

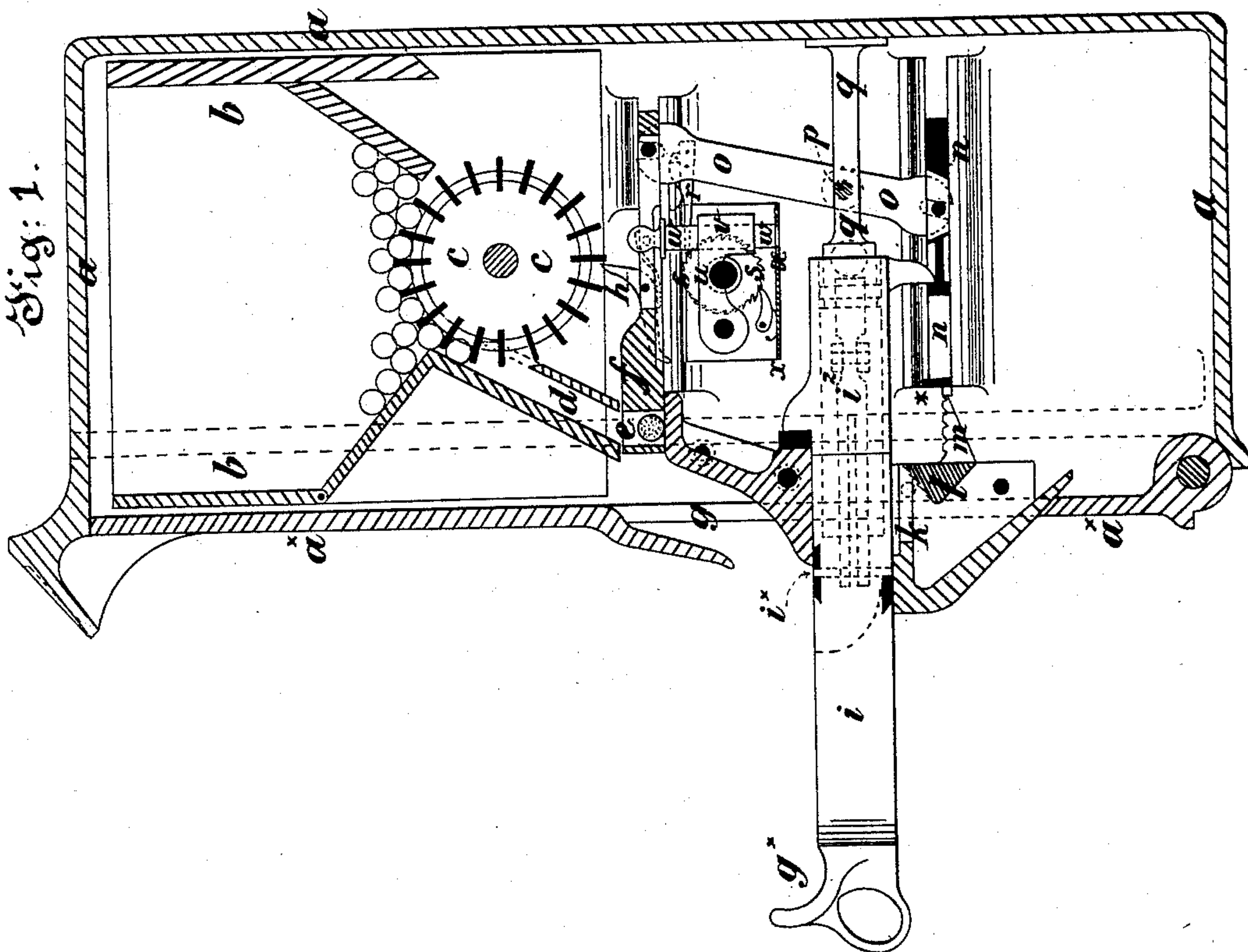
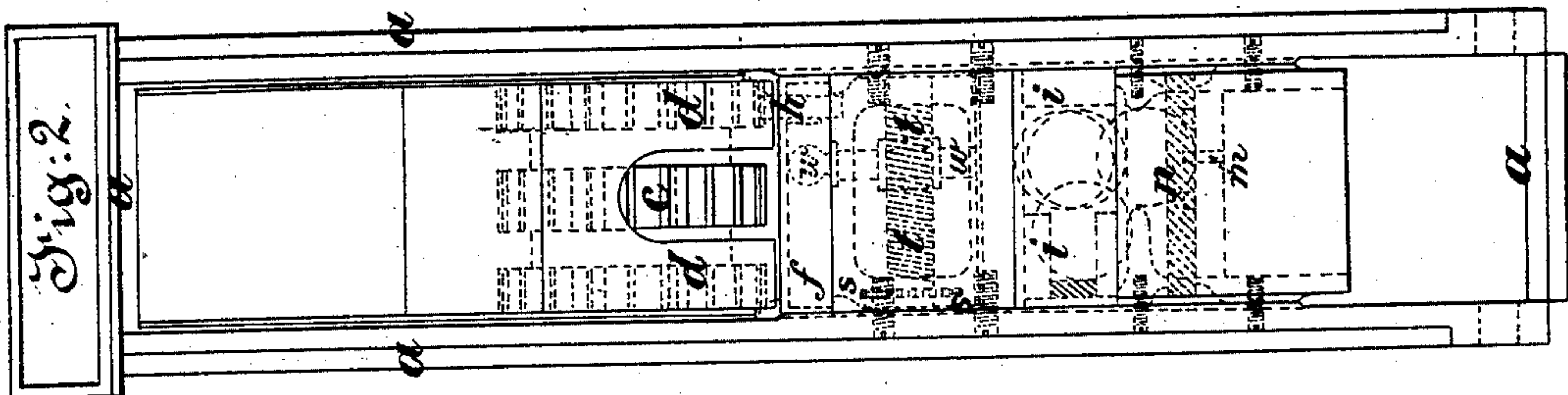
(No Model.)

