

(No Model.)

2 Sheets—Sheet 1.

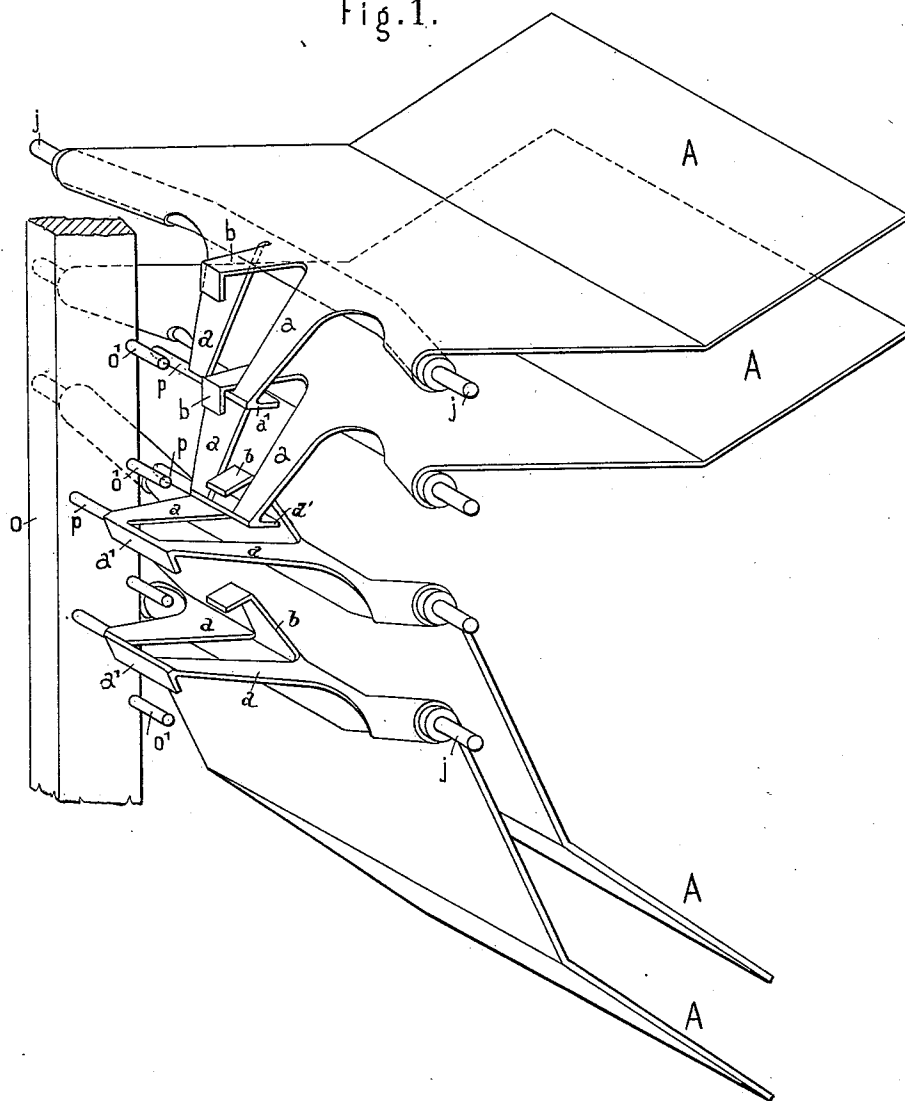
P. SIMONS.

APPARATUS FOR THE AUTOMATIC SALE OF FLEXIBLE ARTICLES.

No. 402,773.

Patented May 7, 1889.

Fig. 1.



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Fig. 2.

Fig. 3.

