

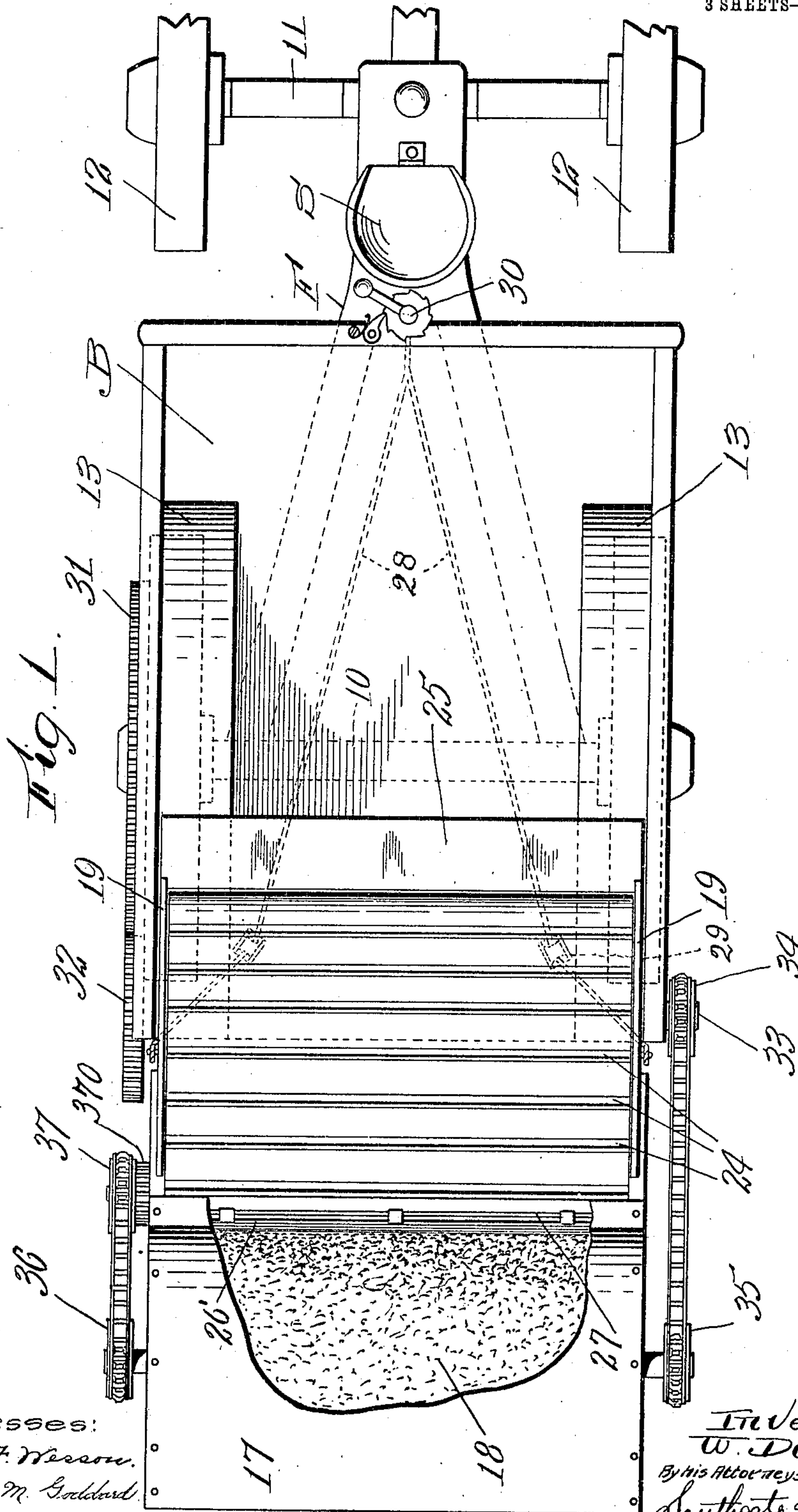
No. 871,212.

PATENTED NOV. 19, 1907.

W. DUPRE.  
STREET SWEEPER.

APPLICATION FILED MAR. 11, 1904.