F. C. LYNDE.

AUTOMATIC VENDING APPARATUS.

No. 371,146.

Patented Oct. 4, 1887.



Witnesses:  
*Alex. Barkoff*  
*John E. Parker.*

Inventor:  
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by his Attorneys  
*Howson and Sons*



# UNITED STATES PATENT OFFICE.

FREDERICK C. LYNDE, OF MANCHESTER, COUNTY OF LANCASTER, ENGLAND.

## AUTOMATIC VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 371,146, dated October 4, 1887.

Application filed November 15, 1886. Serial No. 218,881. (No model.) Patented in Germany November 4, 1886, No. 39,966; in Belgium November 17, 1886, No. 75,253, and in Italy November 19, 1886, No. 20,828.

*To all whom it may concern:*

Be it known that I, FREDERICK CHARLES LYNDE, a subject of the Queen of Great Britain and Ireland, and residing at Manchester, county of Lancaster, England, have invented Improved Apparatus for the Automatic Delivery of Prepaid Goods, (for which I have obtained Belgian Patent No. 75,253, dated November 17, 1886; German Patent No. 39,966, dated November 4, 1886, and Italian Patent No. 20,828, dated November 19, 1886,) of which the following is a specification.

This invention relates to the construction of an improved apparatus for the automatic delivery of cigars, cigarettes, and other articles or packets of a cylindrical form on the prepayment of the proper coin, and is partly founded upon inventions for which I have obtained United States Letters Patent No. 366,490, dated July 12, 1887, and have applied for United States Letters Patent September 14, 1886, Serial No. 213,514.

The nature of my present invention and the manner in which the same is to be carried into practical effect will be readily understood on reference to the sheet of drawings hereto annexed and the following explanation thereof.

Figure 1 on the drawings is a vertical section taken through about the center of the apparatus, and Fig. 2 a front elevation of the same with part of the front casing removed.

The apparatus consists, first, of an external casing, *a*, inside which is placed a box or reservoir, *b*, with the bottom sloping from the back and front toward an aperture in the center. This box or reservoir *b* is for containing the articles to be delivered. Beneath this aperture is a revolving feed-wheel, *c*, which is provided with a series of recesses corresponding in form and size to the cigarettes or other articles to be delivered. This feed-wheel *c* is caused to revolve, as hereinafter described, and discharges the articles one by one down a sloping chute, *d*, into a recess, *e*, in a sliding piece, *f*, which is free to move horizontally in grooves formed in the casing *a*, and whenever this slide *f* (which I call the "delivery-slide") is moved toward the front of the case it pushes the article forward and allows it to fall down the delivery-spout *g* in front of the casing into

