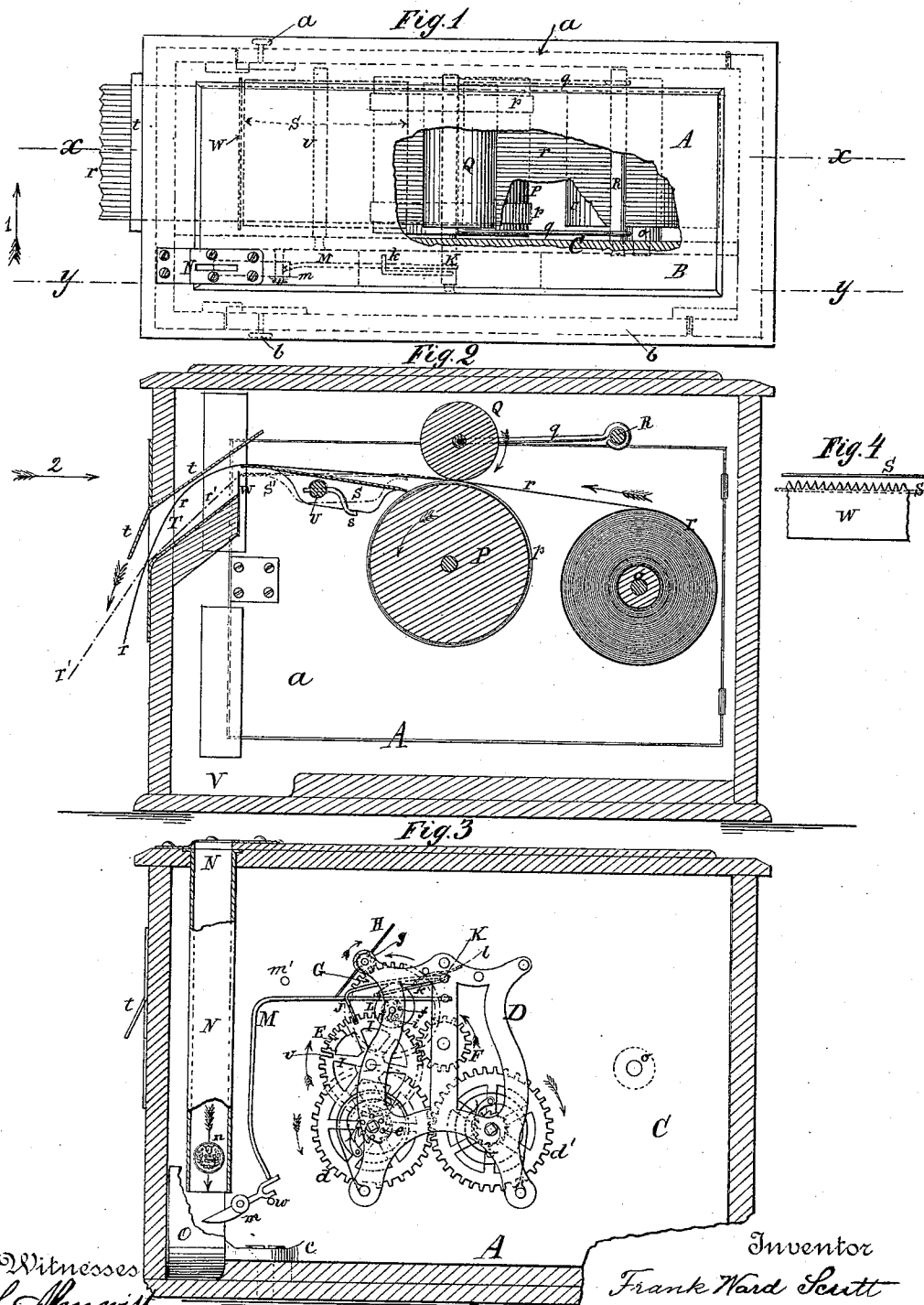


(No Model.)

F. W. SCUTT.
TOILET PAPER DISTRIBUTER.

No. 464,321.

Patented Dec. 1, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

FRANK WARD SCUTT, OF LONG ISLAND CITY, NEW YORK.

TOILET-PAPER DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 464,321, dated December 1, 1891.

Application filed February 5, 1891. Serial No. 380,380. (No model.)

