

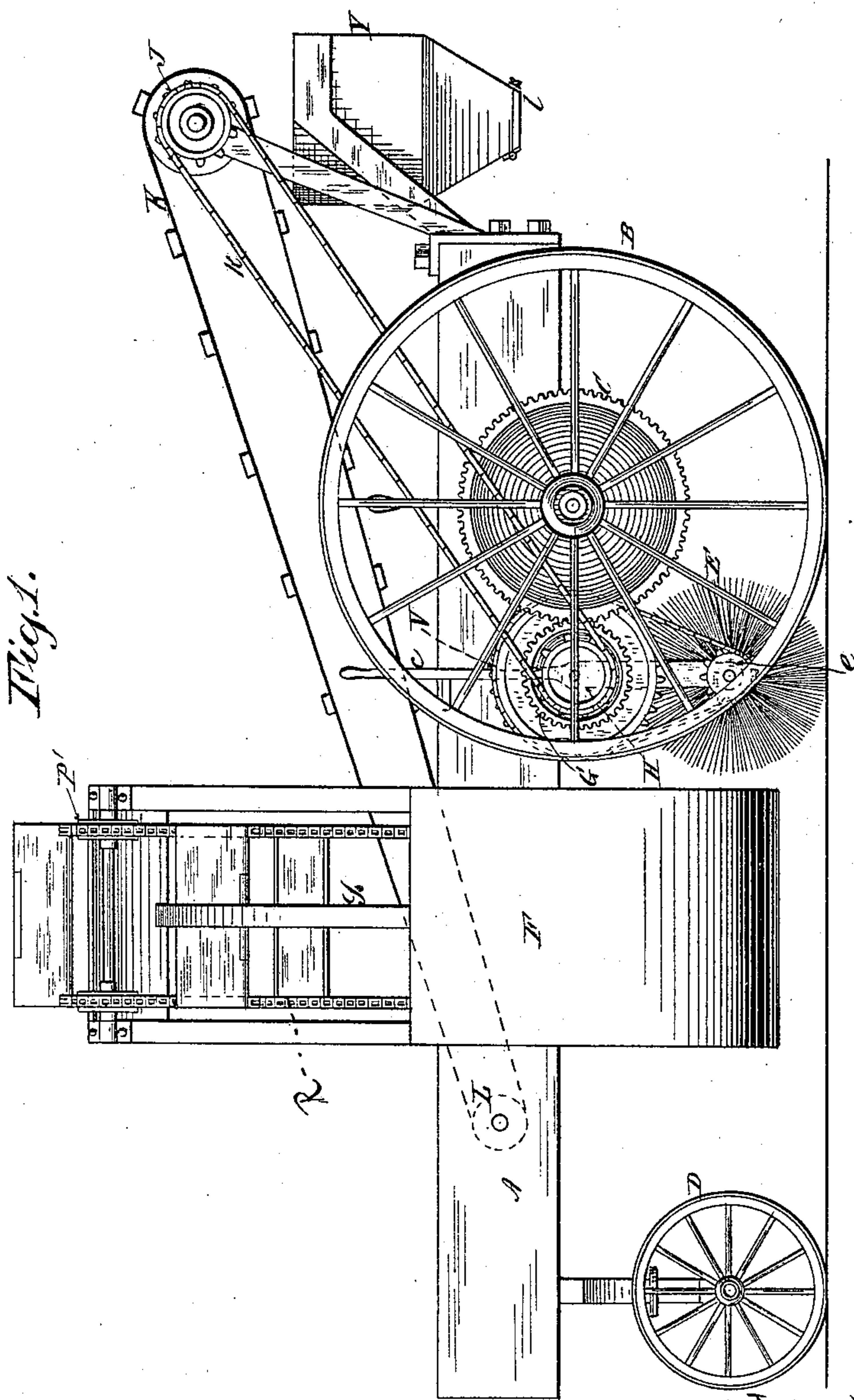
(No Model.)

5 Sheets—Sheet 1.

J. S. GOODNOW.
SWEEPING MACHINE.

No. 451,927.

Patented May 12, 1891.



