

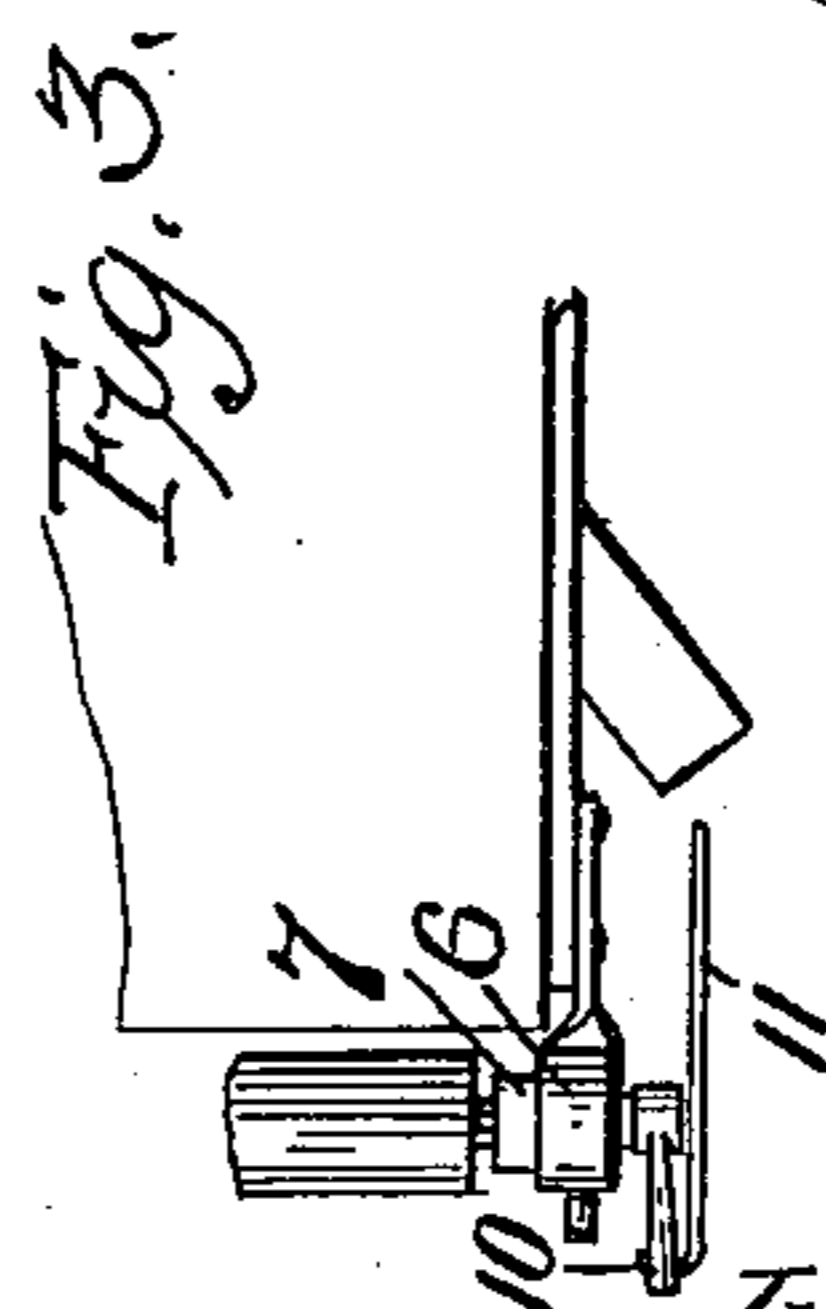
