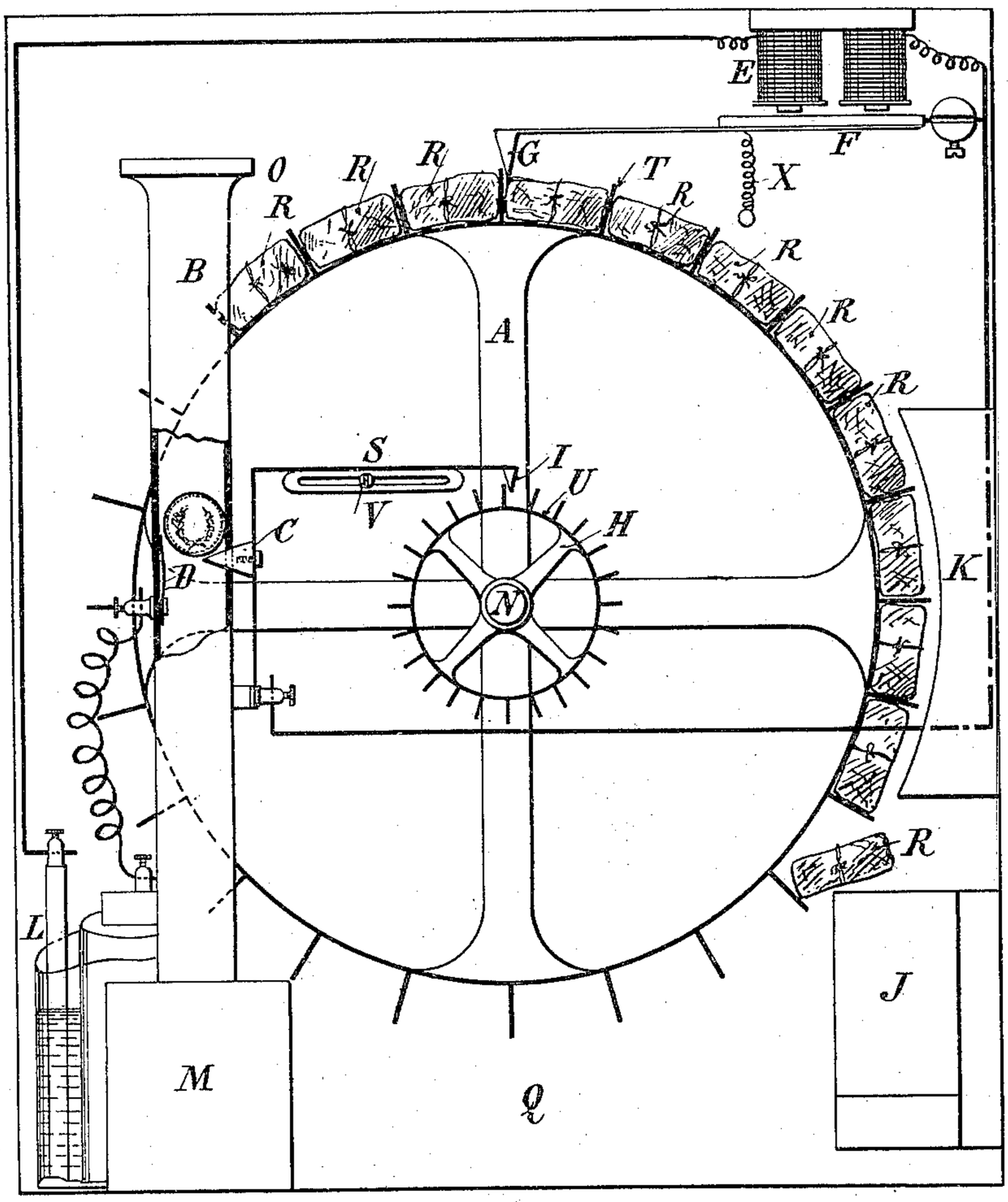
(No Model.) 2 Sheets—Sheet 1.

A. BRUNET.

APPARATUS FOR DELIVERING PREPAID GOODS.

No. 372,010. Patented Oct. 25, 1887.

FIG. 1.



Witnesses

John M. Speer

F. F. Bourne.

Inventor:

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(No Model.) 2 Sheets—Sheet 2.