3 SHEETS—SHEET 1.



Witnesses:

C. F. Messon.

A. M. Goodland.

Inventor:

W. Dupre

By his Attorneys

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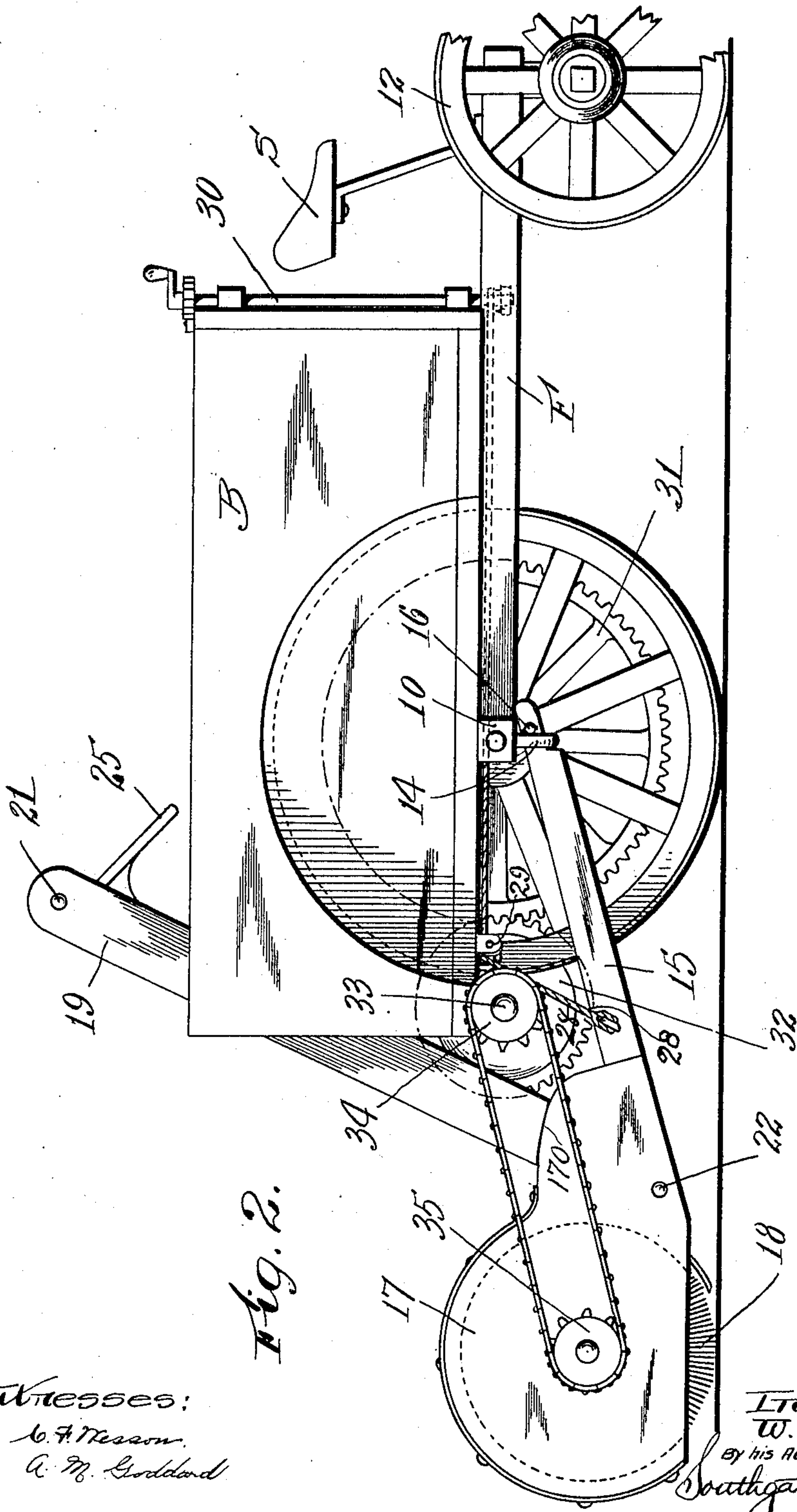
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3 SHEETS—SHEET 2.