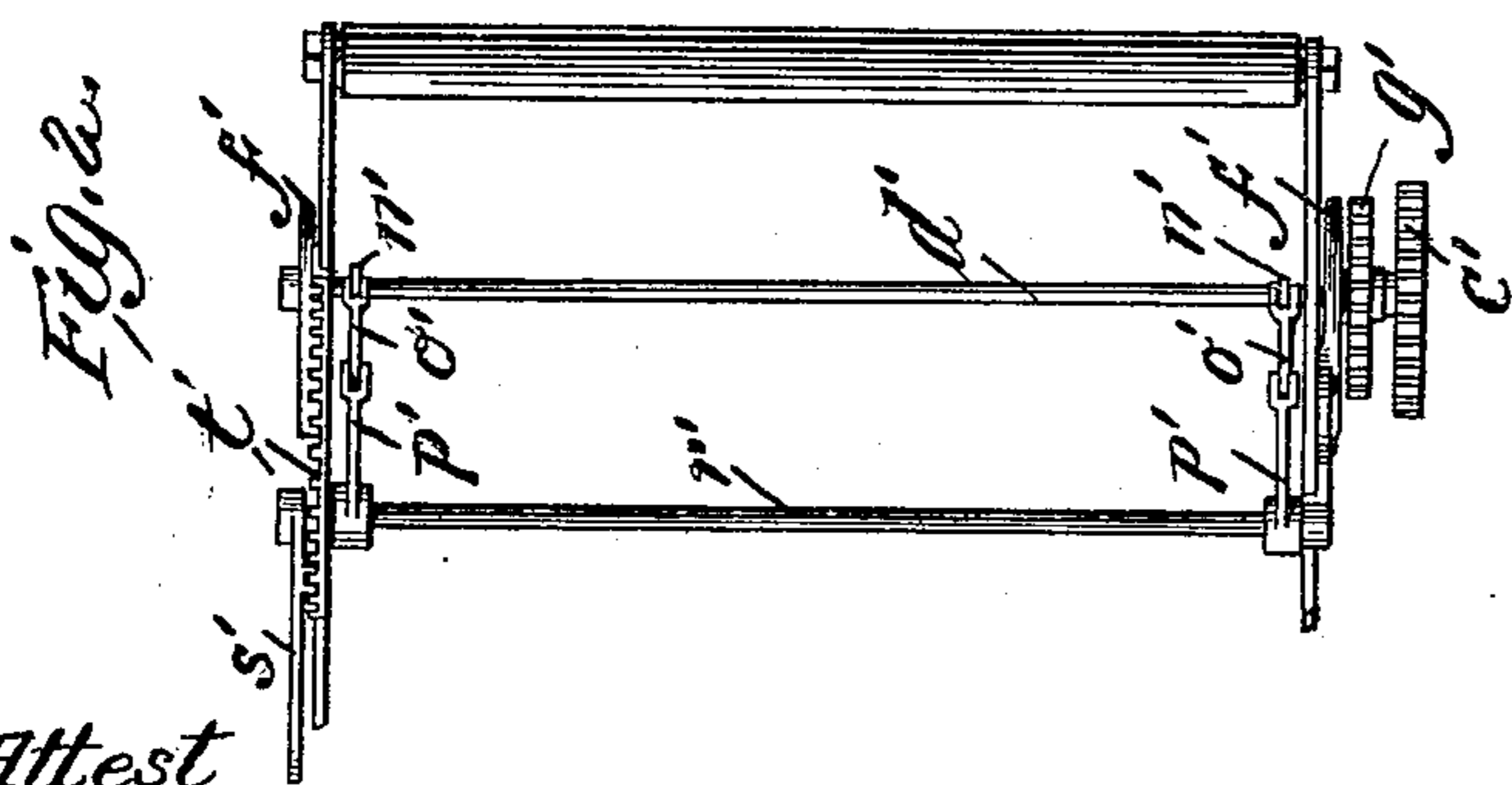
