

No. 640,477.

Patented Jan. 2, 1900.

J. MAXON.  
STREET SWEEPER.

(Application filed Sept. 27, 1898.)

(No Model.)

2 Sheets—Sheet 1.

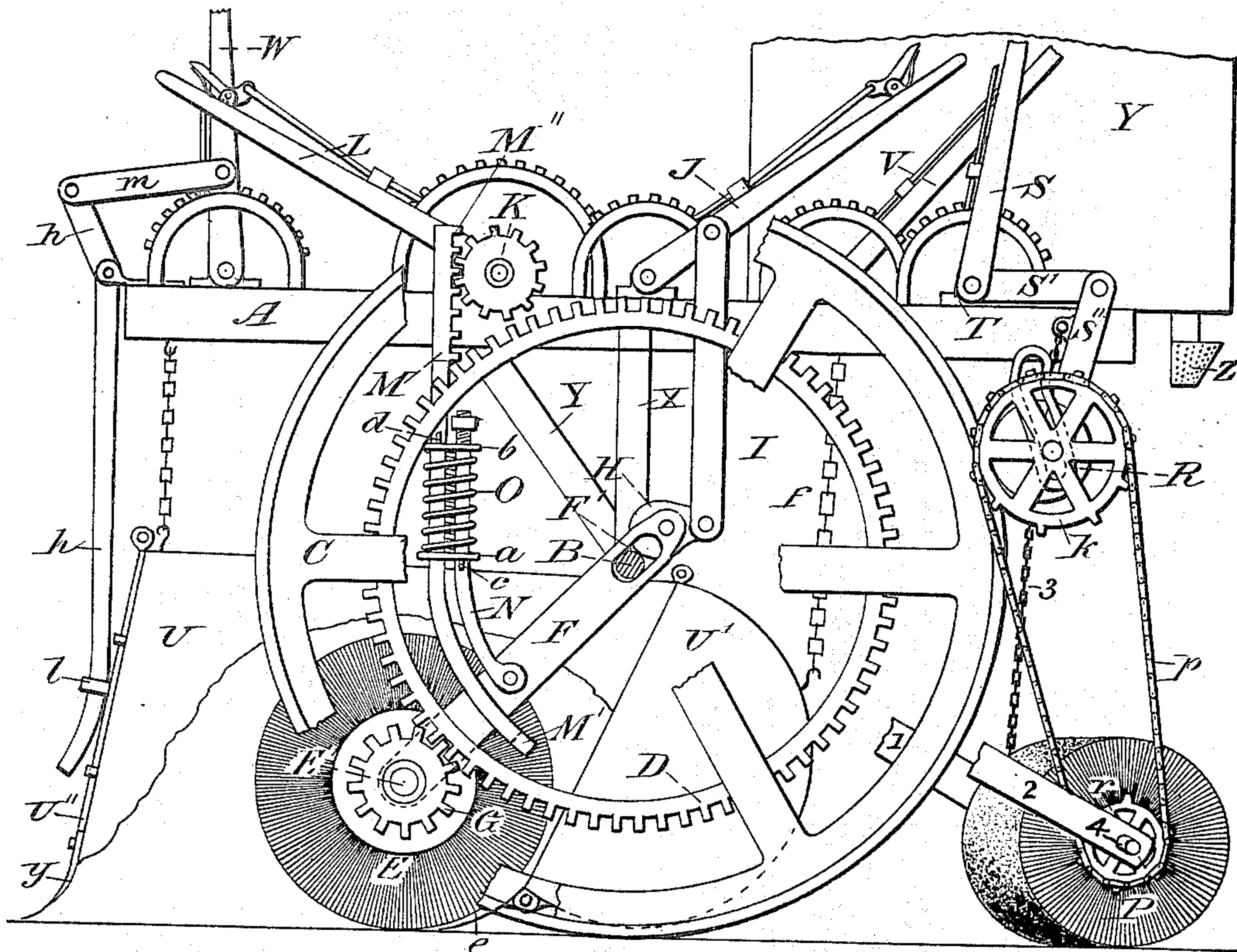


Fig. 1.

