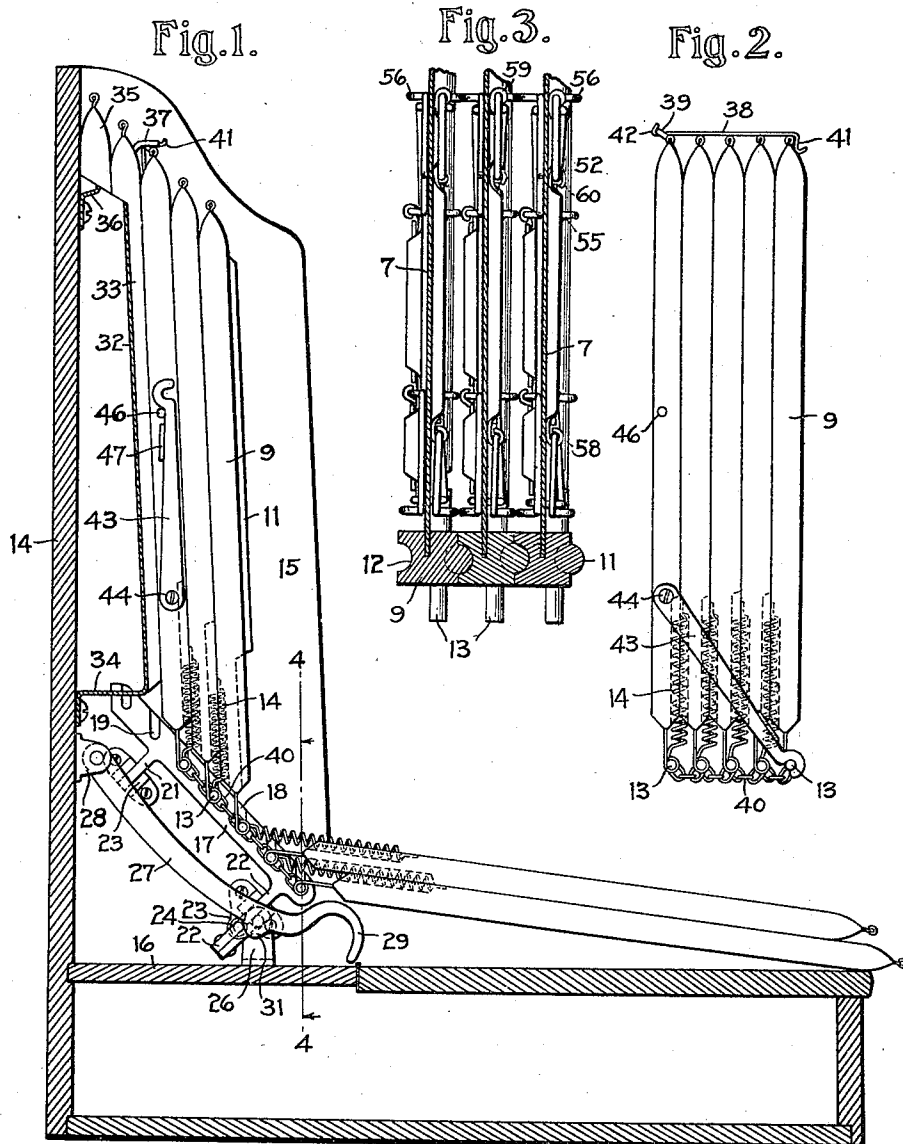


A. F. STAPLES.
ACCOUNT REGISTER.
APPLICATION FILED MAY 19, 1911.

1,008,386.

Patented Nov. 14, 1911.

2 SHEETS-SHEET 1.



Witnesses:
C. W. Carroll
L. Thon

Inventor:
Albert F. Staples
by his attorneys
Osgood, Davis & Dorsey

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2 SHEETS-SHEET 2.

Fig. 4.