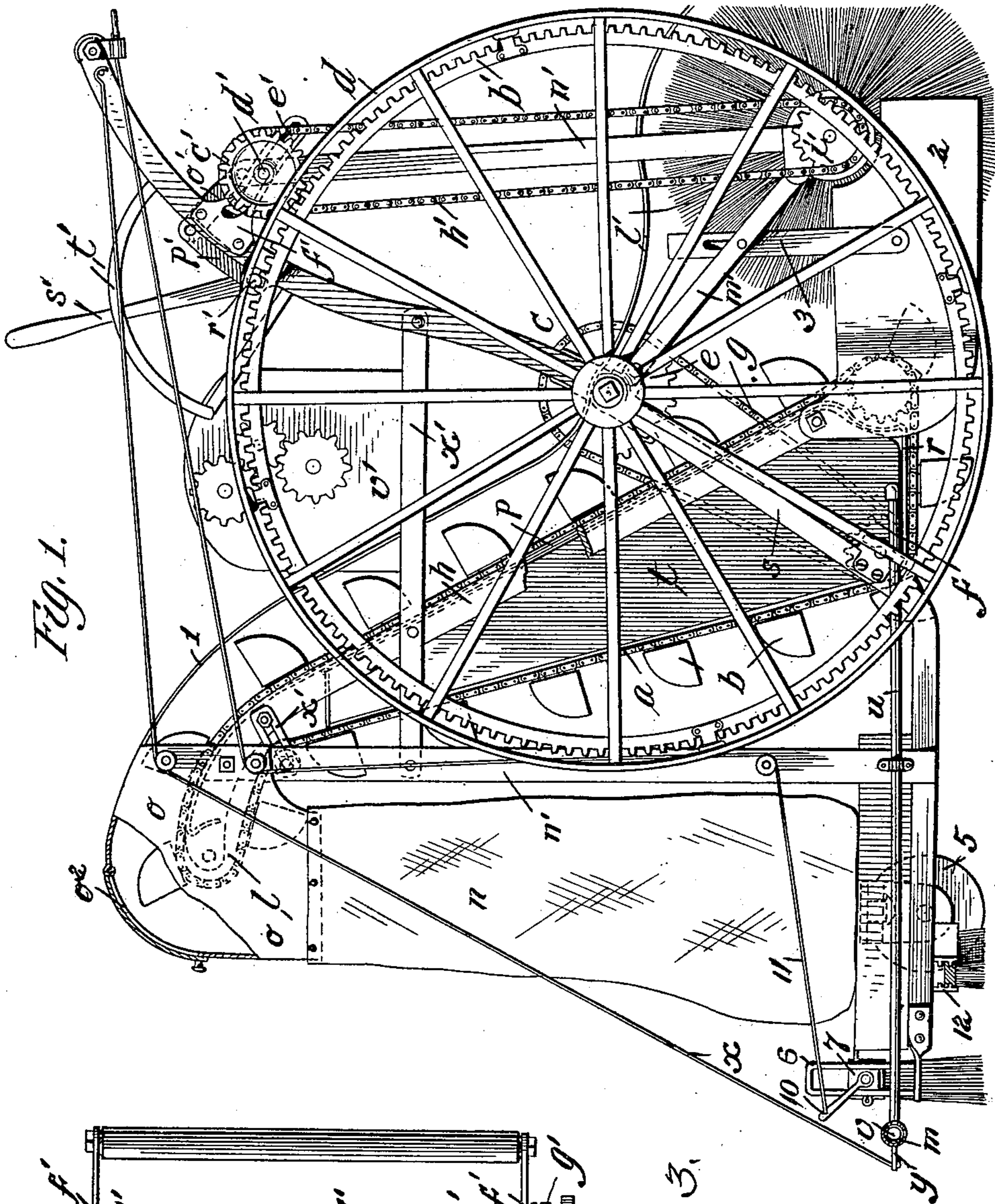
No. 673,734.