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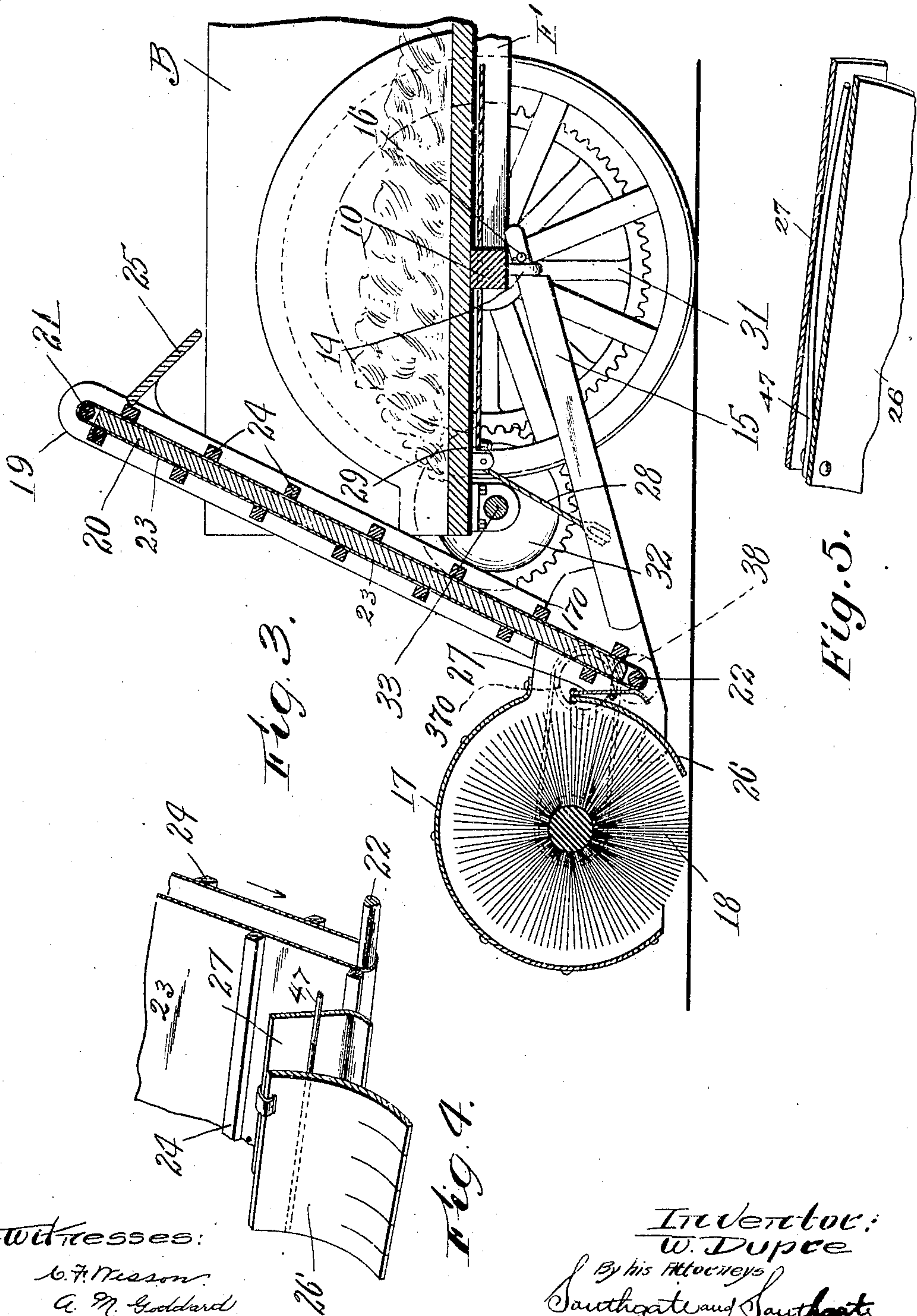
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3 SHEETS—SHEET 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILFRED DUPRE, OF WORCESTER, MASSACHUSETTS, ASSIGNOR OF FORTY-EIGHT FIFTIETHS  
TO HUGH H. O'ROURKE, OF WORCESTER, MASSACHUSETTS.

## STREET-SWEEPER.

No. 871,212.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed March 11, 1904. Serial No. 197,683.

*To all whom it may concern:*

Be it known that I, WILFRED DUPRE, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Street-Sweeper, of which the following is a specification.

This invention relates to a street sweeping apparatus which has been designed to be used as an attachment for a dump-cart or other vehicle.

The especial objects of this invention are to provide a strong, simple, and efficient street sweeping apparatus which may be directly supported by a dump-cart or other vehicle, and which will not require additional traction-wheels for carrying the same; to provide a street sweeping apparatus which will sweep the full width of a street up to the curbsings thereof; to provide means for controlling the sweeping attachment from the driver's seat of the cart or other vehicle; and to provide improved details and special features of construction as hereinafter described and more particularly pointed out in the claims at the end of this specification.

