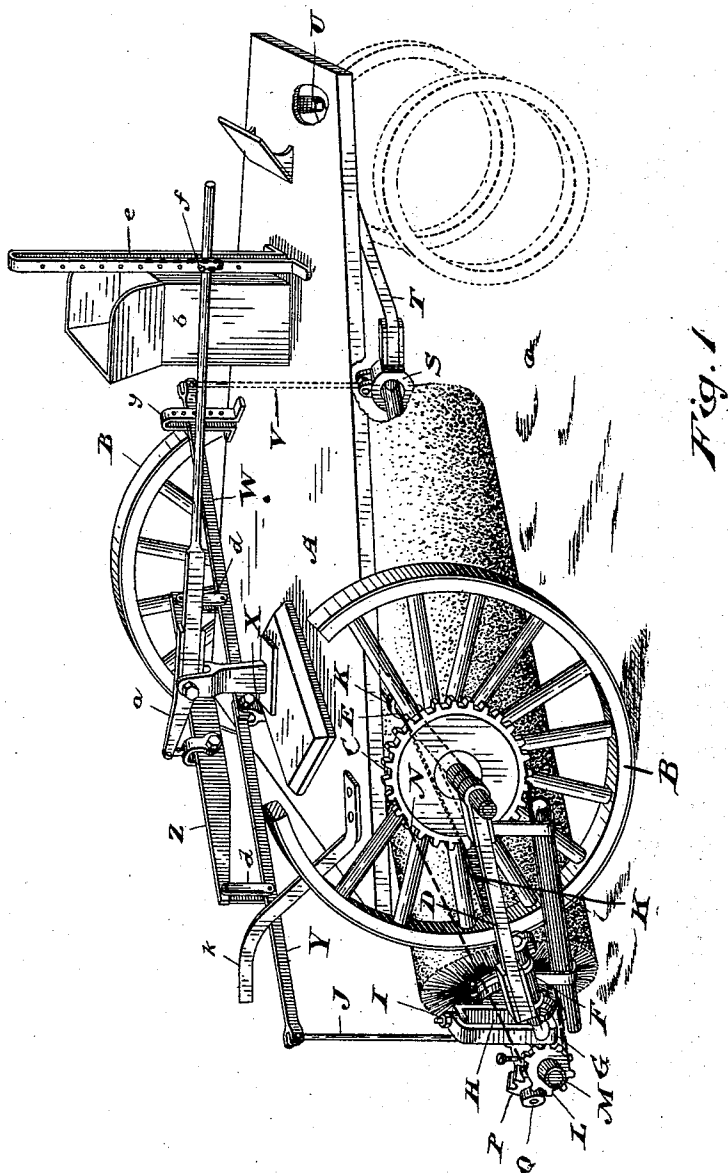


Fig. 1

Witnesses

J. Edw. Maybee

W. C. McMillan.

Inventors

John Jones

Alex. Gillies

by Donald C. Ridout & Co.
Attys.

(No Model.)

2 Sheets—Sheet 2.

J. JONES & A. GILLIES.
STREET SWEEPER.

No. 471,642.

Patented Mar. 29, 1892.

