

T. A. MATTHEWS.
STATIONERY CABINET.
APPLICATION FILED NOV. 27, 1911.

1,028,091.

Patented May 28, 1912.

2 SHEETS-SHEET 1.

Fig. 1.

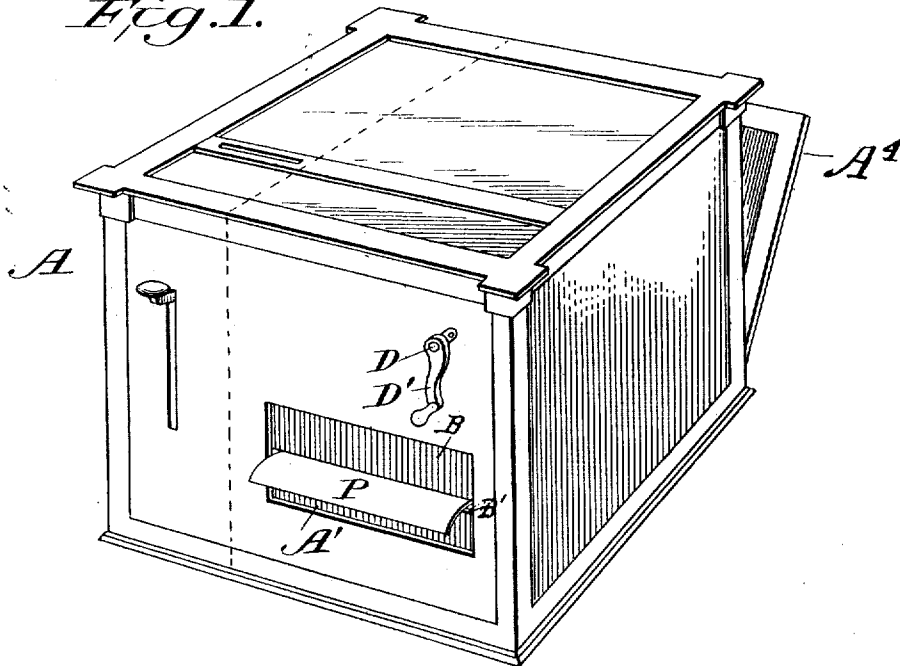


Fig. 4.

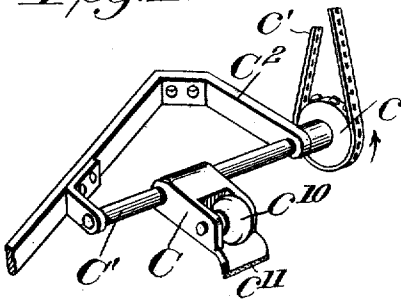
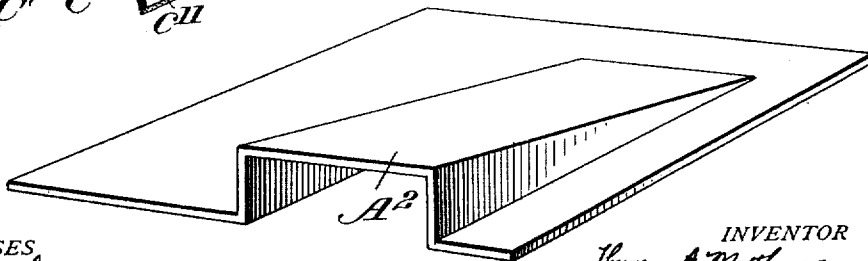


Fig. 5.