In the accompanying three sheets of drawings, Figure 1 is a plan view partly broken away of a cart with a sweeping attachment constructed according to this invention applied thereto. Fig. 2 is a side view of the same with one of the rear wheels removed. Fig. 3 is a partial longitudinal sectional view thereof, Fig. 4 is a fragmentary detail view illustrating the coöperating action between the bars of the endless conveyer and the holding plates, and Fig. 5 is a horizontal sectional view showing one form of spring which can be employed.

One special object of my present invention is to provide a street sweeping machine in which a sweeping attachment is directly attached to and carried by the dump-cart or other vehicle itself in such a way as to insure efficient operation.

Another object is to provide a convenient and efficient construction in which the brushes are not narrower than the distance separating the outer surfaces of the vehicle wheels supporting them so that the full width of the street can be cleaned up to the curbsings or side walks, and to combine the same with efficient means for delivering the sweepings from the brushes to a conveyer which conducts them into the cart.

In a sweeping attachment constructed according to this invention, the parts have been especially designed to employ a sweeping brush which may be as wide or wider than the space between the vehicle wheels, so that the cart can be driven close enough to the curbstone to sweep or clean the full width of the street.

Referring to the accompanying drawings and in detail, I have shown a sweeping apparatus constructed according to this invention combined with a cart or vehicle of the dump-cart type. This cart, as herein illustrated, comprises a supporting frame *F* having a fixed rear axle 10. The frame-work *F* is pivotally connected at its forward end to the front axle 11 having the front wheels 12. The driver's seat *S* is mounted on the frame-work of the cart in the ordinary manner. These parts may be of substantially the ordinary construction employed in dumping carts or similar vehicles.

The body *B* of the cart is pivotally supported upon the rear axle in the ordinary manner, but instead of setting down between the rear wheels, the body *B* is preferably made wide enough to overhang the wheels, and is provided with housings or boxes 13 which fit over the rear wheels. The sweeping attachment is detachably connected with and is carried by the cart itself.

As shown in Fig. 2, the rear axle 10 is provided with the yokes or socket pieces 14. Fitting into the yokes 14 are supporting pieces 15 which may be detachably pinned in place by retaining pins 16. Connected to the rear ends of the supporting arms 15 is a sheet metal housing 17 containing the sweeping brush 18. The housing 17 and the sweeping brush 18 may be as wide or wider than the space between the wheels of the vehicle, and I regard this as a feature of importance, as this enables me to clean the entire width of the street up to the curbstones or sidewalk. A frame-work extends upwardly from the housing 17 and is supported independently of the body *B*. This frame-work comprises side plates 19 which are connected by a center piece 20. At its upper end the frame-work is provided with a shaft 21, and in the housing 17 below the center piece 20 is a shaft 22.

Mounted on the shafts 21 and 22 is an endless conveyer consisting of a belt 23 of strong canvas or similar material carrying



the cross-strips or slats 24. At its upper end, the frame-work 19 is provided with a deflector-board or shelf 25 for directing material towards the forward part of the cart.

5 To direct the material from the sweeping brush 18 to the endless conveyer, I employ a sweeping plate 26 which is fixed in the housing 17, and the lower edge of which is slitted to form separate blades or sections  
10 which may yield when the sweeper passes over stones or other obstructions. Hinged to the sweeper-plate 26 is a yielding plate 27 which is normally swung forward by any desired arrangement of springs, for example,  
15 by a spring-rod 47, having one end fixed and the other bearing on the plate 27. The swinging-plate 27 forms in effect a pivoted door cooperating with the slats 24 so that as each successive slat passes around the bot-  
20 tom shaft 22 it will push back the swinging-plate 27, and as soon as the slat passes the same, the swinging-plate will move back to catch and retain all dirt not carried up by the action of the slat. In practice, I have  
25 found that this construction provides a simple and efficient means for directing the dust or dirt from the sweeping brush to the end-  
less conveyer.

In order to control the action of the  
30 sweeper from the driver's seat of the cart, I have provided lifting attachments which may raise the sweeper up from the ground so as to render the same inoperative, and to permit the same to pass over the larger or  
35 higher obstructions. As shown in the drawings, the lifting cords 28 are connected to the supporting arms 15. The lifting cords pass up over pulleys 29, and at their forward ends the lifting cords are connected to a cord  
40 which is wound upon the vertical shaft 30. The vertical shaft 30 is provided at its upper end with an operating handle for winding up the lifting cords to raise the sweeping at-  
45 tachment when desired, and the sweeping attachment may be held in raised position by means of a ratchet plate and pawl as shown.