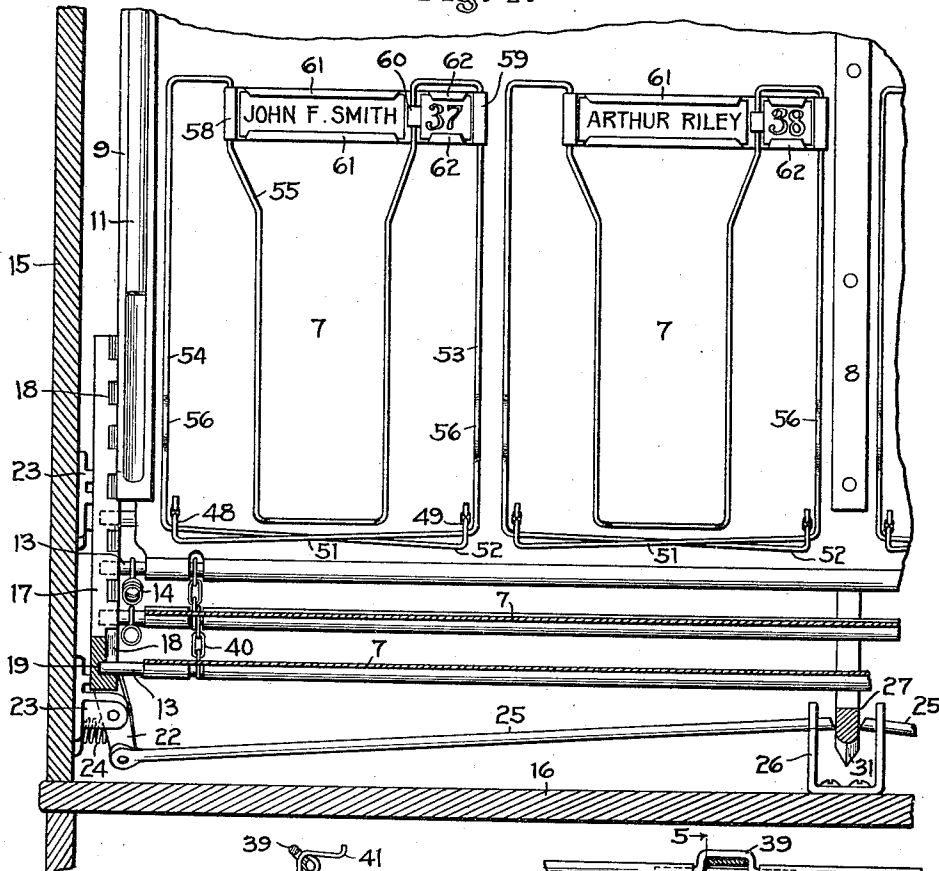


Fig. 5.

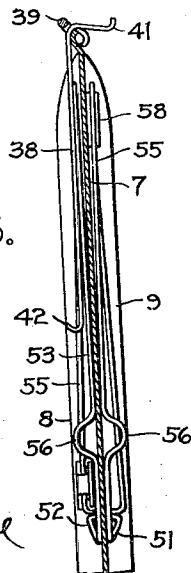
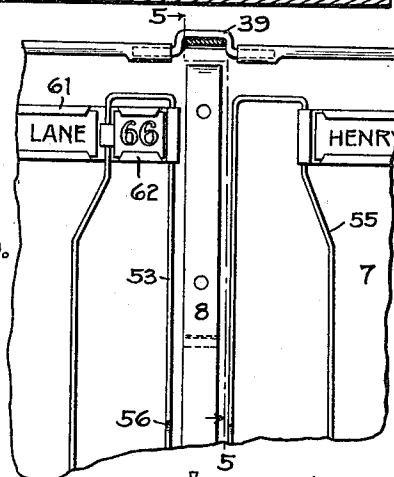


Fig. 6.



Witnesses:
E. W. Carroll
L. Thon

Inventor:
Albert F. Staples
by his attorneys
Osgood, Davis & Dorsey

UNITED STATES PATENT OFFICE.

ALBERT F. STAPLES, OF CANISTEO, NEW YORK, ASSIGNOR TO SUPERIOR REGISTER COMPANY, OF CANISTEO, NEW YORK, A CORPORATION OF NEW YORK.