Witnesses:
D. W. Gardner
H. Constant

Inventor:
Julius S. Goodnow
By his Attorney,
E N Dyer

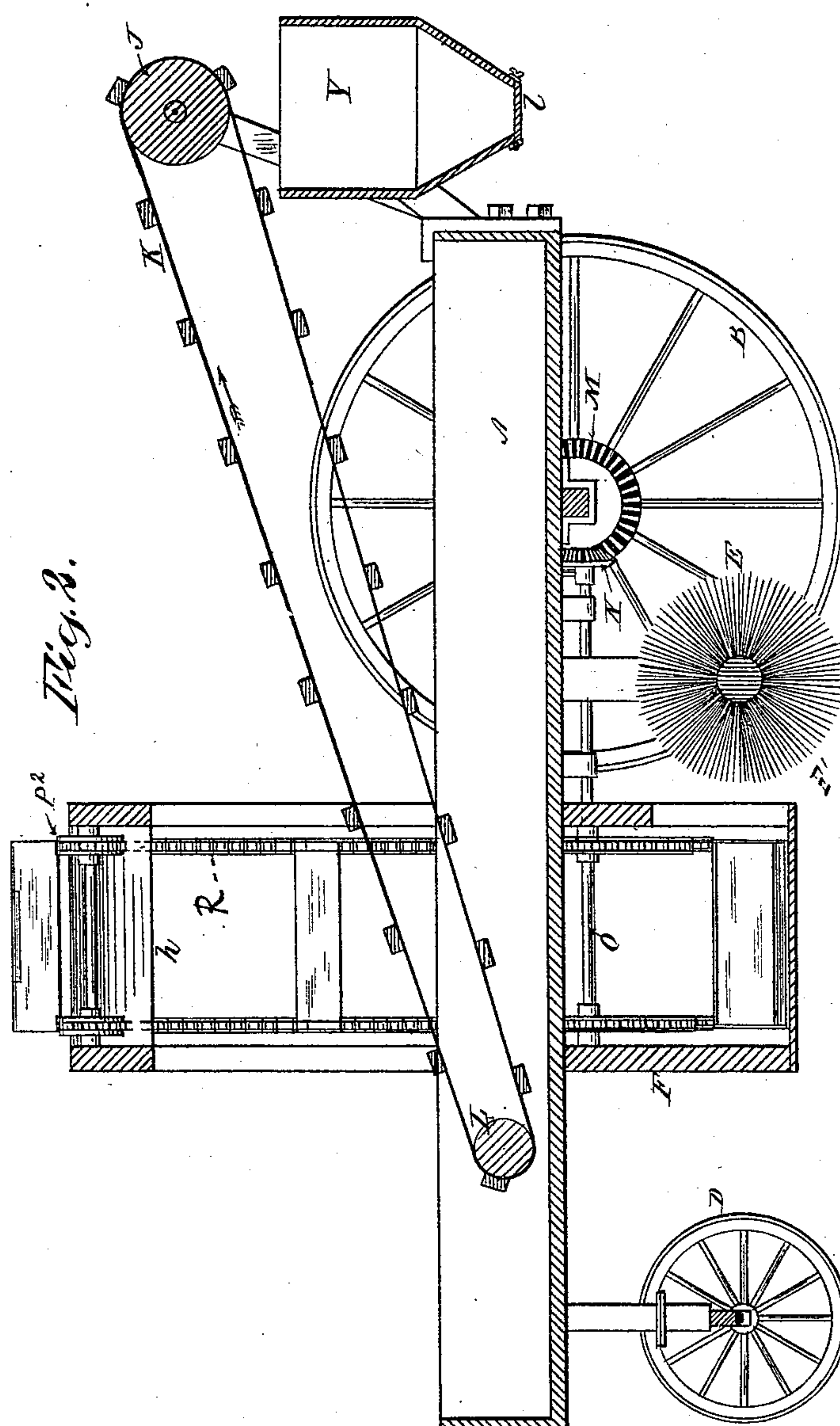