To all whom it may concern:

Be it known that I, FRANK WARD SCUTT, a citizen of the United States, and a resident of Long Island City, in the State of New York and county of Queens, have invented a new and useful Improvement in Toilet-Paper Distributers, of which the following is a specification.

The object of my invention is to provide, suitable for use in privies of hotels, saloons, and other public places, a toilet-paper cabinet or box containing a clock-work or similar machinery connected with a paper feed, cutter, paper-roll holder, and a drop-and-stop motion in such a manner that by depositing a one-cent coin in the drop the machine will be set in motion and, unwinding from the roll a certain fixed length of paper, will deliver the same through a slot or opening in the wall of the said cabinet, the piece delivered being cut within the box and detached by a slight pull of the hand. This will prevent the excessive waste and pocketing of toilet-paper in places where it is now supplied gratis and will insure a constant supply, since such supply will no longer be a source of loss to the proprietors.

The invention will be hereinafter fully described and specifically claimed, reference being had to the accompanying drawings, in which—

Figure 1 represents a top view, partly broken out, of a toilet-paper distributor embodying my present invention. Fig. 2 is a vertical section of the same, taken on the line *xx* of Fig. 1 and seen in direction of arrow 1. Fig. 3 is a vertical section of the same, taken on the line *yy* of Fig. 1, and seen in direction of arrow 1. Fig. 4 is a detail view of the paper-cutting device as seen in direction of arrow 2, Fig. 2.

The box or cabinet is divided longitudinally by a metallic plate C (to which all the movable machinery is attached) into two compartments A and B, provided with lock-doors *a* and *b*, respectively, the former compartment A containing the paper and feeder and the latter B containing the mechanism for operating the same. The plate C is secured upon the bottom of the box by screws through lugs *c*. (See Fig. 3.)

D is an ordinary clock-work whose frame

is secured to the vertical plate C, and has two mainspring-wheels *d d'*, (with the usual ratchets, &c., as shown in Fig. 3, for winding the springs,) which mesh together, and thus co-operate to furnish the motive power, whereby the labor is divided upon two springs, each of one-half of the power needed if only one spring were used, also making it easier to wind them. The direction of the motion of all the wheels when turning is indicated by curved arrows on the drawings. By pinion *e* on shaft of wheel *d* motion is communicated to wheel E, and by this latter to wheel F on the feed-drum shaft and to pinion *f* on the wheel G, which latter wheel meshes with the fly-shaft pinion *g*, and thus revolves the fly H. A single tooth *i* on the shaft of wheel G engages the teeth of the escapement-wheel I, thus moving it the space of one tooth at a time, until the stop-hook J, raised from one of the stop-notches *v*, made at intervals in the bottom of the spaces between the teeth, drops into and lodges in the next one, the diameters of the feed-drums and the drum-wheel F being so proportioned to that of the wheel E and to the interval between two consecutive stop-notches *v* that the desired fixed length of paper is fed forward and delivered between each two successive stops. The said stop-hook J is rigidly secured to a small shaft K, pivoted in the clock-work frame, and to said shaft is also rigidly secured a stop-pawl *k*, (hook-shaped, as seen in Fig. 1,) which by a spring *l* is held down upon the face of a cam L, mounted on the shaft of wheel G. When the hook J rests in one of the notches *v*, the stop-pawl *k* engages a shoulder on the cam L, as seen in Fig. 3, and thus prevents the wheels from being turned by the force of the wound mainsprings. When the wheels are in motion, the action of the cam L lifts the hook J out of one interteeth space of the escapement-wheel for each revolution and the single tooth *i* brings the next space in juxtaposition to the hook. The ordinary interteeth spaces are not deep enough to allow the stop-pawl *k* to drop sufficiently low to engage the shoulder on the cam L. Hence the motion continues until the hook J drops into the next deep space or stop-notch *v*.