ACCOUNT-REGISTER.

1,008,386.

Specification of Letters Patent.

Patented Nov. 14, 1911.

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To all whom it may concern:

Be it known that I, ALBERT F. STAPLES, a citizen of the United States, and resident of Canisteo, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Account-Registers, of which the following is a specification.

This invention relates to account-registers of the type in which bill-holding clips are mounted upon a series of frames, these frames being pivotally supported so as to swing together or apart, like the leaves of a book.

The object of the invention is to produce an account-register of the type in question which shall be simple in construction and convenient in operation, and to this end the invention consists in an account-register having the various novel features of construction and operation hereinafter set forth, as they are defined in the succeeding claims.

In the accompanying drawings:—Figure 1 is a side-elevation of an account-register embodying the present invention, with one side of the cabinet and the adjacent frame-support removed to disclose the construction; Fig. 2 is a side-elevation of the bill-holder frames as removed from the cabinet and fastened together for purposes of storage or transportation; Fig. 3 is a detail-view, on a larger scale, in horizontal section, showing portions of three adjacent bill-holder frames; Fig. 4 is a partial front-elevation, in section on the line 4—4 in Fig. 1; Fig. 5 is a full-size detail-view, in vertical section, of the upper part of the rear-most bill-holder frame, on the line 5—5 in Fig. 6; and Fig. 6 is a front-elevation of the subject-matter of Fig. 5.

The illustrated embodiment of the invention is an account-register comprising five bill-holder frames, although the construction is equally applicable to machines of a smaller or larger number of frames. Each frame comprises a flat body-portion 7 of sheet-metal, or other suitable material, which is stiffened in the middle by vertical ribs 8 on the front and back, which may be of wood or metal riveted to the body, or otherwise secured or formed thereon. The lateral edges of the frame are also stiffened by vertical strips 9. Each of the strips 9 is provided, on the front, with a projecting rib 11, and with a corresponding

groove 12 at the rear. Accordingly, when the frames are in juxtaposition, as in Figs. 1 and 2, these ribs and grooves interlock so as to prevent relative lateral movement of the frames and so as also to afford a substantially dust-tight closure between the frames.

Each bill-holder frame is provided, at the bottom, with a pivot-wire or rod 13 about which the lower edge of the body-portion 7 is rolled. This rod extends entirely across the bottom, thereby stiffening the lower edge, and projects beyond each lateral edge of the frame, as shown in Fig. 4, so as to constitute two pivots by which the frame is movably supported when in use.

To partially counterbalance the weight of the frames when in use I have devised a novel arrangement of springs, these springs being so arranged that they permanently connect the frames, and are removed with the frames when the latter are taken from the cabinet. To this end the rib 11 is cut away at the lower portion of each frame, so as to provide a concavity which, with the adjacent portion of the groove 12 on the next frame, produces a socket adapted to receive a helical tension-spring 14. The upper end of this spring is fastened to the forward frame, while the lower end is fastened to the pivot 13 of the rear frame of each adjacent pair.

The bill-holder frames, when in use, are mounted in a cabinet in which they are adapted to stand normally in upright position. This cabinet comprises a back 14, two side-portions 15 and a base-portion 16, which may be of any ordinary or suitable form. The bill-holder frames are mounted upon two supports 17, each of which comprises an inclined bar having vertical slots 18 on its inner surface. The pivots 13 are introduced through the upper ends of these slots and rest at the bottoms of the slots, as in Figs. 1 and 4, thus supporting the frames pivotally in such a position that they may be swung from upright to horizontal position, or vice-versa. When any of the frames are swung forwardly and downwardly to horizontal position the corresponding springs 14 are stretched, as shown in the case of the two frames illustrated in Fig. 1 in horizontal position, and the tension of these springs tends, accordingly, to partially counterbalance the weight of the

horizontal frames, so as to assist in raising these frames again to upright position.