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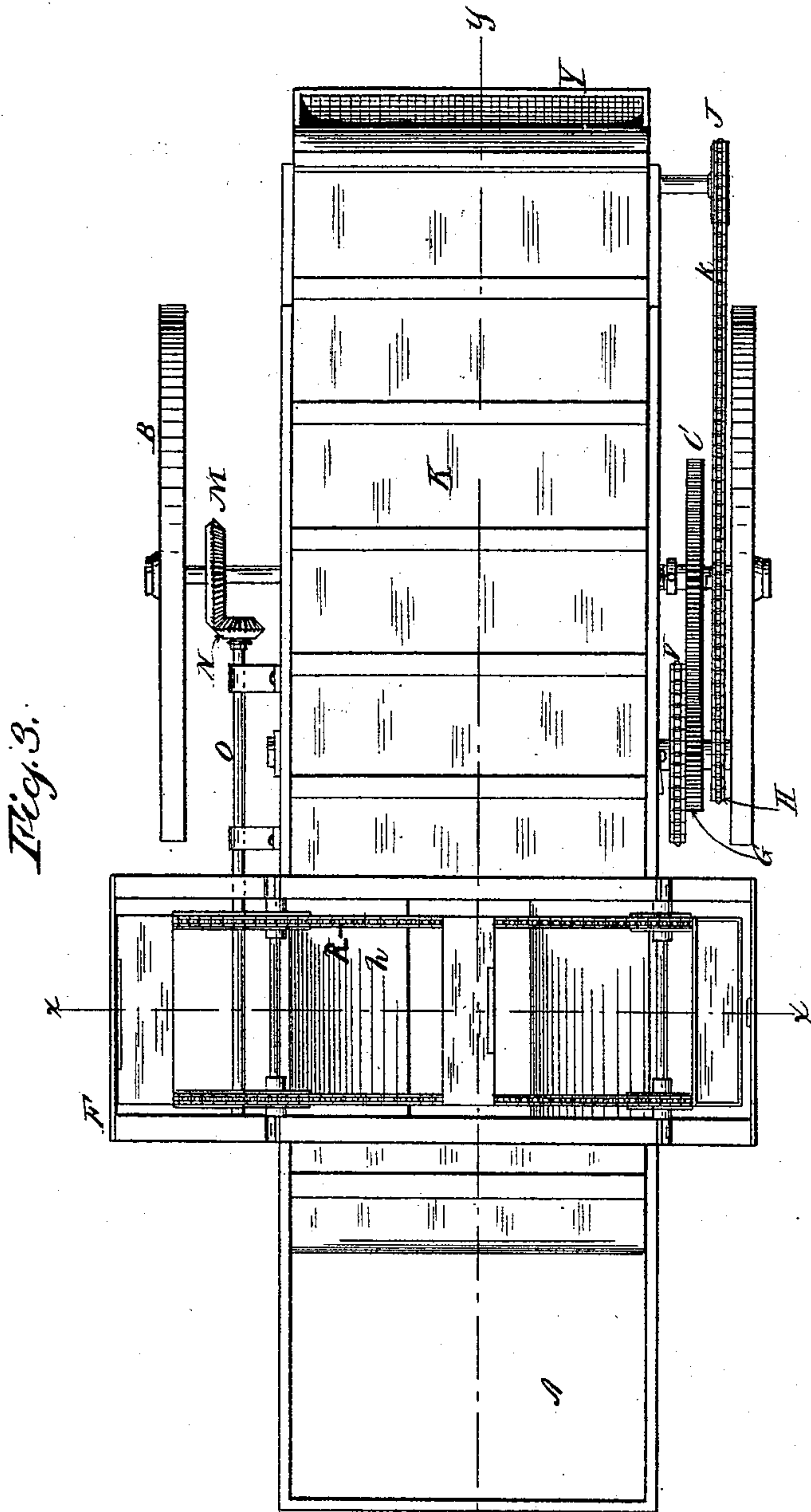
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Fig. 4.

