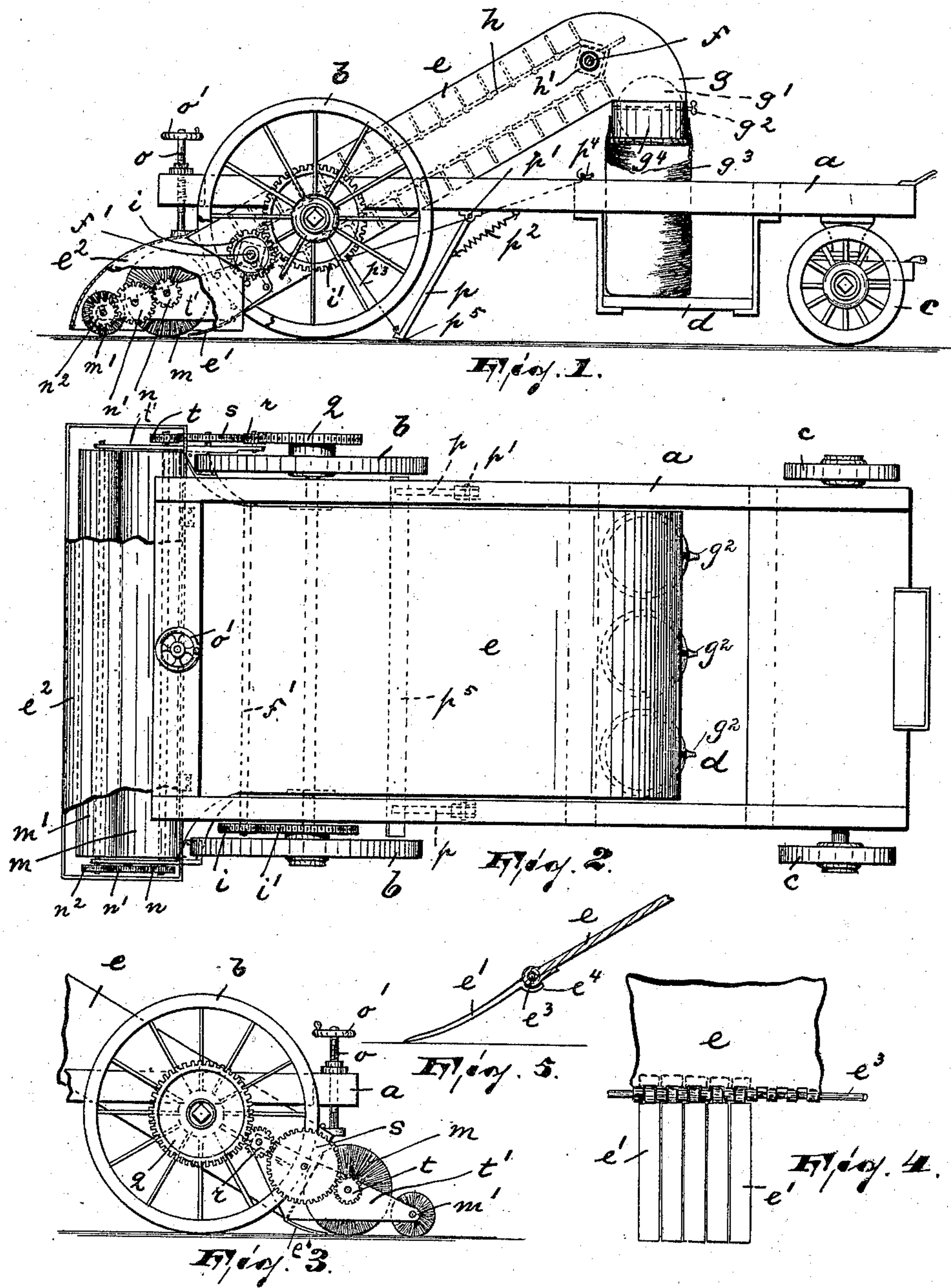


(No Model.)

C. B. BROOKS, G. M. HALLSTEAD & P. S. PAGE.
STREET SWEEPER.

No. 558,719.

Patented Apr. 21, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES B. BROOKS, OF NEWARK, NEW JERSEY, AND GEORGE M. HALL-
STEAD AND PLUMMER S. PAGE, OF SCRANTON, PENNSYLVANIA.

STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 558,719, dated April 21, 1896.

Application filed December 17, 1895. Serial No. 572,438. (No model.)