To prevent the pivots 13 from being accidentally disengaged from the slots when the account-register is in use, the supports 17 are constructed and arranged to act as locking devices as well as supports. For this purpose the supports are provided with sockets or recesses 19 at the bottoms of the slots 18. Each support is provided with two arms 21 and 22 pivoted in bearing-lugs 23 fixed to the inner surfaces 15 of the sides of the cabinet. The arm 22 in each case projects below the lug 23, and is engaged by a compression-spring 24. This spring tends to swing the lower end of the arm inwardly, and thus to swing the support 17 outwardly toward the side of the cabinet. To swing the arms in the opposite direction, each arm 22 is connected with a thrust-rod 25 projecting toward the middle of the cabinet, and the inner ends of these rods are slidably mounted in holes in a U-shaped support 26. In the middle of the cabinet is a finger-lever 27, of which the rear-end is pivoted in a lug 28 on the back of the cabinet, while the forward end 29 is formed to be engaged by the finger of the user. This finger-lever has a downwardly-projecting lug 31 with beveled edges, as shown in Fig. 4. In the normal position of the parts the finger-lever is in its lowermost position, and at this time the lug 31 is located between the inner ends of the thrust-rods 25, thus holding these rods in their outward position so as to compress the springs 24 and swing the supports 17 to their inward positions. Accordingly, the sockets 19 are in engagement with the ends of the respective pivots 13, so that these pivots are locked against vertical movement in the slots 18. When it is desired to remove the bill-holder frames from the cabinet the finger-lever is raised sufficiently to disengage the lug 31 from the rods 25, whereupon these rods are free to move toward each other, thus permitting the springs 24 to swing the supports 17 outwardly enough to disengage the sockets 19 from the pivots 13. After this movement the pivots still rest in the bottoms of the slots, but are free to be raised vertically therefrom.

A feature of the present invention consists in the use of a filler or dummy in the back part of the cabinet which simulates the appearance of bill-holder frames. This device is useful where an account-register is used for handling a small number of accounts. A sufficient number of actual bill-holder frames may be provided initially, while the cabinet employed with these frames is large enough to contain a greater number of frames. The surplus space at the back of the cabinet is filled by means of the dummy device or filler so as to simulate

the appearance of an account-register of full size, and if it becomes necessary later to employ a larger number of bill-holder frames, the filler may be removed and more frames added to the register in place thereof. As shown in Fig. 1, this dummy filler comprises a metal plate 32, similar in general appearance to the body-portion 7 of one of the bill-holder frames. This plate has a flange 34 at its lower edge which is fixed to the back 14 of the cabinet. The plate 32 is provided in front with strips or ribs 33, similar in appearance to those used on the bill-holder frames, and the upper edge of this device is in all respects similar to the upper edges of the bill-holder frames in front. One or more additional members 35 may be employed so as to simulate additional frames. The rearmost member 35 comprises a sheet-metal body 36 which is also fixed to the back of the cabinet. As shown in Fig. 1, the supports 17 are provided with slots and sockets not only for the bill-holder frames actually in use, but also for such further frames as may be subsequently substituted for the dummy filler.

When the bill-holder frames are removed from the cabinet their edges are preferably brought into alinement, so as to make a compact bundle of the frames which may be conveniently placed in a safe or transported from place to place. As a means for bringing the frames into such alinement the finger-lever 27 may be employed. After this lever has been raised, as above described, to unlock the frames, its upward movement may be continued so as to bring it into engagement with the lower edges of the foremost frames and thus raise them vertically out of the slots in the supports, and this movement is continued until the lower edges of the frames are in the same horizontal plane as in Fig. 2. This movement causes the springs 14 to be stretched, and to prevent the rearmost frame from rising at this time a lug 37 is mounted upon the dummy filler, as shown in Fig. 1, to engage the upper edge of the rearmost frame.

In order to hold the bill-holder frames with their upper and lower edges in alinement, means are provided comprising a clip to secure the the upper edges together and hooks to secure the bottoms of the frames together. The clip consists of a flat strip 38 of resilient metal. This strip is passed through a wire loop 39 which projects upwardly and rearwardly from the upper edge of the rearmost bill-holder frame, the loop being secured by locking its ends in the upper edge of the body-portion 7 of the frame. This loop is so formed that the clip 38 may hang normally in vertical position so as to be substantially concealed behind the rearmost frame, as shown in Fig. 5.