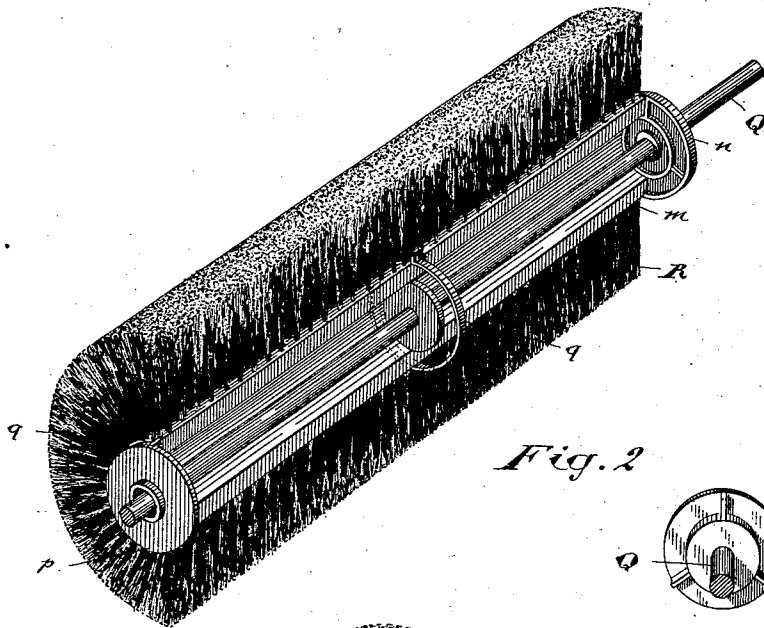


Fig. 2

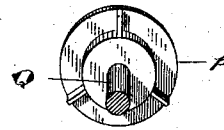


Fig. 4

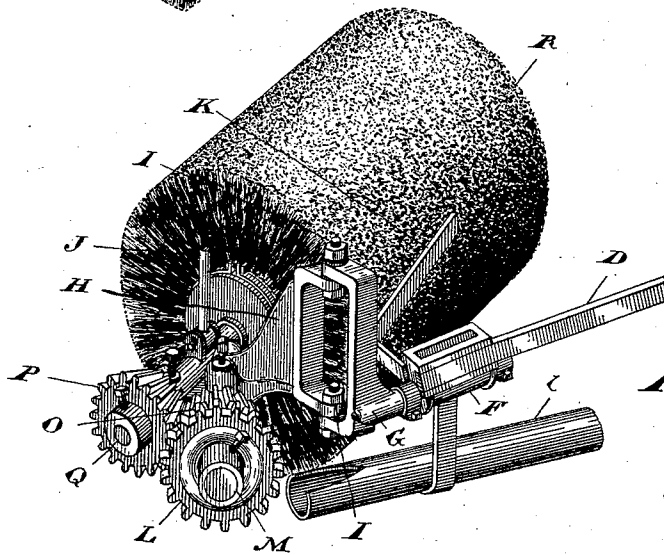


Fig. 3

Witnesses

J. Edw. Mayhew
H. G. Mcmillan.

Inventor

John Jones
Alex. Gillies
By Donald C. Ridout & Co.
Attys.

UNITED STATES PATENT OFFICE.

JOHN JONES AND ALEXANDER GILLIES, OF TORONTO, CANADA.

STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 471,642, dated March 29, 1892.

Application filed April 22, 1891. Serial No. 389,941. (No model.)

To all whom it may concern:

Be it known that we, JOHN JONES, street commissioner, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, and ALEXANDER GILLIES, blacksmith, of the same place, have invented a certain new and useful Improvement in Street-Sweepers, of which the following is a specification.

10 The object of the invention is to construct a street-sweeper which can be readily adjusted and which will be both substantial and easily operated; and it consists in the arrangement and construction of the parts hereinafter more particularly explained and then definitely claimed.

15 Figure 1 is a perspective view of our improved sweeper. Fig. 2 is a perspective longitudinally-sectional detail of the broom used in connection with our sweeper. Fig. 3 is a perspective end view of the broom, showing its operating mechanism. Fig. 4 is an inside view of one of the end pieces of the broom.

20 In the drawings, A represents the platform or main frame of the machine, which is suitably supported at its rear end by the ground-wheels B and at its front end by an ordinary wagon-truck, which we have not shown in the drawings as there is nothing peculiar in its construction.

30 C is a sprocket-wheel fixed to the wheel B.

D is a bar pivoted on the end of the wheel-axle E, which axle is stationary. A journal-box F is fixed to the opposite end of the bar D to receive a spindle projecting from the yoke G. A bracket H is pivoted on the bolts I, which secure it to the yoke G, as indicated. The rear end of the bracket H has a rod J pivoted upon and arranged to support it, as hereinafter described.

40 K is a brace extending from the end of the bar D to the axle E, on which axle the said brace K is pivoted.

45 L is a sprocket-wheel, loosely journaled on a spindle M, extending from and supported by the bracket H. This sprocket-wheel L is connected to the sprocket-wheel C by the sprocket-chain N, so that when the sprocket-wheel C revolves with its wheel B the motion of the said wheel is conveyed to the sprocket-wheel L. The bevel-pinion O is cast upon or connected to the sprocket-wheel L and is de-

signed to mesh with the bevel-pinion P, fixed to the shaft Q of the brush R, the said shaft Q being suitably journaled at one end in the bracket H and at its other end in a socket S, 55 attached to the arm T, pivoted on a suitable support U, fixed to the platform A. A rod V is pivoted on the top of the socket S and extends up to the bar W. The bar W is pivoted on a bracket X, located substantially in the center of the platform A. The bar Y, to which the rod J is connected, is also pivoted on the bracket X.