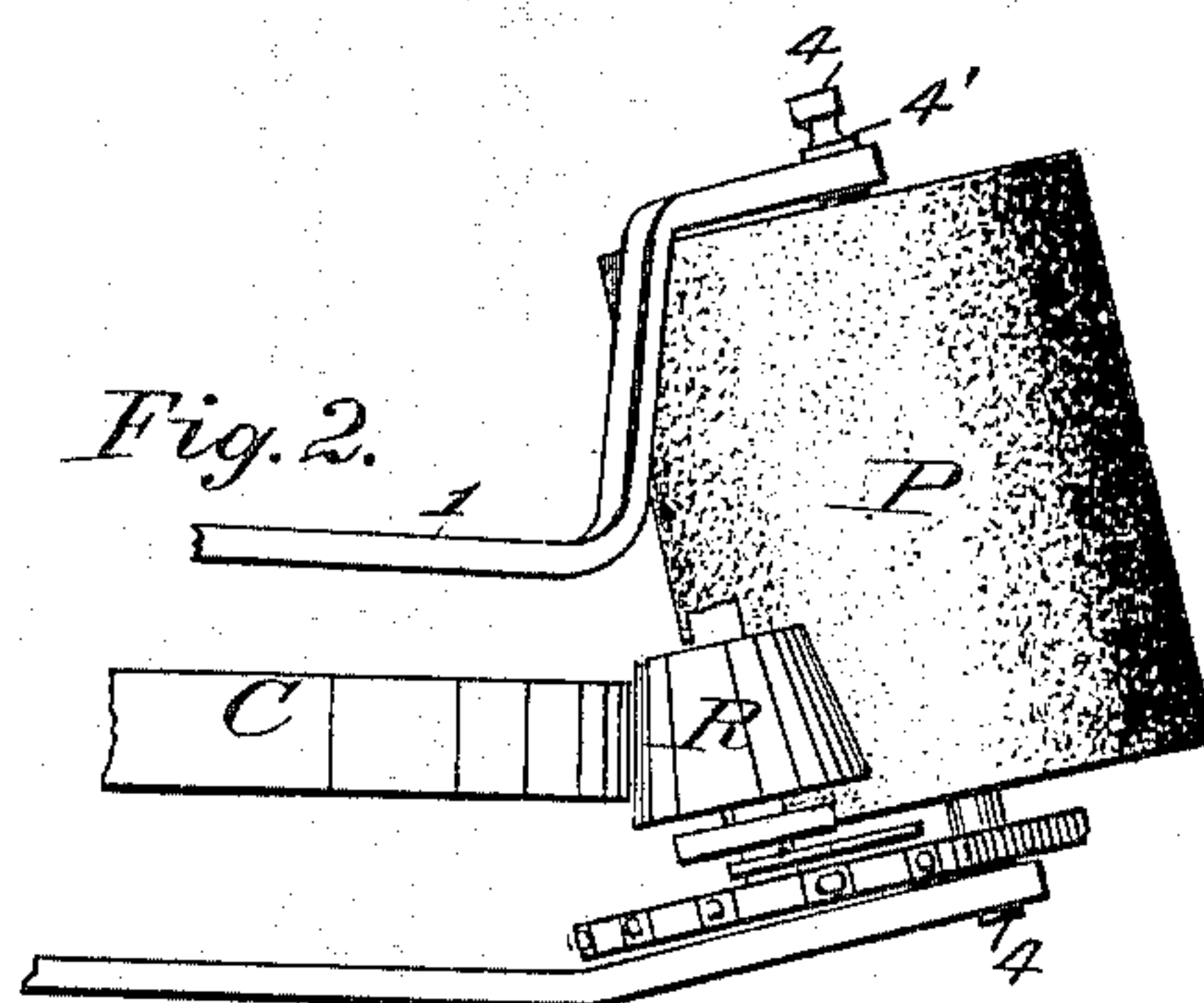


Fig. 2.