Patented May 7, 1901.

G. B. SICCARDI.  
STREET SWEEPER.

(No Model.)

(Application filed July 16, 1900.)



Attest  
Wm. F. Hall,  
Notary Public.

Inventor  
Giovanni B. Siccardi  
by Ellis Spear  
Atty.

# UNITED STATES PATENT OFFICE.

GIOVANNI B. SICCARDI, OF WASHINGTON, DISTRICT OF COLUMBIA.

## STREET-SWEEPER.

SPECIFICATION forming part of Letters Patent No. 673,734, dated May 7, 1901.

Application filed July 16, 1900. Serial No. 23,846. (No model.)

*To all whom it may concern:*

Be it known that I, GIOVANNI B. SICCARDI, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Street-Sweepers, of which the following is a specification.

My invention relates to hand street-sweeping machines such as shown in patent No. 585,600, granted to me on the 27th day of June, 1897, and while the general principle and arrangement of said patented machine are maintained in the present invention the details of construction thereof have been altered to improve the efficiency of and perfect the same generally.

To this end the invention includes the details of construction to be hereinafter described, and particularly pointed out in the claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the machine. Fig. 2 is a detail plan view of the brush-raising mechanism. Fig. 3 is a detail plan view of the scraper.

The framework of the machine is substantially the same as that shown in my patent before referred to and includes a pair of traction-wheels, a front platform for supporting the bag which receives the sweepings, a chain elevator carrying a series of buckets, and rearwardly-extending handles.

The elevator-chain *a*, carrying the buckets *b*, is driven, as in my former case, from the axle *c* of the main wheels *d* through the medium of the sprocket-wheels *e* *f* and chain *g*. Each chain as it ascends rests upon the edge of the adjacent inclined brace *h* and passes over the guide-sprockets *l*, carried at the ends of each brace-piece. To insure the full contents of the buckets *b* falling into the bag *n*, which has its mouth secured to the bottom of the hood *o*, inclosing the upper end of the elevator-chains, the oblique brace-pieces are extended at their upper ends forwardly in a curved direction to a point well over the center of the mouth of said bag.

Extending between the oblique brace-pieces and supported thereby at each edge is a sheet-metal plate *p*, which forms a guard through-

out the full upward travel of the buckets to prevent the sweepings which spill therefrom from falling onto the drive-sprockets and clogging the same. The lower end of this plate is extended in a horizontal direction to form the platform *r*, the end of which is supported by the downwardly-extending braces. Upon this platform and between the vertically-moving portion of the chain a water-tank *t* is supported, and from the lower portion thereof a pipe *u* leads to a transverse discharge-pipe *m*, located in front of the sweeper, which is controlled by a turn-valve *v*, operated from the rear of the machine by means of the cord *x*, secured to the lever *y*.

To one of the main or traction wheels *d*, near the periphery thereof, a gear-wheel *b'* is rigidly secured, with which a gear-wheel *c'* is adapted to mesh. The latter is carried by one end of a spindle *d'*, guided in slots *e'*, concentric to the wheel *d*, in brackets *f'*, secured to the handle-braces. The spindle *d'* also has secured thereto a sprocket-wheel *g'*, which, through the chain *h'* and sprocket *i*, drives the brush *l'*. The spindle of the latter is journaled in brackets at the intersection of the downwardly-extending pivotal brace *m'* and the vertical arms *n'*. Through the latter, near their upper ends, the spindle *d'* passes, and to the extreme ends of said arms the lower ends of link *o'* are pivotally connected, the upper ends of the latter being pivotally connected to the upper ends of arms *P*, rigidly connected to and extending laterally from the rock-shaft *r'*, journaled in brackets on the handle-braces. This shaft carries an operating-handle *s'*, which normally engages a toothed segment *t'*. By operating this handle the spindle *d'* can be moved up or down in the slots *e'* and through the arms *n'* the brush raised or lowered. As the slots *e'* are concentric to the axle *c*, the gears *d'* and *c'* will remain in engagement during the adjustment of the brush. To disengage said gears to stop the rotation of the brush, the upper ends of the slots are extended laterally, so that as the spindle *d'* reaches its extreme forward movement it will ride up in these lateral extensions and raise the gear *c'* out of mesh with gear *b'*. To assist the operator in propelling the machine, a mechanical or electrical motor may be employed.

This motor  $v'$  is mounted, preferably, between the horizontal brace-bars  $x'$ , and the drive-shaft thereof is geared to the wheel  $b'$ .

To incase the parts of the machine to the greatest degree compatible with the efficient working of the same, I provide a guard  $l$ , which extends from the hood  $o$  down outside of the elevator and over the brush. Upon each side of the brush a guard is also located, which in the present case is formed by a plate 2, secured to each brace  $h$  and to the braces  $m'$  by means of arms 3.

The front part of the machine is supported upon a wheel 5, swiveled beneath the platform. To the side bars of this platform, at the end thereof, guide-brackets 6 are secured, in which blocks 7 are adjustably held, the latter forming journals for the spindles of the scraper. One of the spindles is extended through its block and receives a lever 10, operated by a cable or cord 11, running to the rear of the machine, whereby the scraper may be tilted from the rear of the machine. The gutter-brush is carried by a casing 12, extending obliquely from one of the side bars. This casing has a series of pairs of ribs which coact with corresponding grooves in the back of the brush to hold the latter in place. The pairs of ribs are placed one pair below the other, so that as the fiber of the brush wears it may be placed in a lower position in the holder. The hood  $o$  is provided with an opening  $o^2$ , into which paper or the like, which would not be swept into the scoops, may be placed by the operator by hand, a suitable flap covering the opening.