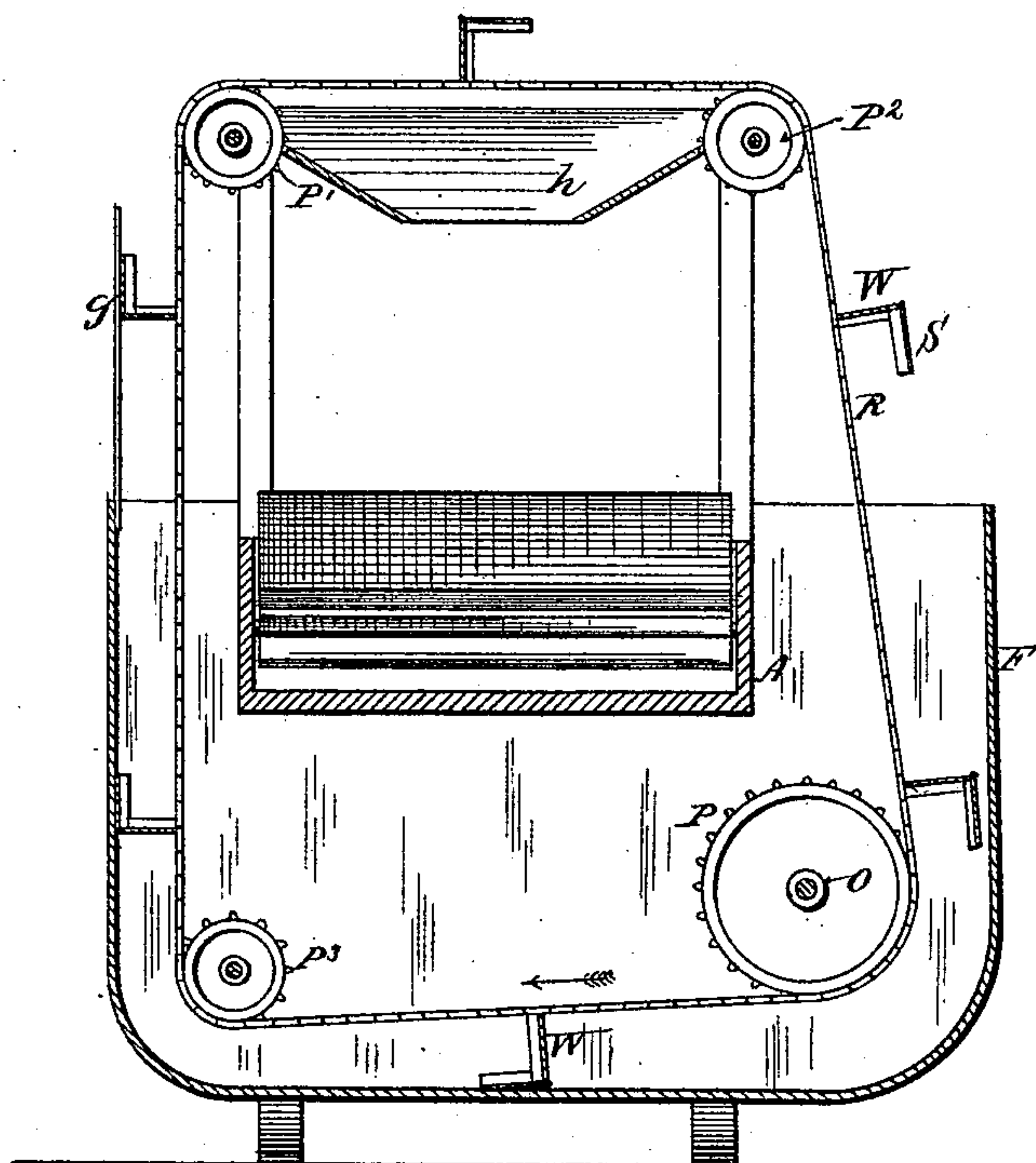