WITNESSES

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INVENTOR

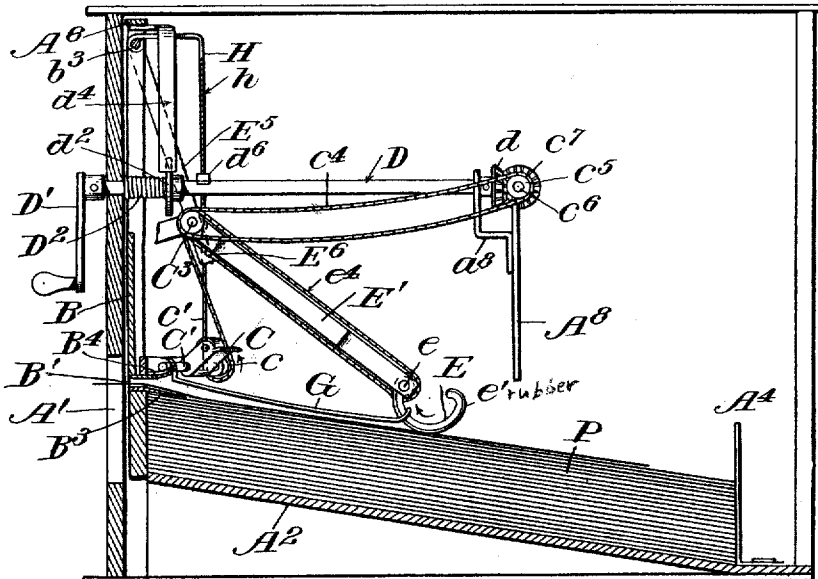
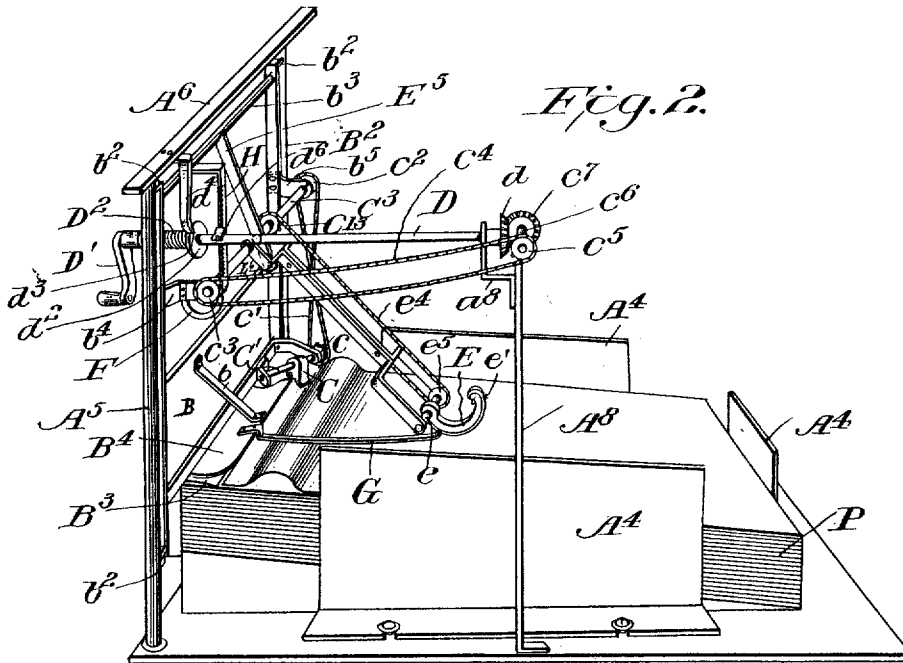
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2 SHEETS-SHEET 2.



WITNESSES

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Fig. 3.

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THOMAS A. MATTHEWS, OF NASHVILLE, TENNESSEE.

STATIONERY-CABINET.

1,028,091.

Specification of Letters Patent.

Patented May 28, 1912.

Application filed November 27, 1911. Serial No. 662,617.

To all whom it may concern:

Be it known that I, THOMAS A. MATTHEWS, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Stationery-Cabinets, of which the following is a specification.

My invention relates to stationery cabinets such as shown in my Patent 748,967, January 5, 1904.

The object of the invention is to improve the paper-feeding mechanism shown in said patent. This object I accomplish by the mechanism shown in the accompanying drawings, in which:

Figure 1 is a perspective of my improved cabinet. Fig. 2 is a perspective of the paper-feeding mechanism removed from its casing; the paper lifter having just lifted or buckled a sheet of paper. Fig. 3 is a sectional side elevation showing the paper feeder in the act of feeding a sheet through the delivery opening. Fig. 4 is a perspective of the paper lifter removed. Fig. 5 is a perspective of the bottom of the cabinet.