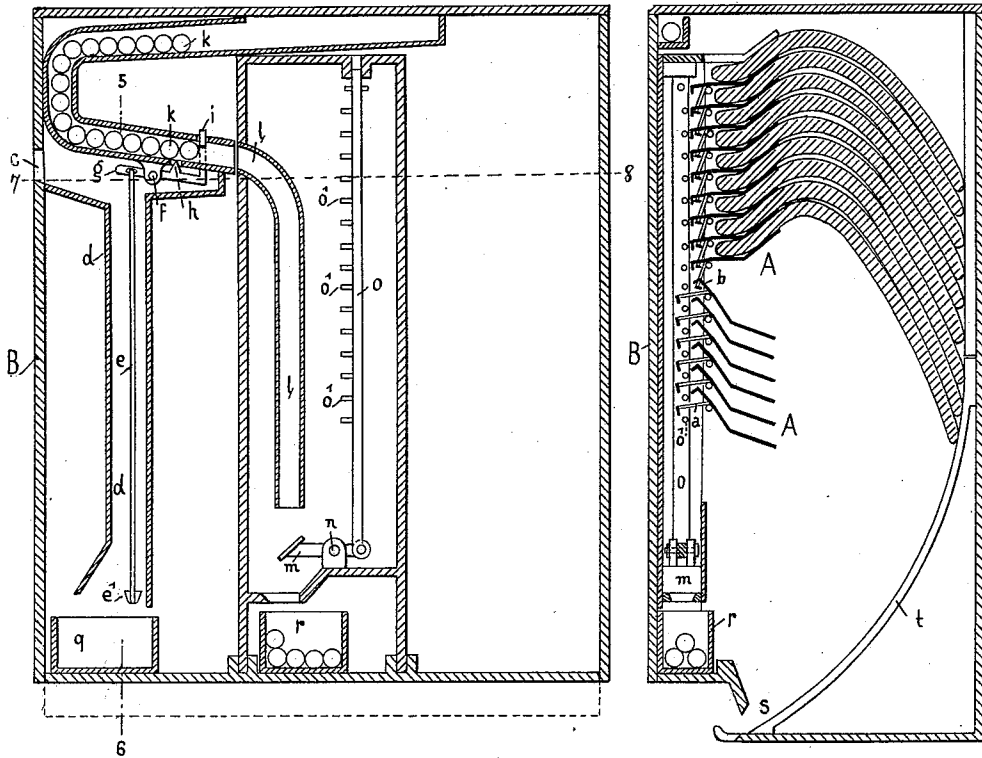
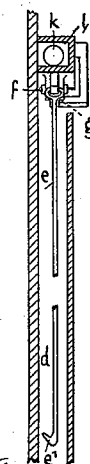
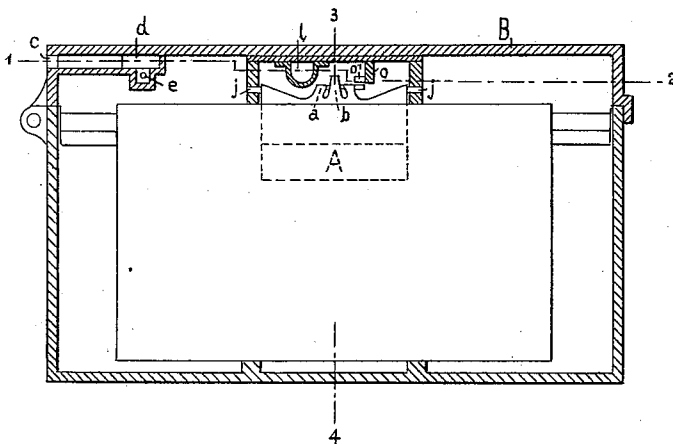


Fig. 5.

Fig. 4.



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UNITED STATES PATENT OFFICE.

PAUL SIMONS, OF DARMSTADT, GERMANY.

APPARATUS FOR THE AUTOMATIC SALE OF FLEXIBLE ARTICLES.

SPECIFICATION forming part of Letters Patent No. 402,773, dated May 7, 1889.

Application filed February 26, 1889. Serial No. 301,245. (No model.)

To all whom it may concern:

Be it known that I, PAUL SIMONS, a subject of the Grand Duke of Hesse, residing at Darmstadt, Grand Duchy of Hesse, German Empire, have invented new and useful Improvements in Apparatuses for the Automatic Sale of Flexible Articles, whereof the following is a specification.

My invention relates to apparatuses for the automatic sale of flexible articles, such as newspapers. The improved apparatus consists of a number of superposed flaps turning on horizontal axes and adapted to clamp newspapers and other like articles between them. These flaps are provided with contrivances whereby each flap locks the one next above it, and with them is combined a device which normally locks the lowest flap charged with a paper, but which may be caused to release the said lowest flap by the impact of a ball, which is occasioned to drop by the dropping of a coin introduced into the apparatus.

In the annexed drawings is represented an apparatus carried out according to my invention.