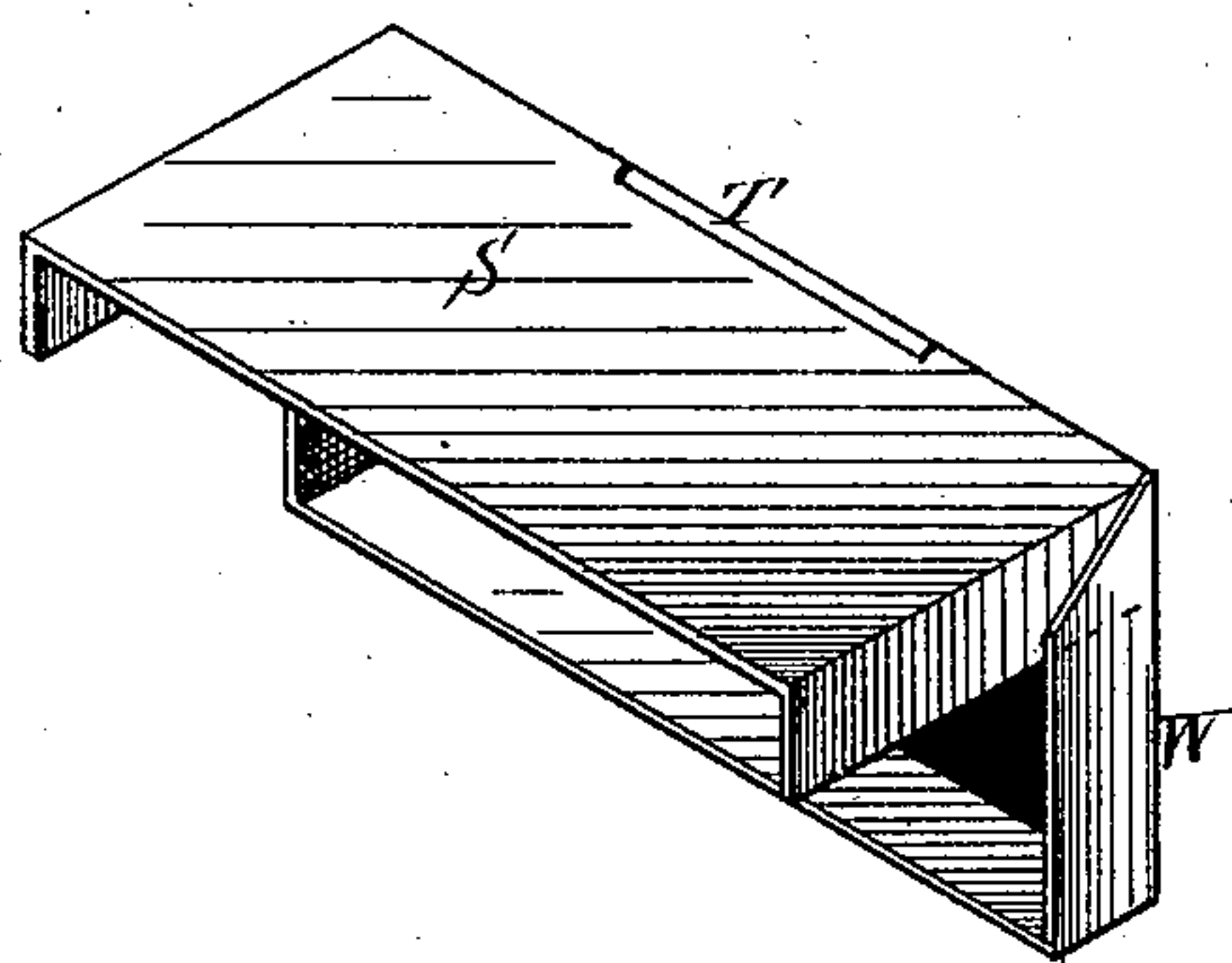