Near the upper end of each brace  $n'$  a slotted arm  $x'$  is adjustably secured, which carries at its end a roller, over which the elevator-chain is guided.

By adjusting the arm the tension of the chain can be varied to compensate for the contraction or expansion of the same due to heat or cold.

I claim—

1. The combination with a hand sweeping-machine including traction-wheels, a rotary brush and rearwardly-extending handle-braces, of a gear secured to one of said wheels, slotted brackets secured to said handle-braces, a spindle guided in said brackets, a gear carried thereby in mesh with the first gear, a sprocket-wheel on said spindle, a drive connection from the same to the brush, a rock-shaft, a lever for rocking the same, and means interposed between the shaft and spindle for shifting the latter and there-through the brush, substantially as described.

2. In combination in a hand-sweeper including the main wheels, a gear carried thereby, rearwardly-extending handle-braces, a brush, brackets extending from handle-braces, a spindle guided in the same, drive connections between said spindle and brush, a gear carried by said brush adapted to mesh

with the first gear, arms secured to the spindle and to the brush, links secured to the arms, a rock-shaft, arms extending therefrom connected to said links, a lever for rocking said shaft and means for holding said lever in place, substantially as described.

3. In combination, in a hand-sweeper including the main wheels, a gear carried thereby, rearwardly-extending handle-braces, a brush, brackets extending from said handle-braces, a spindle guided in the same, drive connections between said spindle and brush, a gear carried by said spindle adapted to mesh with the first gear, arms secured to the spindle and to the brush, links secured to the arms, a rock-shaft, arms extending therefrom connected to said links, a lever for rocking said shaft and means for holding said lever in place, said brackets having slots therein concentric with said main wheel for guiding said spindle, said slots terminating in lateral extensions, substantially as described.

4. The combination in a hand street-sweeping machine, of supporting-wheels, a rotary brush, scrapers at the front of the machine, an endless elevator-chain forming a loop, a water-tank carried by the machine located within the loop formed by the chain and a pipe leading therefrom discharging in advance of the scraper, substantially as described.

5. The combination with a hand street-sweeping machine having supporting-wheels, a brush located in the rear of the same rotated therefrom, an elevator in front of the wheels and a platform, of a scraper in advance of the machine extending transversely of the sweeper, vertically-arranged brackets at each side of the platform at the front thereof, bearing-blocks adjustably supported in said brackets, spindles extending from the ends of the brush journaled in said blocks, and means operated from the rear of the machine for turning the brush to raise the same.

6. The combination with a hand street-sweeping machine having supporting-wheels, a brush located in the rear of the same, rotated therefrom, an elevator in front of the wheels and a platform, of a scraper in advance of the machine extending transversely of the sweeper, vertically-arranged brackets at each side of the platform at the front thereof, bearing-blocks adjustably supported in said brackets, spindles extending from the ends of the brush journaled in said blocks, a lever fixed to one spindle, and a cord for operating the same to tilt the brush running to the rear of the machine, substantially as described.

7. In combination in a hand sweeping-machine, supporting-wheels, a gear secured to one of said wheels, rearwardly-extending handle-braces, a gear supported therefrom in mesh with the first gear, a brush-roll connections from the second gear to the brush-roll for operating the latter, a vertically-moving

elevator, a series of buckets carried thereby,  
a platform, a hood at the upper end of the  
elevator, a door therein, a guard-plate located  
beneath the upwardly-moving scoops, a guard-  
5 plate forming a continuation of the hood ex-  
tending down and over the brush, side guards  
at the ends of the brush, a water tank and dis-  
charge, a scraper and cords for controlling

the water-discharge and lifting the scraper  
extending to the rear of the machine. 10

In testimony whereof I affix my signature  
in presence of two witnesses.

GIOVANNI B. SICCARDI.

Witnesses:

HENRY E. COOPER,

WALTER DONALDSON.