To all whom it may concern:

Be it known that we, CHARLES B. BROOKS, residing in Newark, Essex county, and State of New Jersey, and GEORGE M. HALLSTEAD and PLUMMER S. PAGE, residing in Scranton, Lackawanna county, and State of Pennsylvania, citizens of the United States, have invented certain new and useful Improvements in Street Sweepers and Cleaners; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Our present invention is an improvement on the street sweeper and cleaner covered by the application for United States Letters Patent Serial No. 547,455, filed April 29, 1895.

The object of the invention is to provide a street cleaner and sweeper of simple and durable construction, effective in operation, and easily handled and controlled. A further object is to provide the sweeper with such means that the flying around of dust, dirt, &c., during the operation of sweeping is fully avoided.

The invention consists in the improved street sweeper and cleaner, in the series of revolving brushes of different size arranged parallel at the lower end of the elevator-casing, in the sectional receiving-pan, the spring-controlled scraper, and in the combination and arrangement of the various parts thereof, substantially as will be hereinafter more fully described, and finally embodied in the clauses of the claim.

In the accompanying drawings, Figure 1 is a side elevation of our improved street sweeper and cleaner, certain portions being removed and others broken away to better illustrate the nature of our said invention; Fig. 2, a top plan view of Fig. 1; Fig. 3, a detail view illustrating in elevation the relative arrangement of parts on the opposite side of the device, and Figs. 4 and 5 detail views of a certain sectional pan used in connection with the street sweeper and cleaner.

In said drawings, *a* represents a truck-frame having bearings for the axles carrying the rear and front wheels *b* and *c*, respectively. The inclined elevator-casing *e* is ful-

crumed on the axle of the rear wheels *b*. Its upper forward portion terminates in a channel or chamber *g*, provided with a series of downwardly-extending hoppers *g*⁴, adapted to receive the bags *g*³, which are removably secured thereto in any desired manner. Each hopper is traversed by a spindle *g*², on which is arranged a damper *g*¹ for the purpose of closing the outlet of said hoppers during the operation of changing the bags.

For conveniently carrying and arranging the bags on the truck a depending platform *d* is constructed below the outlets of the hoppers, as clearly shown in Figs. 1 and 2.

In the elevator-casing *e* is arranged the endless bucket-chain *h*, passing over squared cylinders *h*¹, arranged on the upper and lower traversing shafts *f* and *f*¹, respectively, which have their bearings in the sides of the casing. On one end of the lower shaft *f*¹ is secured a pinion *i*, meshing with gear-wheel *i*¹, secured on the axle of the rear wheel, and thus transmitting its motion to the endless bucket-chain, as will be manifest. To the rear end of the casing and to the under side thereof is secured in any desired manner a rod or shaft *e*³, on which is fulcrumed a sectional pan, consisting of a series of narrow strips *e*¹, each of which is limited in its downward motion by its arm or projection *e*⁴ bearing on the under side of the casing.

At the inlet of the elevator-casing—that is to say, at its lower end—and supported in the bracket-frame *t* is arranged a shaft on which is secured the revolving brush *m*, receiving its motion from the axles of the rear wheels *b* by a train of gears *q*, *r*, *s*, and *t*, as clearly shown in Fig. 3. The bracket-frame *t* is connected with the elevator-casing in any desired manner. By this arrangement the brush *m* is bound to revolve in a direction opposite to that of the wheels of the truck. In rear of said brush *m* and parallel thereto is arranged another shaft, to which is secured a revolving brush *m*¹, of smaller size, receiving its motion from the shaft of the brush *m* through a train of gears *n*, *n*¹, and *n*², as clearly shown in Figs. 1 and 2. Said brush revolves in the same direction as the brush *m*. Both brushes *m* and *m*¹ are covered by a hood or casing *e*², secured to the elevator-casing by hinges, as shown in Fig. 2, or in any desired manner, and is provided at its top with a bushing, in

which is arranged the lower end of the elevator-screw o , having hand-wheel o' , and can, together with the elevator-casing e , by these means, be raised and lowered at will. The
 5 elevator-screw can also be connected with the casing, as will be manifest.