Any desired arrangement of gearing may be employed for driving the moving parts.  
50 In the construction herein illustrated, a driving-gear 31 is secured to and turns with one of the rear wheels. Meshing with and driven from the gear 31 is a gear 32 secured on one end of a cross-shaft 33. At its oppo-  
55 site end the cross-shaft 33 is provided with a sprocket wheel 34 which is connected by a drive-chain to a sprocket wheel 35 on the shaft of the sweeping brush 18. At its oppo-  
60 site end the shaft of the sweeping brush is provided with a sprocket wheel 36 which is connected by a chain to drive a sprocket wheel 37. Fastened upon and turning with the sprocket wheel 37 is a gear section 370 which, as most clearly illustrated by dotted

lines in Fig. 3, meshes with and drives a gear 65 38 upon the lower shaft 22 of the endless conveyer. In the actual use of a street sweep-  
ing attachment as thus constructed, the dirt swept up by the sweeping-brush will be car-  
ried up by the endless conveyer and allowed 70 to fall into the body of the cart, and inas-  
much as the sweeping attachment forms an attachment which is supported entirely from the cart or vehicle itself, I have provided a  
construction which can be driven around 75 comparatively short turns or corners. Fur-  
thermore, as the sweeping brush is the full width of the vehicle body, the entire width of the street up to the curbs or sidewalks can be swept or cleaned. 80

When it is desired to render the sweeping attachment inoperative, the construction may be lifted or raised by the connections before described. When the cart has been  
filled, or it is desired to use the cart for other 85 purposes, the sweeping attachment may be readily disconnected from the cart and can be used in connection with another cart, if desired.

I am aware that numerous changes may 90 be made in the construction of my street sweeping apparatus by those who are skilled in the art without departing from the scope of my invention as expressed in the claims. I do not wish, therefore, to be limited to the 95 special constructions I have herein shown and described, but

What I do claim and desire to secure by Letters Patent of the United States is:—

1. The combination with a sweeping de- 100 vice, of an inclined endless conveyer, a plate pivoted at a point above the lower end of the conveyer and depending from its pivots, and yielding means for forcing the lower edge of the plate into engagement with the lower end 105 of the conveyer.

2. The combination of a sweeping device, a conveyer comprising movable slats, and a plate yieldingly mounted and extending 110 downwardly from above into engagement with the conveyer, thereby forming a pocket with the conveyer for the reception of sweep-  
ings.

3. The combination of a sweeping brush, a conveyer, a movable plate normally engag- 115 ing the conveyer, and means for resiliently forcing the plate toward the conveyer; the conveyer and plate forming a pocket for the reception of sweepings, the conveyer having means for engaging the plate, pushing it out- 120 wardly from the conveyer, and passing through the pocket from the bottom to re-  
move sweepings from the pocket.

4. In a sweeping and delivering mechan- 125 ism, the combination of the brush, a plate for gathering the material swept up by the brush, an endless conveyer having slats, and a spring-actuated pivoted plate normally in



position to engage the slats and adapted to be moved back thereby to permit the passage of said slats.

5 In a sweeping and elevating mechanism, the combination of a cart, a sweeping mechanism mounted upon and supported entirely by said cart, and comprising arms detachably pivoted to the cart, a housing carried by the arms, a conveyer-frame extending up from the housing, a conveyer mounted therein, a brush in the housing, a plate for gathering the material swept up by the brush, a swinging plate normally in position for engaging the conveyer, and gearing for  
10 operating the brush and conveyer from the cart wheels.

6. In a sweeping and delivery mechanism, the combination of a cart having a body portion with housings or boxings to receive the

rear wheels, said body portion and housings 20 extending out over said rear wheels, and an attachment comprising arms extending rearwardly from the cart, a housing carried by said arms, a conveyer frame supported by the last named housing, a conveyer connected with said frame and adapted to deliver into said body portion, and a brush mounted in the housing and adapted to deliver to the conveyer, said brush and conveyer being a width not less than the distance between  
25 the outer surface of said rear wheels.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

WILFRED DUPRE.

Witnesses:

PHILIP W. SOUTHGATE,  
LOUIS W. SOUTHGATE.