the recess *g*\* in the upper side of the coin-slide. As the delivery-slide *f* is moved backward a projecting spring-catch or weighted lever, *h*, thereon comes against one of the bars of the feed-wheel *c*, causing it to revolve partially and discharge another cigarette or other article or packet down the chute *d* into the recess *e* in the slide, ready for delivery. The delivery-slide is caused to move toward the delivery-spout *g* and discharge the article or packet upon the insertion into the apparatus of a suitable coin (or coins) in the manner hereinafter described. The coin is passed into the apparatus by means of a second slide, *i*, which I call the "coin-receiving slide," and which is provided with a slit, *i*\*, in which the coin is placed edgewise. This coin-receiving slide may be of any suitable construction; but I prefer to make it according to the invention for which I have applied for a patent, as above referred to, with a magnet, forked plate, and fixed incline, as described in my former specification, the forked plate being marked *k* in the present drawings and the fixed incline *l*. When the coin-receiving slide *i* has been pushed in a sufficient distance to carry the coin past the apex of the fixed incline *l*, the coin falls onto a plate or bracket, *m*, the upper portion of the coin being still held fast in the slit *i*\* of the coin-receiving slide *i*, and as the latter is pushed farther in, the lower part of the coin comes against a projection, *\**, on a sliding piece, *n*, which also works in grooves in the casing *a*. The sliding piece *n* is connected to the delivery-slide *f* by a lever, *o*, having its fulcrum at *p*; or two side levers may be used, if preferred; and it will be evident that the pushing in of the empty coin-receiving slide will not have any effect upon the delivery-slide; but if the requisite coin has been placed in the slit and has passed the magnet and fixed incline, it then acts as a key on coming against the projection *\**, locking the delivery apparatus to the coin-receiving slide, and the further movement of the latter causes the cigars, cigarettes, or other articles to be delivered. When the coin-receiving slide *i* is drawn out again to receive a fresh coin, the spring catch or weighted lever *h* comes against one of the bars of the feed-wheel *c*, (as previously stated,) causing



it to revolve partially and to discharge another cigar, cigarette, or other article down the chute *g* into the recess *e* in the slide *f*, ready for delivery.

5 To regulate the speed at which the coin-receiving slide *i* can be pushed in, so as to give the levers time to act, the said slide *i* is provided with an air-chamber, *i*<sup>2</sup>, in which the air is compressed by a fixed piston, *q*, as the  
10 slide *i* is pushed in. This feature forms the subject of a claim in an application for a patent filed by me November 2, 1886, Serial No. 217,821, and I therefore do not claim it in this case.

15 In order to lock the apparatus when the last (or nearly the last) cigar, cigarette, or other article has been delivered, the following device is provided. Attached to the lever *o* is a ratchet or click, *r*, which at each forward move-  
20 ment of the delivery-slide *f* takes up one tooth (or more) of a ratchet-wheel, *s*, fixed on one end of a screw, *t*. On this screw rests a half-nut, *u*, carrying a boss, *v*, through a hole in which passes loosely a bolt, *w*. The lower end of this  
25 bolt is supported by a plate, *x*.

It will be evident that as the movement of the lever *o* causes the screw *t* to be turned slowly round it gradually slides the bolt *w* along the plate *x*, and a hole is made in the  
30 latter and in the coin-receiving slide in such a position that by the time the box or reservoir *b* is nearly empty the bolt *w* comes over the hole, and, falling through, it locks the coin-receiving slide fast.

35 When a fresh supply of cigars, cigarettes, or other articles is needed, the front of the case,

*a*<sup>\*</sup>, must be opened and the box *b* and feed-wheel *c* must be removed. The half-nut *u* and bolt *w* can then be raised up and moved to the other end of the screw *t*, when the full box or  
40 reservoir, with the feed-wheel *c*, can be replaced in position and the front *a*<sup>\*</sup> closed, and the apparatus is again ready for use.

I claim as my invention—

1. In an apparatus for the automatic deliv- 45  
ery of cigars, cigarettes, or other cylindrical articles, the combination of a movable coin-receiving slide and a delivery-slide controlled thereby with a supply box or reservoir for  
50 containing the articles, a revolving feed-wheel divided on its surface into compartments, and a delivery-spout through which the articles are successively delivered, all substantially as specified.

2. The combination of the delivery-slide of 55  
an apparatus for the automatic delivery of small articles and a coin-receiving slide for operating the same with a feed-screw adapted to be operated by the coin-slide, a nut acted on by the screw, carrying a locking-bolt, and  
60 a plate having an opening through which the bolt can fall to lock the coin-slide as the last article is delivered, all substantially as specified.

In testimony whereof I have signed my name 65  
to this specification in the presence of two subscribing witnesses.

FRED. C. LYNDE.

Witnesses:

GEORGE DAVIES,

CHARLES A. DAVIES.