Between the platform d and the lower end of the elevator-casing e and in brackets on the under side of the truck is arranged the
 10 rod or shaft p' , on each end of which is secured a downwardly-extending arm p , normally held by spiral spring p^2 and controlled by a cord or chain p^3 , which can be shortened and lengthened at will by fastening its free
 15 end to a cleat p^4 , as clearly shown in Fig. 1 of the drawings. To the lower ends of said arms p is secured in any desired manner a substantially knife-edged scraper p^5 , having its forward edge adapted to rest on and scrape
 20 the asphalt or other smooth pavement to be cleaned when the sweeper is used for that purpose.

The operation of the device is thought to be obvious. The dirt, dust, or snow is brushed
 25 onto the sectional pan e' by means of the revolving brush m , from whence it is carried or scooped upward in the elevator-casing by the bucket-chain and is discharged through channel g and hoppers g^4 into the bags g^3 , which, when filled, are removed and closed and empty bags arranged in their places. During the operation of changing the bags the dampers on spindles g^2 are closed. Any dirt,
 30 dust, or snow which was not brushed into the pan by means of the revolving brush m is taken up by the auxiliary brush m' and discharged or thrown on the brush m , which in turn discharges it onto the pan, as above stated.

40 We do not intend to limit ourselves to the precise construction shown and described, as various alterations can be made without changing the scope of our invention; but

What we claim as new, and desire to secure
 45 by Letters Patent, is—

1. A sweeper consisting of a truck on wheels, an inclined elevator-casing fulcrumed on the axle of the rear wheels, a pan pivoted at the lower end of said casing, a frame connected with said casing a revolving brush
 50 mounted in said frame and in rear of said pan, an auxiliary brush of smaller diameter also mounted in said frame and arranged parallel and in rear of the revolving brush, and means for revolving the brushes substantially as and for the purposes described.

2. A sweeper consisting of a truck on wheels, an inclined elevator-casing fulcrumed on the axle of the rear wheels, a pan pivoted
 60 at the lower end of said casing, a frame connected with said casing a series of revolving brushes of various diameter mounted in said frame arranged parallel and in rear of said pan and adapted to revolve in the same direction, but in opposite direction to that of the wheels of the truck, a hood or casing over said brushes and pan, and means for

revolving said brushes substantially as and for the purposes described.

3. A sweeper consisting of a truck on wheels, an inclined elevator-casing fulcrumed on the axle of the rear wheels, a pan pivoted at the lower end of said casing, a frame connected with said casing, a series of revolving brushes mounted in said frame and arranged
 75 parallel and in rear of said pan, a casing or hood over said brushes and pan, means for raising and lowering said elevator-casing, hood and brushes simultaneously, and means for revolving said brushes substantially as
 80 and for the purposes described.

4. A sweeper consisting of a truck on wheels, an inclined elevator-casing fulcrumed on the axle of the rear wheels, a pan pivoted at the lower end of said casing, a frame connected with said casing a revolving brush
 85 mounted in said frame and in rear of said pan, a train of gears transmitting the motion from the rear axle to the said brush and revolving said brush in a direction opposite to that of the rear wheels, an auxiliary brush also mounted in said frame and in rear of and parallel to said revolving brush, and means
 90 for revolving said auxiliary brush substantially as and for the purposes described.

5. A sweeper, consisting of a truck on wheels, an inclined elevator-casing fulcrumed on the axle of the rear wheels, a pan pivoted at the lower end of said casing, a frame connected with said casing a revolving brush
 100 mounted in said frame and in rear of said pan, a train of gears transmitting the motion from the rear axle to the said brush and revolving said brush in a direction opposite to that of the rear wheels, an auxiliary brush
 105 also mounted in said frame and in rear of and parallel to said revolving brush, a casing or hood over said brushes and pans, and means for revolving said auxiliary brush substantially as and for the purposes described.

6. A sweeper consisting of a truck on wheels, an inclined elevator-casing fulcrumed on the axle of the rear wheels, a pan pivoted at the lower end of said casing, a frame connected with said casing a revolving brush
 115 mounted in said frame and in rear of said pan, a train of gears transmitting the motion from the rear axle to the said brush, an auxiliary brush also mounted in said frame and in rear of and parallel to said revolving brush, a hood over said brushes and pan, means for raising said casing, brushes and pan simultaneously, and means for revolving said auxiliary brush substantially as and for the purposes described.

In testimony that we claim the foregoing we have hereunto set our hands this 31st day of October, 1895.

CHARLES B. BROOKS.
 GEORGE M. HALLSTEAD.
 PLUMMER S. PAGE.

Witnesses:

J. ALTON DAVIS,
 HORACE E. HAND.