Fig. 5.



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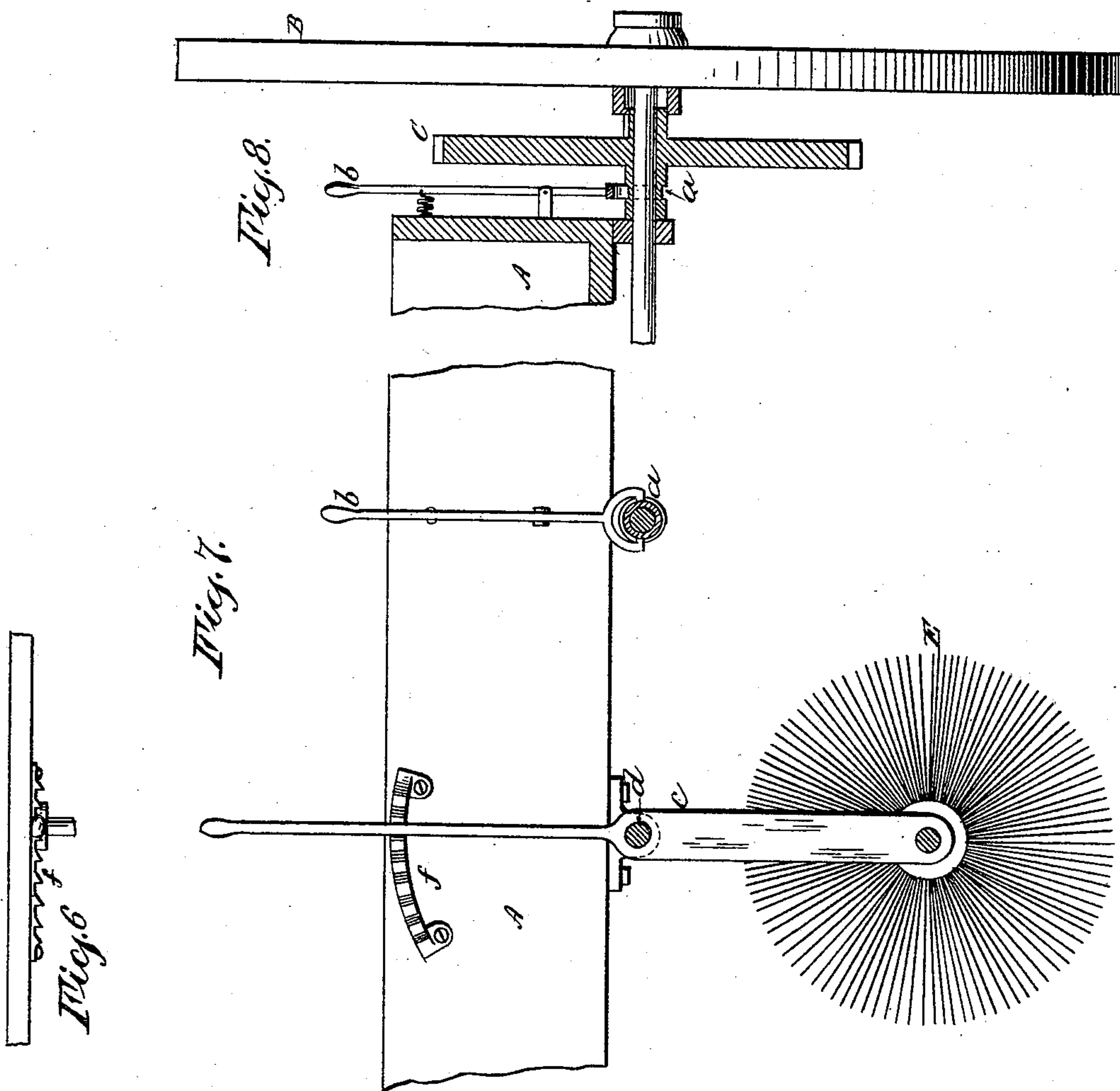
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UNITED STATES PATENT OFFICE,