60 Z is an equalizing-bar suspended on the end of the lever *a*, which is suitably pivoted, as indicated, and extends past the driver's seat *b*, as shown. This equalizing-bar is connected by the links *d* to the bar W and to the bar Y. As the rod J connects the bracket H (in which the shaft Q is journaled) to the bar Y, and the opposite end of the shaft Q is supported by the rod V, connected to the bar W, and as the equalizing-bar Z supports both of the pivoted bars W and Y it follows that the 75 shaft Q is carried by the bar Z, suspended from the end of the lever *a*. As the end of the shaft Q on which the driving-gearing is supported is heavier than the opposite end of the said shaft, the link which connects the bar Y to the equalizing-bar Z is placed nearer to the outer end of the bar Y than the link which connects the said equalizing-bar to the bar W, their relative position being such that in the normal position of the bars described the 85 brush R on the shaft Q is suspended horizontally. By means of the lever *a* the brush R may be raised clear off the ground, or such pressure downward as may be required can be directed against the brush R by simply 90 adjusting the lever *a*. This lever, it will be observed, passes through the bracket *e*, and is held by means of a pin *f*, which may be placed in any of the holes made in the bracket *e*. The pivoted bar W passes through the 95 bracket *g*, in which bracket a series of holes is made.

Should it be desired to hold the light end of the brush R stationary while its opposite end is being raised or lowered, we place the 100 pin *h* in one of the holes in the bracket *g*, so that the lever *a* may be moved in the required direction without adjusting the light end of the brush. In this way the brush R

may be set so as to act upon the road, no matter at what angle the said road may be made. It will be noticed that the bracket *g* extends over the bar *W*, so as to prevent the said bar being raised higher than a given distance should the end of the brush *R* come in contact with an obstruction. An arm *k*, fixed to the platform *A*, extends over the bar *Y* for the same purpose as is accomplished by the bracket *g*.

By supporting the brush *R* at one end by a bracket supported as described, so that it has a free flexible movement both vertically and horizontally and at its other end by what is, in fact, a universal joint, the said brush has a perfectly-free movement to adjust itself to any unevenness in the road without in any way interfering with the driving mechanism by which the brush *R* is revolved.

On reference to Figs. 2 and 4 it will be observed that the bristles of the brush *R* are fixed to strips or bars *m*, fitted at one end into the recessed disk *n* and at the other against the disk *p*, both of which disks are securely fastened to the shaft *Q*. These strips or bars *m* are held together by the bands *g*, which are cramped around the strips or bars, so as to securely hold them together.

From this description it will be seen that we have produced a substantially constructed street-sweeper which can be easily manipulated, and in which all its working parts may be readily got at.

What we claim as our invention is—

1. The bar *D*, pivoted at one end on the axle *E* and having fixed to its other end a journal-box *F*, in which a spindle extending from the yoke *G* is journaled, in combination with the bracket *H*, pivotally connected to the yoke *G* and having a journal-box formed in it to receive the shaft *Q*.

2. The bevel-pinion *P*, fixed to the shaft *Q*, journaled in the bracket *H*, and the bevel-pinion *O*, carried by a spindle extending from the bracket *H*, in combination with the sprocket-wheel *L*, sprocket-chain *N*, and sprocket-

wheel *C*, arranged substantially as and for the purpose specified.

3. The bar *D*, pivoted at one end on the axle *E* and having fixed to its other end a journal-box *F*, in which a spindle extending from the yoke *G* is journaled, and the bracket *H*, pivotally connected to the yoke *G* and having a journal-box formed in it to receive the shaft *Q*, in combination with the bevel-pinion *T*, fixed to the shaft *Q*, journaled in the bracket *H*, the bevel-pinion *O*, carried by a spindle extending from the bracket *H*, a sprocket-wheel *L*, sprocket-chain *N*, and sprocket-wheel *C*, arranged substantially as and for the purpose specified.

4. A rotating brush-shaft *Q*, suitably supported at one end, a rod *J*, connected at one end to a properly-supported pivoted bar *Y* and at its other end to the bracket *H*, which supports the other or driven end of said shaft *Q*, in combination with yoke *G*, pivotally connected to the bracket *H* and journaled on the rod *D*, substantially as described.

5. The rod *V*, arranged to connect the socket *S*, in which the light end of the shaft *Q* is supported, to the pivoted bar *W*, in combination with the equalizing-bar *Z*, suspended from the pivoted lever *a* and connected, respectively, to the pivoted bar *W* and the pivoted bar *Y* in such a manner that the weight supported by the said pivoted bars shall be equally divided between the ends of the said equalizing-bar *Z*, arranged substantially as and for the purpose specified.

6. A cylindrical brush made in segments supported by and between two end pieces fixed to the shaft *Q* and held together and in position by adjustable metal bands, arranged substantially as and for the purpose specified.

Toronto, April 2, 1891.

JOHN JONES.
ALEXANDER GILLIES.

In presence of—

CHARLES C. BALDWIN,
JOHN E. CAMERON.