A designates the cabinet of any suitable material and construction and provided in its front with an opening A' about as high as the pile of paper to be contained within the cabinet. The bottom of the cabinet has an inclined portion A² on which the paper P rests; the high end of the incline being about in line with the lower edge of opening A' and spaced from the cabinet front. The rear end of the cabinet has a door A³ for the introduction of the paper. Secured to the base of the cabinet at the sides and lower end of the incline A² are the adjustable gages or guides A⁴ for the pile of paper.

Within the front end of the cabinet at opposite sides thereof are vertical guides A⁵ connected at their upper ends by a cross bar A⁶, and between these guides A⁵ slides an inner panel B, working between the cabinet front and the front end of the incline A². This sliding panel B has a horizontal slot B', registering with the opening A', in the cabinet front through which the paper is fed, as will be presently described.

The panel B is provided at its ends with uprights B², having outwardly projecting notched guide lugs b² at their upper and lower ends; said notched lugs sliding on the vertical guides A⁵. The upper ends of the uprights B² are connected by a cross bar b³,

and below the cross bar the uprights are provided with inwardly extending brackets b⁴, b⁵.

The sliding panel B is provided at the lower edge of its slot B' with an inwardly extending flange or lip B³ which rests on the pile of paper, and the upper edge of the slot has a guide flange or lip B⁴ parallel with the flange B³ to guide the paper through the slot B'. The lip or flange B⁴ is firmly held by an inclined brace b.

C is the paper lifting arm secured firmly to an oblique shaft C', mounted in an angle bracket C², secured to the inner face of the sliding panel B just above the left hand end of its slot B'. The shaft C' has at one end a sprocket wheel c actuated by a crossed chain c', the upper portion of which engages a sprocket wheel c², carried by one end of a transverse shaft C³, mounted in the brackets b⁴, b⁵ above described, and provided at its opposite end with a sprocket wheel c³. The sprocket wheel c³ is engaged and operated by a chain c⁴, the inner portion of which engages a sprocket wheel c⁵, carried by a transverse shaft c⁶, mounted at the upper end of a standard A⁸, extending up from the bottom of the cabinet. This shaft c⁶ is provided with a bevel gear c⁷, which meshes with a similar gear d on the inner end of the longitudinal shaft D, which is the operating or driving shaft of the paper-feeding mechanism. The inner end of the main shaft D is mounted in a bracket a⁸ on the upper end of standard A⁸, and the outer end of said shaft extends through a bearing in the fixed front of the cabinet and is provided with an operating crank or handle D'.

The lifting arm C has an anti-friction roller c¹⁰ journaled in a recess in its free end and projecting beyond one side of said arm, while projecting from the opposite side of the free end of said arm C is a friction device c¹¹. When, therefore, the main shaft D is rotated a single revolution the arm C will be rotated toward the front of the cabinet, and when the roller c¹⁰ engages the paper the arm will act as a cam and slightly elevate the panel B, by which it is carried, and so raise the flange or lip B³ from the paper, the top sheet of which, at its forward edge, will then be engaged by the rearwardly moving friction device c¹¹ and moved rearwardly from under the lip B³ which will then descend upon the pile and the friction device will release the free edge of the

buckled sheet which will then slide forward upon the upper side of the flange or lip B³ ready for forward feeding, as will be described.

5 The paper is fed by a forwardly turning curved arm or cam E secured to a short transverse shaft *e* mounted in the forked end *e*³ of an inclined arm A', the upper forward forked end of which is loosely hung on the shaft C³. The shaft C³ is provided within the upper forked end of arm E' with a sprocket wheel *e*¹³, from which a chain *e*⁴ leads to a sprocket wheel *e*⁵ on the shaft *e*.