Figure 1 is a perspective view showing four of the aforesaid flaps, two of them being in raised position and two turned down. Fig. 2 is a section on line 1 2, Fig. 5; Fig. 3, a section on line 3 4, Fig. 5; Fig. 4, a section on line 5 6, Fig. 2; and Fig. 5, a horizontal section on line 7 8, Fig. 2.

The flaps A are mounted with their pivots *j* in two ledges fixed to the door B of the apparatus. Each flap is provided at its rear with two arms, *a* and *b*. The arm *a* has in the middle a slit closed at the lower end by a cross-piece, *a'*, while the arm *b* forms a hook adapted to pass through the slit of the arm *a*, being next above it, and to engage with the cross-piece *a'* thereof. Thus in Fig. 1 the arm *b* of the second flap from the top is shown in engagement with the arm *a* of the first flap, which is thereby maintained in elevated position. Each arm *a* has a pin or projection, *p*, and close to the latter is arranged a vertically-movable bar, *o*, having pins *o'*, which are so disposed relatively to the pins *p* that when the bar *o* is in its lowest position each pin *o'* corresponding to a pin *p* of a raised flap is in the path of such pin. The

pin *p* of the lowest flap charged with a paper (in Fig. 1 the second one from the top) will therefore bear against the pin *o'*, registering therewith, the flap being thereby prevented from dropping; but if the bar *o* is raised for a moment the said pin *p* becomes free to pass beneath the pin *o'*, and the flap drops, thereby releasing the paper which it held, and which then slips along the curved bars *t*, Fig. 3, and out through the slit *s*. If the bar *o* were kept raised for a sufficiently long time, all the flaps would drop one after the other; but it quickly returns to its normal position and re-engages the pin *p* of the flap next above the one that was to drop before the former had become entirely disengaged from the latter.

The movement of the bar *o* is brought about by means of balls *k*, stored up in a tube, *l*, Fig. 2, and a lever, *m*, centered at *n* and pivoted to the lower end of the bar *o*. The said balls are retained in the upper portion of the tube *l* by a lever, *g*, having an arm which is bent around the tube, and has at its upper end a finger, *i*, projecting through a hole from above into the tube. The lever *g* has, moreover, a finger, *h*, arranged to be passed through an opening at the bottom of the tube into the space between the lowermost ball and the next one. When the lever *g* is in its normal position, the finger *i* hinders the lowest ball from passing; but upon the lever being turned, and the finger *i* being thereby withdrawn from the tube, the said ball drops on the inclined end surface of the lever *m* and pushes the bar *o* upward a moment. It is, however, but one ball which can drop at a time, as when the finger *i* is raised the finger *h*, being raised also, keeps back the following ball. The lever *g* and the fingers *h* and *i* being then depressed again, all the balls in the tube *l* rush forward until they are again stopped by the finger *i*.

To the end of the lever *g*, being outside of its fulcrum *f*, is suspended a rod, *e*, hanging in a groove of a wall of the channel *d*, which communicates with the slit *c*, through which the coin for actuating the apparatus is to be introduced. At its lower end the said rod has a hook, *e'*, projecting into the channel *d*. The coin inserted at *c* and falling on the said hook pulls the rod *e* down, and thereby pro-

duces the operations hereinbefore described. After having struck on the hook *e'* the coin drops into the box *q*, while the balls are collected subsequent to their action in the box *r*.

5 I claim as my invention—

1. The combination of the pivoted flaps *A*, having arms *a*, with cross-pieces *a'* and pins *p*, and arms *b*, forming hooks, the bar *o*, having pins *o'*, and means for imparting vertical
10 motion to the bar *o*, substantially as described.

2. The combination of the pivoted flaps *A*, having arms *a*, with cross-pieces *a'* and pins *p*, and arms *b*, forming hooks, the bar *o*, having pins *o'*, the lever *m*, the tube *l*, adapted
15 to contain balls, the lever *g*, with fingers *h* and *i*, and means for moving the said lever

through the medium of a coin, substantially as specified.

3. The combination of the pivoted flaps *A*, having arms *a*, with cross-pieces *a'* and pins *p*, and arms *b*, forming hooks, the bar *o*, having pins *o'*, the lever *m*, the tube *l*, adapted to contain balls, the lever *g*, with fingers *h* and *i*, rod *e*, with hook *e'*, and channel *d*, with slit *c*, substantially as set forth.
25

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

PAUL SIMONS.

Witnesses:

H. E. LUDWIG,
JOHANN WÄBER.