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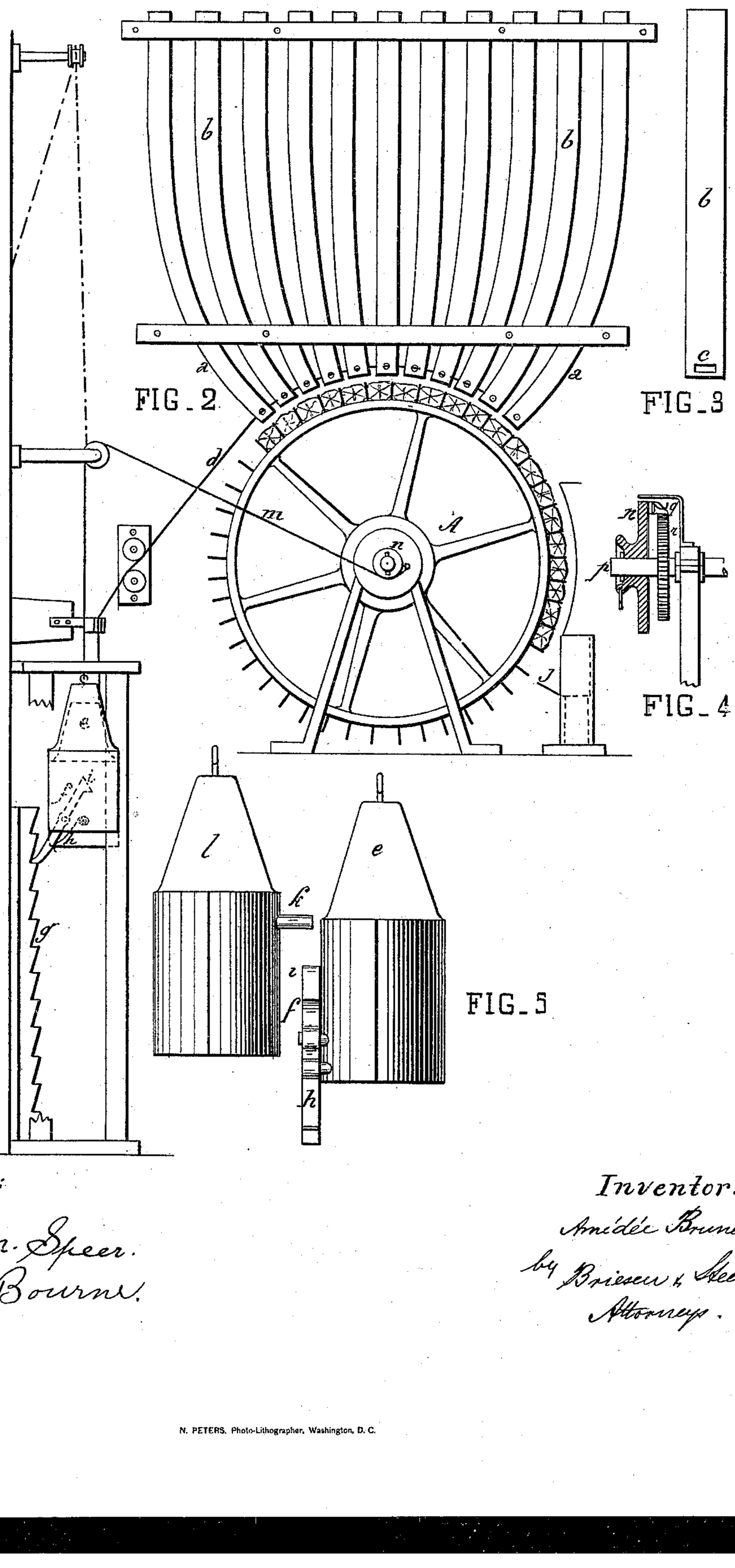

FIG_2

FIG_3

FIG_4

FIG_5

Witnesses:

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UNITED STATES PATENT OFFICE.

AMÉDÉE BRUNET, OF PARIS, FRANCE.

APPARATUS FOR DELIVERING PREPAID GOODS.

SPECIFICATION forming part of Letters Patent No. 372,010, dated October 25, 1887.

Application filed February 3, 1887. Serial No. 226,403. (No model.)

To all whom it may concern:

Be it known that I, AMÉDÉE BRUNET, of the city of Paris, France, have invented new and useful Improvements in Apparatus for the Delivery of Prepaid Goods, of which the following is a full, clear, and exact description.

This invention relates to apparatus for automatically delivering small packets of bonbons or other articles; and it consists of a drum divided into compartments of a size suitable to contain the articles to be delivered, and caused to revolve by the action of gravity, and of an electrically-operated detent, which prevents the drum revolving until a coin of the proper denomination is introduced into the apparatus.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows a central vertical section of the distributer. Fig. 2 shows a complete view of the feeding mechanism. Fig. 3 shows a side view of one of the feeding-tubes. Fig. 4 shows a sectional view made through the axis of the distributing-drum. Fig. 5 shows the respective positions of the counter-weights of the feeding mechanism.

In the figures like letters refer to like parts.

The apparatus consists, essentially, of a drum, A, whose periphery is divided into a number of compartments by division-plates F, to contain the articles, R, to be delivered. The drum A is mounted to revolve upon a shaft, N, supported in a closed casing, Q.