When the clip is to be used, however, it is drawn upward and forward into horizontal position, as in Fig. 2, and at this time its forward end 41, which is bent downwardly into the form of a hook or catch, is sprung over the upper edge of the foremost frame, while the other end of the clip is held in the loop by a hook 42 formed at this end of the clip. The resiliency of the upper edges of the frames is sufficient to cause them to be securely fastened together by this clip, while permitting it to be readily disengaged from the foremost frame when necessary.

The hooks for holding the bottoms of the frames together are illustrated particularly in Figs. 1 and 2. Each of these hooks consists of a strip 43 of resilient sheet-metal pivoted at 44 upon the rearmost bill-holder frame. The forward end of the hook is slotted to engage the pivot 13 of the foremost frame. When the frames are in the cabinet the hook is swung upwardly into engagement with a stop-pin 46 on the rearmost frame, thus bringing the hooks out of the way while the frames are in use. The hook is provided with an outstanding lug 47 by which it may be conveniently manipulated. When the hooks are in use they occupy an inclined position, as shown in Fig. 2, whereby they resist the tendency of the springs 14 to move the frames out of alinement.

By the interlocking action of the beads 11 and the grooves 12, together with the use of the clip and the hooks just described, the bill-holder frames are securely fastened together in a compact group when removed from the cabinet, so that they may be conveniently handled and may be stored in small bulk in a safe or vault.

To prevent the possibility of breaking or unduly stretching the springs 14 in case the bill-holder frames are carelessly handled and not properly secured together when removed from the cabinet, the frames are permanently connected together at the bottom by means of chains 40. One of these chains is employed near each side of the group of frames, as shown in Fig. 4, each third link of the chain inclosing one of the pivot-rods. The chain has sufficient slack to permit the necessary relative movements of the bottoms of the frames, but provides effectually against the frames moving far enough apart in any direction to unduly stretch the springs.

The bill-holder frames may be provided with bill-clips of any ordinary or suitable form. In the illustrated embodiment of the invention each of these clips, as shown particularly in Figs. 4 and 5, comprises a single piece of wire which is bent at its ends to form hooks 48 and 49 which pass through corresponding openings in the body-portion 7 of the bill-holder frame. The wire is then

bent laterally to form two torsion-members 51 and 52, each of which is pivotally supported by one of the hooked portions just described. From the torsion-members the wire passes upward in the form of side-members 53 and 54, respectively. The wire is then bent inwardly and downwardly so as to form a central loop 55. This central loop serves as the device for pressing and holding the charge-clips or bills against the body-portion of the bill-holder frame, being permitted to move toward or from this body-portion owing to the resiliency of the wire, and particularly to the torsional action of the portions 51 and 52. Coöperating with the clip is a device of novel form for holding removable cards or markers containing the name and the number of the account to which the bills relate. This device comprises a strip of sheet-metal which extends across the upper portion of the loop 55 and the side-member 53, having ends 58 and 59 bent forwardly around these parts, respectively, to secure the strip in place. For further security a tongue 60 is cut and bent upwardly from the strip and locked around the other side of the loop 55, as shown particularly in Fig. 4. Between the sides of the loop 55 the strip has flanges 61, bent forwardly and vertically so as to secure in place the removable name-card. Between the side-member 53 and the adjacent side of the loop 55 the metal strip is provided with similar flanges 62, between which the number-card is removably secured.

The side-members 53 and 54 of the bill-holder are spaced apart a distance slightly greater than the width of the bills or charge-slips to be held by the clip, so that these side-members constitute abutments to prevent lateral displacement of the upper ends of the bills. To similarly prevent displacement of the lower ends of the bills, the side-members are bent or looped forwardly so as to provide portions 56 which extend outwardly for the full depth of the bundle of bills held by the holder.