JULIUS S. GOODNOW, OF BROOKLYN, ASSIGNOR TO HIMSELF AND REBECCA LICHTENSTEIN, OF NEW YORK, N. Y.

SWEEPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 451,927, dated May 12, 1891.

Application filed April 15, 1890. Serial No. 347,975. (No model.)

To all whom it may concern:

Be it known that I, JULIUS S. GOODNOW, of the city of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Sweeping-Machines, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

This invention relates to an improvement in machines for sweeping surfaces, such as streets, and in one operation collecting the dirt or sweepings and carrying the same to a place of deposit—as, for instance, a hopper. The apparatus consists, therefore, essentially of two operative parts—one a sweeping contrivance for sweeping and picking up the dust and removable substances and the second an apparatus for transferring or carrying such sweepings to the point of deposit. In my contrivance as illustrated both of these apparatuses are operated from a wheel of the vehicle carrying them. My apparatus as shown is designed to be mounted upon a wagon pulled by horses or other suitable traction power, and of course is capable of being guided.

My invention will be readily understood from the accompanying drawings, in which—

Figure 1 represents a lateral elevation; Fig. 2, a longitudinal section through Fig. 3 on the line *y y*; Fig. 3, a plan view with the cover removed; Fig. 4, a transverse section through Fig. 3 on the line *x x*; Fig. 5, a detail of the scoop or bucket shown in Fig. 4; Fig. 6, a plan view of the upper end of the brush-adjusting lever, showing the latch; Fig. 7, a vertical elevation of the same, showing also the friction-clutch lever; and Fig. 8, a transverse section through the friction-clutch lever, showing also the main driving-wheel.

My apparatus is mounted generally upon a frame A, supported upon wheels B B D D, the wheels D D being pivoted in the usual manner. The brush E is driven from the driving-wheels B B, the shaft of which drives the gear-wheel C, meshing into the gear G, driving a counter-shaft which drives the sprocket-wheels H and V. The gear-wheel C is thrown into gear by the friction-clutch *a*, controlled by lever *b*, which may be of any usual construction. The brush E is mounted upon the lower end of the lever *c*, pivoted upon the axis *d* of the counter-

shaft. It is driven by a sprocket-chain passing over the sprocket-wheel V and the sprocket-wheel *e* upon the axis of the brush. The position of the brush may be adjusted closer to or farther from the receiving dirt-box F by the movement of the lever *c*. The brush E may be adjusted away from the box by catching the lever *c* behind the latch or cam *f*. The wagon moving forward in the direction of the smaller wheels D, the lower surface of the brush moves in the direction of movement of the wagon, thus throwing the dirt and sweepings into the dirt-box F. In this box the dirt is received and carried upward by a series of scoops or buckets. (Shown clearly in Figs. 4 and 5.) These buckets are carried upon sprocket-chains R R, and consist of two partial boxes S W, hinged at T. The part W is fastened to the sprocket-chains, and the part S can move outward toward parallelism with the part W. As these buckets move in the direction of the arrow, Fig. 4, they pick up and remove the dirt which collects in the bottom of the dirt-chamber F. By the pivoted arrangement shown they are enabled to come close in contact with this surface. As they move upward and pass beyond the limits of the box F their outside portions S are guided by spring *g* until they pass over the roller P' and deliver into the hopper or chute *h*. The sprocket-chains R, carrying these scoops, are driven from the shaft O, driving sprocket-wheel P. The chains pass over the sprocket rollers or wheels P³, P', and P². The shaft O is driven from the miter-gears M N, the miter-gear M being driven directly from the main driving-shaft. The sweepings passing through the chute *h* are delivered upon the surface of the traveling apron K, which may be provided with slats or other conveyers. This apron passes beneath the opening of the chute, and is mounted upon rollers J L. It is driven by the sprocket-chain *k*, which is driven from the sprocket-wheel H. Beneath the roller J is the hopper or chute Y, provided with valve *l*, which may be opened at intervals, as desired. Of course the upper part of the machine is provided with suitable covers to prevent the escape of the dirt. (Not shown in the drawings.)

The operation of the machine is readily un-

derstood. As the machine moves forward, the dirt is picked up by the brush E and thrown into the dirt-receptacle F, passing through the opening F'. It is then scooped up by the buckets S, carried to the hopper H, dropped upon the conveyer K, and finally delivered into the hopper Y. A supplemental wagon may be drawn beneath the hopper Y, or the accumulations therein may be delivered at intervals, as desired.

It is obvious that, though I have shown but one form of construction, my apparatus can be readily modified mechanically without departing from the nature of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a moving vehicle carrying a rotating brush located transversely to the movement of the vehicle, a dirt-receptacle containing a conveyer revolving at right angles to the movement of the vehicle, and a second conveyer located within the first conveyer and adapted to receive and transfer the

dirt elevated by the first conveyer, substantially as described.

2. The combination of the brush E, dirt-receptacle F, conveyer R, internal conveyer K, and chute h, delivering from conveyer R to conveyer K, substantially as described.

3. The combination of the brush E, dirt-receptacle F, having a curved corner, and the buckets W, having their outer portions pivotally connected with their main portions or shanks, while the main portions are rigidly connected to the carrier in such manner as to be free to swing outward beyond a right angle, whereby they are adapted to travel in close contact with the dirt-receptacle, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JULIUS S. GOODNOW.

Witnesses:

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WM. A. POLLOCK.