10 The feeding arm or cam E has a friction surface *e*⁷ of rubber or other suitable material. The inclined arm E' is held from imparting its weight to the pile of paper by means of a supporting arm E⁵ extending from cross bar *b*³ with its lower hooked end E⁶ extending under the upper fork of the arm E'. The arm E⁵ is apertured for the passage of the shaft C². It will be seen, therefore, that the rotation of the drive shaft will, through shaft C', which is indirectly geared thereto as described, first cause the lifting arm C to release the front edge of a sheet of paper, and that said edge will then spring forward upon the flange or lip B³, after which the continued rotation of drive shaft will, through the feed arm E, also geared thereto, feed the paper through the slot B' and opening A' in the cabinet front from which it may be pulled by the fingers of the operator.

15 As the lifting mechanism and the feeding mechanism are carried by the sliding panel A, the relative relation of the same to the slot A' remains the same and the chain *c*⁴ is sufficiently slack to allow of the vertical movement of the panel A and its attached gearing. The chain *c*⁴ is held from displacement from sprocket wheel *c*³ by a guide arm F projecting inwardly from panel A.

20 An arm G in the form of a spring extends inwardly from the guide flange or lip B⁴ across the pile of paper to a point adjacent to the feed arm E, and prevents the top sheet from buckling up between the lip B⁴ and the arm E' in case its front edge should not be lifted from beneath the flange or lip B³ at any rotation of the lifting arm C.

25 The drive shaft D is provided with a ratchet disk *d*² having a single notch *d*³ engaged by a spring pawl *d*⁴ depending from the stationary top bar A⁶. This pawl and ratchet permit the rotation of the drive shaft D in one direction only and stop it at every complete cycle of the operation. A coiled spring D² on shaft D between disk *d*² and the front wall of the cabinet exerts sufficient friction to prevent lost motion of the drive shaft.

30 H is a vertical rack bar secured at its upper angle end to the cross bar *b*³ of uprights

B² and at its lower end to the bracket *b*⁴, with its toothed edge *h* facing the drive shaft D. The shaft D is provided with a thin sheet metal pawl *d*⁵ which snaps into a tooth *h* every time the pawl *d*⁴ enters the notch *d*³ and holds the panel B with its lip or flange B³ slightly above the top sheet while the parts are at rest. This pawl *d*⁵ allows of the descent of the sliding panel as the pile of paper diminishes.

35 The cabinet proper may be made as in my Patents 787,966 and 787,967, if desired.

What I claim is:

1. A paper serving mechanism comprising a cabinet or receptacle having an opening across its front corresponding in height to the pile of paper, an inner vertically sliding panel having a paper discharge slot provided with an inwardly extending flange or lip to rest on top of the front edge of the paper, a paper lifting device mounted on the sliding panel to move the front edge of the top sheet from beneath said flange or lip and allow it to spring forward on top thereof, a paper-feeding device also mounted on the sliding panel, and an operating mechanism to positively actuate the paper lifter and the paper feeder.

2. A paper serving mechanism comprising a cabinet or receptacle having an opening across its front, an inner vertically sliding panel having a paper discharge slot provided with an inwardly extending flange or lip to rest on top of the front edge of the paper, a rearwardly rotating paper lifting device mounted on the sliding panel to move the front edge of the top sheet from beneath the said flange or lip and allow it to spring forwardly on top thereof, a forwardly rotating paper feeder to move the top sheet through said slot and opening, and operating means for actuating the lifting and feeding devices in proper order.

3. A paper serving mechanism comprising a cabinet or receptacle having an opening across its front, a vertically sliding inner panel having a horizontal discharge slot provided on its lower side with an inwardly extending flange or lip to rest on the forward edge of the pile of paper, a rearwardly rotating paper lifting arm provided at its free end with an anti-friction device to first engage the pile and slightly raise the panel and with a friction device to then engage the top sheet and move its front edge from beneath the flange or lip and allow it to spring forward on top thereof, a paper-feeding device to feed the sheet through the discharge slot, and an actuating mechanism for positively operating the lifting and feeding devices in proper order.