My invention is not limited to the embodiment thereof hereinbefore described and illustrated in the accompanying drawings, but may be embodied in various other forms within the nature of the invention as it is defined in the following claims.

I claim:—

1. An account-register having, in combination, a plurality of bill-holder frames provided with pivots at the bottom, a support for engaging said pivots to support the frames, the pivots being removable from said support, and a spring connecting each frame with the pivot of the next adjacent frame and removable with the frames.

2. An account-register having, in combination, a plurality of bill-holder frames pivotally supported at the bottom, and a spring

extending from the pivotal point of one frame to a higher point upon the next frame in front.

3. An account-register having, in combination, a plurality of bill-holder frames provided with oppositely-recessed engaging lateral-portions, and a spring located in the recess formed between two such portions and extending from the bottom of one frame upwardly to a point on the next frame in front.

4. An account-register having, in combination, a plurality of bill-holder frames, one of two adjacent frames having a vertical tongue and the next adjacent frame having a corresponding groove to receive said tongue, the tongue being cut away at the lower portion of said groove so as to form a recess between the two frames, and a spring located in said recess and connected at its upper and lower ends to said two frames, respectively.

5. An account-register having, in combination, a plurality of bill-holder frames, the adjacent frames having cooperating vertical abutments to prevent relative lateral movements of the frames, a support upon which the frames are pivotally and removably mounted at the bottom, and means for connecting the bottoms of the frames together when removed from said support.

6. An account-register having, in combination, a plurality of bill-holder frames, a support upon which the frames are pivotally and removably mounted, a spring connecting the lower portion of each frame, except the foremost frame, with a higher point on the next frame in front, and means for holding the upper and lower edges of the frames, respectively, in alinement against the tension of said springs when the frames are removed from the support.

7. An account-register having, in combination, a plurality of bill-holder frames provided with pivots, and means for receiving and locking the pivots comprising bars movable laterally into and out of locking engagement with the pivots.

8. An account-register having, in combination, a plurality of bill-holder frames provided with pivots at the bottom, and means for supporting and locking the pivots comprising portions provided with upwardly-extending slots adapted to receive the pivots, and abutments movable laterally into and out of locking engagement with the pivots.

9. An account-register having, in combination, a plurality of bill-holder frames provided with laterally-projecting pivots at the

bottom, a cabinet in which the frames are adapted to stand upright, two bars mounted within the cabinet and laterally movable into and out of locking engagement with said pivots, and means for moving the two bars simultaneously toward or from the pivots.

10. An account-register having, in combination, a plurality of bill-holder frames, means for pivotally and removably supporting the frames with their edges normally in an inclined plane, and means for engaging said edges and moving them into alinement prior to removal of the frames.

11. An account-register having, in combination, a plurality of bill-holder frames, a cabinet in which said frames are adapted to stand normally upright, an inclined support in the cabinet upon which the frames are pivotally and removably mounted at the bottom, and means for raising the bottoms of the foremost frames to bring the lower edges of the frames into horizontal alinement prior to their removal from the cabinet.

12. An account-register having, in combination, a plurality of bill-holder frames, a support upon which the frames are pivotally and removably mounted at the bottom, springs connecting the adjacent frames near the bottom and extending upwardly from one frame to a higher point on the next frame in front, means for raising the bottoms of the frames to bring the lower edges of the frames into alinement, and means for securing the frames in such alinement when removed from the support.

13. An account-register having, in combination, a plurality of bill-holder frames provided with pivots at the bottom, an inclined support for the frames having slots to receive said pivots, a spring connecting each frame with the next adjacent frame near the bottoms of the frames, and means for securing the rearmost frame in said slots.

14. An account-register having, in combination, a plurality of bill-holder frames, a support upon which the frames are pivotally and removably mounted at the bottom, a spring connecting each pair of adjacent frames near the bottoms of the frames, and extensible connections at the bottoms of the frames arranged to limit positively the separation of the frames when removed from the support while permitting a limited relative movement of the frames.

ALBERT F. STAPLES.

Witnesses:

FARNUM F. DORSEY,
D. GURNEE.