With the exception of the two mainspring-wheels *d d'* co-operating, the general features

of the gearing and escapement are those common in ordinary clock-works. The springs being wound, to start the machinery it is thus only necessary to raise the stop-pawl *k*, and thereby also the stop-hook *J*. This is done directly by the arm or lever *M* and indirectly by the descending one-cent coin *n* in the following manner: The arm *M*, secured to a shaft pivoted in the clock-work frame, is bent at an angle and supported with the lower end of its vertical part upon the inner end of the trip-lever *m*, resting on a stop *w*. The lever *m* is pivoted upon a stud attached to the plate *C*, and its outer end projects under the drop or guide *N* for the fall of the coin *n*. The horizontal part of the arm *M* in its normal position underlies the pawl *k* in close contact, and its upward movement is limited by a stop *m'* on the plate *C*. By the impact on the trip-lever *m*, due to the weight and momentum of the falling coin *n*, the arm *M* is raised, and in its turn lifting the pawl *k* from the shoulder on cam *L*, and thereby also the hook *J* from the notch *v* on the escapement-wheel *I*, allows the wheels to move by the force of the wound springs, moderated by the inertia caused by the resistance of the air to the motion of the fly *H* in the usual manner of clock-works. After tripping the lever *m* the coin drops onto a curved guide-plate *O* below, which causes it to slide into a cavity *V* in the adjacent compartment *A*, (see Fig. 2,) where access to remove it can be had by unlocking and opening the door *a*.

P is the paper-feed drum or roller, which, as before stated, is mounted upon the same shaft as the wheel *F*. The drum *P* is surrounded by rubber bands *p* to prevent slipping of the paper web *r*, which, unwinding from a paper roll on a stud *o*, secured to the plate *C*, passes over the drum, being pressed upon the rubber bands *p* by the weight of a roller, or so-called "idler" *Q*, which is pivoted on a shaft, hinged by arms *q*, upon a stationary stud *R*, secured to plate *C*.

T is the spout or opening in the wall of the box through which the paper is delivered. At the point where the paper web *r* enters the spout is secured in position underneath and crosswise to the web a serrated knife or cutter *W*, and between the latter and the feed-drum *P* is pivoted upon a stud *U*, secured to the plate *C*, a platform *S*, whose forward edge reaches close to but without touching the cutter *W*. Upon this platform the paper web slides to the spout *T* when being pushed out by and between the drum and idler *P* *Q*. The platform is weighted or balanced so that its inner end preponderates, and in its normal position rests upon a stop *s*, sufficiently low to elevate the outer end a little above the edge of the cutter *W*, in order that the paper web, when passing to and through the spout *T*,

shall not come in contact with the teeth of the cutter. When the machine, having been started by depositing a one-cent coin in the drop *N* and having delivered the certain given length of the paper web, stops, the piece delivered is detached from the remainder of the web by a pull of the hand. The effect of thus pulling is easily understood with reference to Figs. 2 and 4. By the pull the web *r* and weighted platform *S* assume the positions indicated by the dotted and dashed lines *r'* and *s'*, the outer edge of the platform dips below the edge of the cutter *W*, and the web is caught upon and severed by the teeth of the latter. When the downward pressure of the pull ceases, the weighted platform resumes its normal position, elevating its forward end and the web thereon above the edge of the cutter in proper position for an unimpeded next feed.

Having thus described my invention, I desire it understood that I lay no claim to the principle of automatic delivery of articles from a box by a clock-work or other machinery started by dropping a coin in a slot, for such principle has been numerously applied heretofore.

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

1. A toilet-paper distributor comprising a box or cabinet provided with a coin-drop, as *N*, delivery-spout, as *T*, and a stationary cutter *W*, and within the said box a detachable plate or frame *C*, carrying on one side a paper-feeder, communicating with the said spout, and on the opposite side a motor, operating the said feeder and having start-and-stop mechanism communicating with the said drop.

2. In combination with a web-feeder, as *P* *Q*, and motor for operating the same, a stationary cutter *W*, and a weighted platform *S*, guiding the web to and normally elevating it above the said cutter, but yielding and dipping below the cutting-edge when the delivered end of the paper is pulled, for the purpose of bringing the web in contact with and severing it on said cutter.

3. The combination of a drop *N*, trip-lever *m* below said drop, starter *M*, actuated by said lever, and a motor *D*, feed-drum *P*, having friction-surface *p* and operated by said motor, idler *Q*, web-holder *o*, tilting platform *S*, cutter *W*, and delivery spout or opening *T*, all contained in a box or cabinet, substantially as hereinbefore set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 30th day of January, 1891.

FRANK WARD SCUTT.

Witnesses:

FREDK. U. SMITH,
H. T. PAYNE.