WITNESSES  
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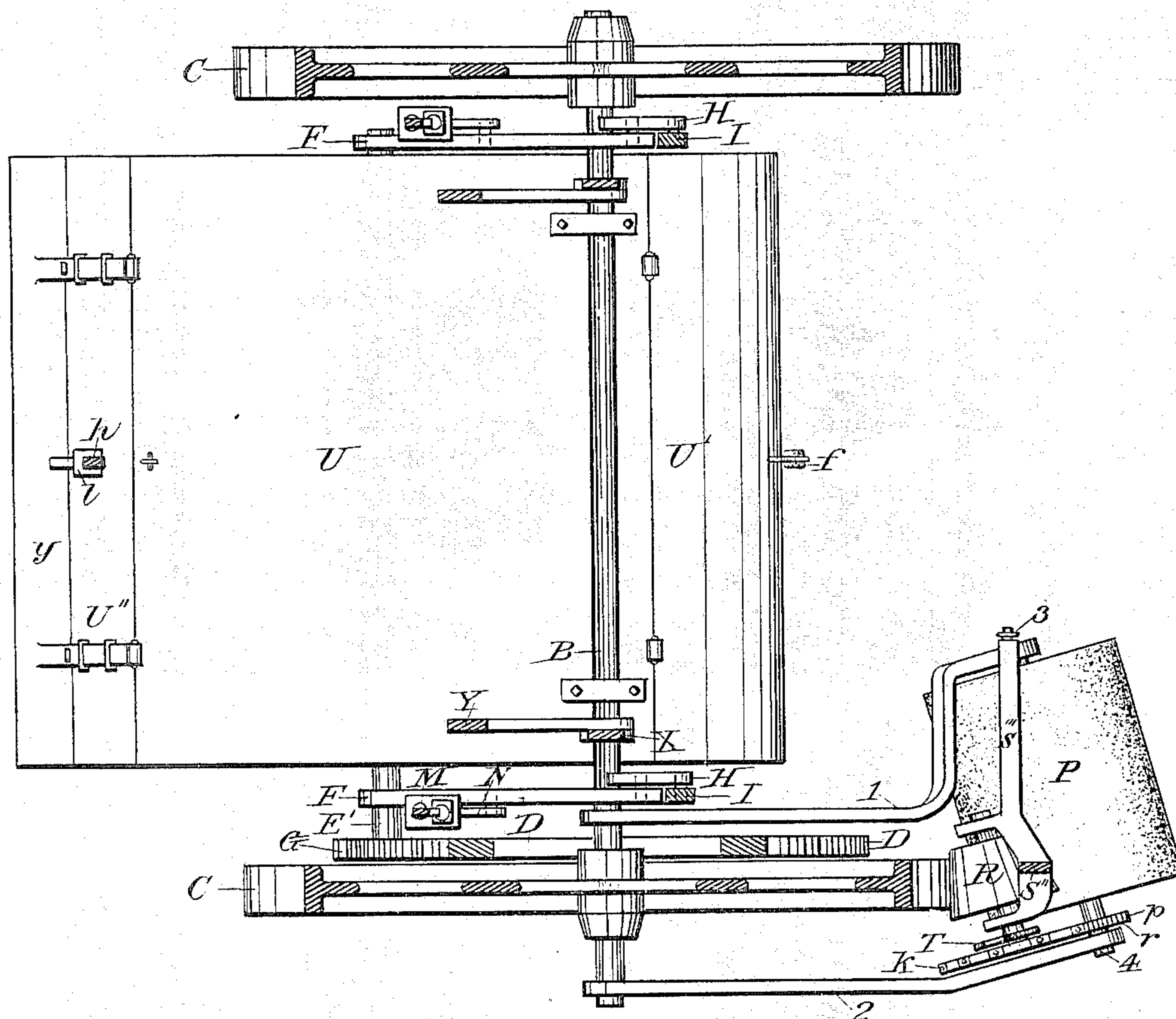
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*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

JAMES MAXON, OF BURBANK, CALIFORNIA, ASSIGNOR TO THE AZUSA MANUFACTURING COMPANY, OF LOS ANGELES COUNTY, CALIFORNIA.

## STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 640,477, dated January 2, 1900.

Application filed September 27, 1898. Serial No. 692,006. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES MAXON, a citizen of the United States, residing at Burbank, county of Los Angeles, State of California, have invented a new and useful Improvement in Street-Sweepers, which improvement is fully set forth in the following specification and illustrated in the accompanying drawings.

My invention relates to improvements in street-sweepers, and my object is to provide a sweeper which will at the same time sweep the gutter as well as the roadway, and which will collect the dirt, so that it may be deposited in piles, and in which the pressure of the sweeping-brushes upon the surface being swept may be regulated at the will of the driver of the machine; and it consists in the combination and arrangement of parts as herein-  
after described and claimed.

Figure 1 is a side elevation of so much of my machine as is necessary to illustrate my invention, some of the parts being cut away. Fig. 2 is a detail showing the driving mechanism of the gutter-brush. Fig. 3 is a horizontal section taken on a plane just below the frame A of Fig. 1.

Suitably attached to the frame A by means of the supports X and Y is the axle B, on which is rotatively mounted the main driving-wheels C, one on each side. Attached to the wheel C is a gear D. The main sweeping-brush E is attached to the axle B by an arm F at each end, having a slotted opening F' in the upper end and passing around the axle E' of the brush E at the lower end. To the axle E' is rigidly attached a pinion G, which meshes into the gear D, thereby imparting motion to the brush E when the machine is moving.

The upper end of the arm F is pivoted to a cam H, to which is pivoted a bar I, which is pivoted to the lever J, which in turn is pivoted in bearings attached to the frame A. By the movement of the lever J actuating the cam H the pinion G can be thrown out of or into engagement with the gear D, and thereby the working of the brush E is controlled at will. On the frame A, in suitable bearings, is mounted the pinion K, suitably governed by stop-catches. This pinion K is operated by lever L, which meshes with a rack on the upper end

of the bar M. The lower end of the bar M forms a hook M', (shown in dotted lines,) adapted to engage with the arm F when it is desired to raise the brush E. Pivotal-  
ly attached to the arm F is the bar N. The bars M and N are held from separating from each other by plates a and b, through which they pass. Between the plates a and b and surrounding the bars M and N is a strong spiral spring O. The plate a is kept from sliding down by a pin c, mounted in the bar N, and the plate b is kept from sliding up by a pin d, mounted in the bar M. By means of the lever L, pinion K, the bars M and N, and spring O the brush E may be raised or lowered, and any desired pressure may be put on the brush while sweeping, and such pressure may be regulated at will by the driver of the machine. It will also be observed that the spring O permits the brush E to have a yielding motion, and thereby enables it to pass over large inequalities in the surface being swept.

On the front part of the machine is attached the auxiliary brush P for sweeping the gutter close to the curb. This brush is attached to the machine by the arms 1 and 2, the axle B, passing through holes in the ends of the arms 1 and 2, making a hinged joint. The arm 1 is curved, so as not to interfere with the raising of the front part U' of the dust-case. The axle 4 of the brush P passes through the other ends of arms 1 and 2. This brush is set at an angle to the direction the machine takes in sweeping, so that the dirt moved by the brush P will be thrown directly in the path of the brush E. The brush P is operated by means of a sprocket-gear r on the outer end of its axle and a chain passing over a sprocket-wheel attached to the axle of a cone R, which has frictional engagement with the periphery of the wheel C. The cone R is mounted in the furcations of the bifurcated bar S'.