B is a chute of flattened form arranged at one side of the drum, and having at its upper end a mouth or aperture, O, into which pennies or coins of the proper denomination are introduced, and at its lower end a receptacle, M, in which the coins are received. Within the chute B, and at opposite sides thereof, are two contacts, D C, in circuit with a battery, L. E is an electro-magnet in the circuit, the soft-iron armature F of which controls the detent G, which retains the drum. The contact C projects into the chute B, and it is carried by a slotted guide-bar, S. H is a wheel mounted on the same axis as the drum, and provided with pins or projections U, which strike the projection I of the guide-bar S and withdraw the contact C, so as to allow the coin to fall. K is a shield or guard, beneath which the articles are delivered as the drum revolves.

The operation of the apparatus is as follows: The coin in passing down the chute strikes the contacts D C, thereby closing the circuit and exciting the electro-magnet E. The armature F is attracted and the detent G raised so as to release the drum A, whereupon the weight of the packets, which are properly disposed around the drum A for the purpose, rotates the drum by the action of gravity, together with the wheel H, and delivers a packet onto the inclined surface J and discharges it from the apparatus. The contact C is withdrawn and the coin allowed to fall into the receptacle M by the teeth U of wheel H acting on a projection, I, of the bar S. The direct action of the teeth U may be replaced by the action of a pawl and ratchet mounted at any suitable point in the mechanism. At this moment the circuit is broken, and the armature F, being no longer attracted by the electro-magnet, is returned to its original position by spring X, and the detent G again engages with the next succeeding division-plate T and prevents the further revolution of the drum until a fresh coin is introduced into the chute P. As soon as a packet has been delivered from the drum onto the incline J, it is replaced by another packet fed by the feed mechanism *a*. This latter consists of a certain number of tubes, *b*, containing a number of packets or articles to be delivered. The tubes are provided at their lower end with a slit, *c*, through which may be passed a flexible rod or stick, *d*, such as a whalebone or steel ribbon. The object of this flexible stick is to retain the packets within the tubes, and also to open these tubes successively, in order that the packets may be fed at proper time. For this object the stick *d* is connected with a counter-weight, *e*, carrying a pawl, *f*, which is pressed by a spring, *h*, against the teeth of a rack, *g*. The upper end of the pawl is provided with an incline, *i*, upon which rests, at proper intervals of time, the pin *k*, carried by a second counter-weight, *l*. The counter-weight *l* is caused to descend gradually when the drum A rotates upon its axis. To this end the counter-weight *l* is carried by a string or wire, *m*, wound upon a grooved pulley, *n*. The pulley *n* may freely turn upon

the shaft *p;* but the rotary motion of the drum A is communicated to it through a pawl, *q*, engaging into a ratchet-wheel, *r*, keyed upon the shaft *p*.

From this description it will be easily understood that the string *m* is unwound from the pulley *n*, and the counter-weight *l* descends in proportion as the drum A rotates and delivers the packets or articles. When a suitable length of the string has become unwound, the pin *k*, carried by the counter-weight *l*, presses upon the incline *i* of the pawl *f*, so that the latter is withdrawn from the rack-teeth *g*. At this moment the counter-weight *e* is liberated and may freely fall until the ratchet is again stopped by the following tooth of the rack. In this movement the counter-weight withdraws the flexible stick *d* from one of the tubes *b*. When this tube has been emptied, the same operation is repeated automatically and the following tube is opened so as to feed the packets or articles onto the drum A.

The apparatus may be modified without departing from the invention. For example, any other arrangement may be adopted for insuring communication between contacts C and D, as well as any other means of withdrawing contact C to allow the coin to fall into the drawer on the delivery of a packet.

I claim—

1. In an apparatus for delivering prepaid goods, the feeding mechanism which consists in the combination of the tubes *b*, the flexible strip or stick *d*, the counter-weights *e* and *l*, and the pawl *f* and rack *g*, the whole operating substantially as shown and described.

2. An apparatus for delivering prepaid goods, consisting in the combination, with a rotary drum, A, arranged to carry packets, of an electro-magnet, E, for controlling the locking device of the drum, which magnet is excited by the passage of a current when the circuit is closed by the introduction of a coin into a tube or chute, the coin then forming part of the circuit, substantially as herein described.

3. In an apparatus for delivering prepaid articles, the drum A, electro-magnet E, in circuit with the battery L, armature F, and detent G, for retaining and releasing the drum, in combination with contacts C D and chute B, so arranged that a coin passed into the chute will itself close and form part of the circuit by resting on the contacts C D, substantially as described.

4. The drum A, electro-magnet and armature E F, in circuit with battery L, contacts C D, chute B, and with a coin for closing the circuit to release the drum, in combination with the wheel H, having projections U, guide-bar S, carrying contact C, and projection I, for releasing the coin and breaking the circuit, substantially as described.

The foregoing specification of my improvements in apparatus for the delivery of prepaid goods signed by me this 18th day of October, 1886.

AMÉDÉE BRUNET.

Witnesses:
ROBT. M. HOOPER,
ALBERT MOREAU.