4. In a paper serving apparatus, a cabinet or receptacle having an opening across its front, a vertically sliding panel in rear thereof having a paper discharge slot pro-

vided at its lower side with an inwardly extending flange or lip to rest on the forward edge of the pile of paper, a rearwardly rotating panel raising and paper
 5 lifting arm mounted on the panel to first slightly raise the same, and then move the front edge of a sheet from beneath the flange or lip and allow it to spring forwardly on top thereof, a forwardly rotating curved paper-feeding arm also mounted
 10 on the sliding panel, and a main shaft geared to the paper lifting and feeding arms to operate them in proper order.

5. A paper serving apparatus comprising
 15 a cabinet or receptacle having an opening across its front, a vertically sliding panel in rear thereof having a paper discharge slot provided at its lower side with an inwardly extending flange or lip to rest on the forward
 20 edge of the pile of paper, an oblique shaft, a bearing therefor carried by the sliding panel, an arm projecting from the shaft to move the front edge of the top sheet from under the flange or lip and allow it to
 25 spring forward on the upper side of said flange, a swinging bar connected at its upper forward end to the sliding panel, a shaft mounted on the rear end of said arm, a paper feeder on said shaft, and a drive
 30 shaft geared to the shafts of the lifter and feeder arms.

6. A paper serving apparatus comprising a cabinet or receptacle having a front opening, a vertically sliding panel having a
 35 paper discharge slot provided with a flange or lip on its lower side to rest on the front edge of the pile of paper as a follower, a rearwardly rotating paper lifter, a swinging arm mounted at its upper forward end
 40 on the sliding panel, a rotary paper feeder mounted on the lower inner end of said arm, a transverse shaft mounted on the sliding panel, chain and sprocket gearing connecting said shaft with the paper lifter
 45 and the paper feeder, a longitudinally extending drive shaft extending through the front of the cabinet, and bevel and chain and sprocket gearing connecting said main shaft to the transverse shaft.

50 7. A paper serving apparatus comprising a cabinet or receptacle having an opening in its front, a vertically sliding panel having a paper discharge slot and a flange or lip on the lower side thereof to rest as a
 55 follower on the front edge of the pile of paper, a rotary arm mounted on the sliding panel and acting at its free end to first slightly raise the panel and its flange and

then move the paper rearwardly and allow it to spring forwardly over said flange, a
 60 rotary paper feeder to move the released sheet through the slot and opening, a longitudinal drive shaft having an operating handle exterior to the cabinet, a disk on the shaft having a notch, a pawl engaging said
 65 notch, a vertical rack bar carried by the panel, a plate-spring pawl mounted on the shaft to engage the rack bar at every complete revolution of the shaft and gearing connecting the drive shaft with the paper
 70 lifter and the paper feeder.

8. A paper serving apparatus comprising a cabinet or receptacle having a front opening, a vertically sliding inner panel having a horizontal discharge slot and a
 75 flange or lip to rest on the front edge of the pile of paper, a paper lifter mounted on the sliding panel to move the front edge of the top sheet from under said flange and allow it to spring forwardly on top thereof,
 80 a downwardly inclined arm pivotally connected at its upper forward end to the sliding panel, a retaining device to limit the downward movement of the arm, a paper feeder mounted in the lower end of the
 85 arm, a drive shaft operable from the exterior of the cabinet and gearing connecting said shaft with the paper lifter and the feeder.

9. A paper serving apparatus comprising
 90 a cabinet or receptacle having a front opening, a vertically sliding inner panel having a horizontal discharge slot and a flange or lip to rest on the front edge of the pile of paper, a paper lifter mounted on the sliding
 95 panel to move the front edge of the top sheet from under said flange and allow it to spring forwardly on top thereof, a downwardly inclined arm pivotally connected at its upper forward end to the sliding panel,
 100 a retaining device to limit the downward movement of the arm, a paper feeder mounted in the lower end of the arm, a rod extending horizontally from the sliding panel to a point adjacent to the paper
 105 feeder, a drive shaft operable from the exterior of the cabinet and gearing connecting said shaft with the paper lifter and the feeder.

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

THOMAS A. MATTHEWS.

Witnesses:

W. S. LYNCH,

W. A. MATTHEWS.