T is a link attached to frame A. This link is slotted, and said slot is curved, being concentric with wheel C in the lower part and curving away from wheel C in the upper part. The purpose of this construction is to permit of the adjustment of the cone R and the brush P to different heights and to enable the cone R to be thrown into and out of engagement



with the wheel C at the will of the driver. This is accomplished by means of the lever S, pivotally mounted in bearings attached to the frame A, the lever S', rigidly attached to the lower end of the lever S, and the bar S'', pivotally attached to the lever S' and to which is rotatively attached the axle of the cone R. It will be observed that when it is desired to raise or lower the brush P by moving the lever S forward the brush will be lowered, and by moving it backward far enough the cone R may be thrown up and entirely out of engagement with the wheel C and the operation of the brush P suspended. In raising and lowering the brush P one end of its axle is supported by the sprocket-chain *p* and the other end by chain 3, attached to arm S'', affixed to bar S'.

U is the dust-case, composed of the top, the front part or dust-receptacle U', hinged to the top, and the rear lid U'', also hinged to the top. The dust-case is attached to the axle B by means of straps of iron (not shown) passed over the axle and bolted to the top. The rear end of the dust-case is supported by a chain. The dust-receptacle U' is preferably constructed circular, as shown, and from the bottom thereof projects a rearwardly-extending apron *e*, which is hinged to the dust-receptacle U', as shown in Fig. 1.

The rear lid U'' of the dust-case U is provided at the bottom thereof with a flexible strip *y*, affixed thereto, preferably of heavy sheet rubber, the purpose of which is to adjust itself to the inequality of the surface of the street. The lid U'' is raised and lowered by means of the lever *h*, bar *m*, and lever W. The levers W and *h* are pivotally mounted in bearings attached to the frame A. They are connected by the bar *m*, the joints being hinged joints. The lower end of the lever *h* is curved so that it may slide through the staple *l* on the lid U'' when said lid is raised, which is only necessary when dirt is dumped from the machine. By throwing the top of lever W forward the lower end of lever *h* is thrown backward and upward, carrying with it the lid U''. The levers L, J, S, V, and W are each retained by suitable stop-catches, so that they may be held at any desired point.

On the frame A is mounted a water-tank Y, in the bottom of which is a properly-regulated sprinkler Z, whereby the surface to be swept may be sprinkled just before the brush passes over it. The loose material on the street will be swept up over the apron *e* into the circular front U' of the dust-case until a sufficient quantity of dirt is collected. The front U' of the dust-case is then raised by the lever V and the collected dirt is dumped in a pile, and it is then lowered in place again, when the operation is repeated. As soon as the front U' of the dust-case is raised the brush E and the apron U'' are also raised by their respective levers and connections and pass over the pile of dirt dumped from the front part of the dust-case. After they have passed over the pile of dirt they are again lowered into position. When it is desired to sweep next to the curb, the auxiliary brush P is lowered into position, as shown in the drawings.

Having thus described my invention, what I claim is—

In a street-sweeping machine, the frame A; axle B; driving-wheel C; gear D attached to wheels C, brush E rotatively mounted in the lower end of arm F; arm F having slot F' in its upper end, through which the axle B passes; pinion G attached to the axle of the brush E; cam H pivotally attached to the arm F and to bar I; lever J pivotally attached to bar I and to bearings in frame A; plates *a* and *b* having openings therein through which bars M and N pass; bar M having hook M' on the lower end and rack M'' on the upper end thereof; bar N pivotally attached to arm F; pin *c* mounted in bar N below plate *a*; pin *d* mounted in bar M above plate *b*; and spiral spring O surrounding bars M and N between plates *a* and *b*; pinion K and lever L all constructed and operated substantially as described herein.

In witness that I claim the foregoing I have hereunto subscribed my name this 18th day of August, 1898, at Los Angeles, California.

JAMES MAXON.

Witnesses:

G. E. HARPHAM,  
W. M. CASWELL.