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ACCOUNT REGISTER.

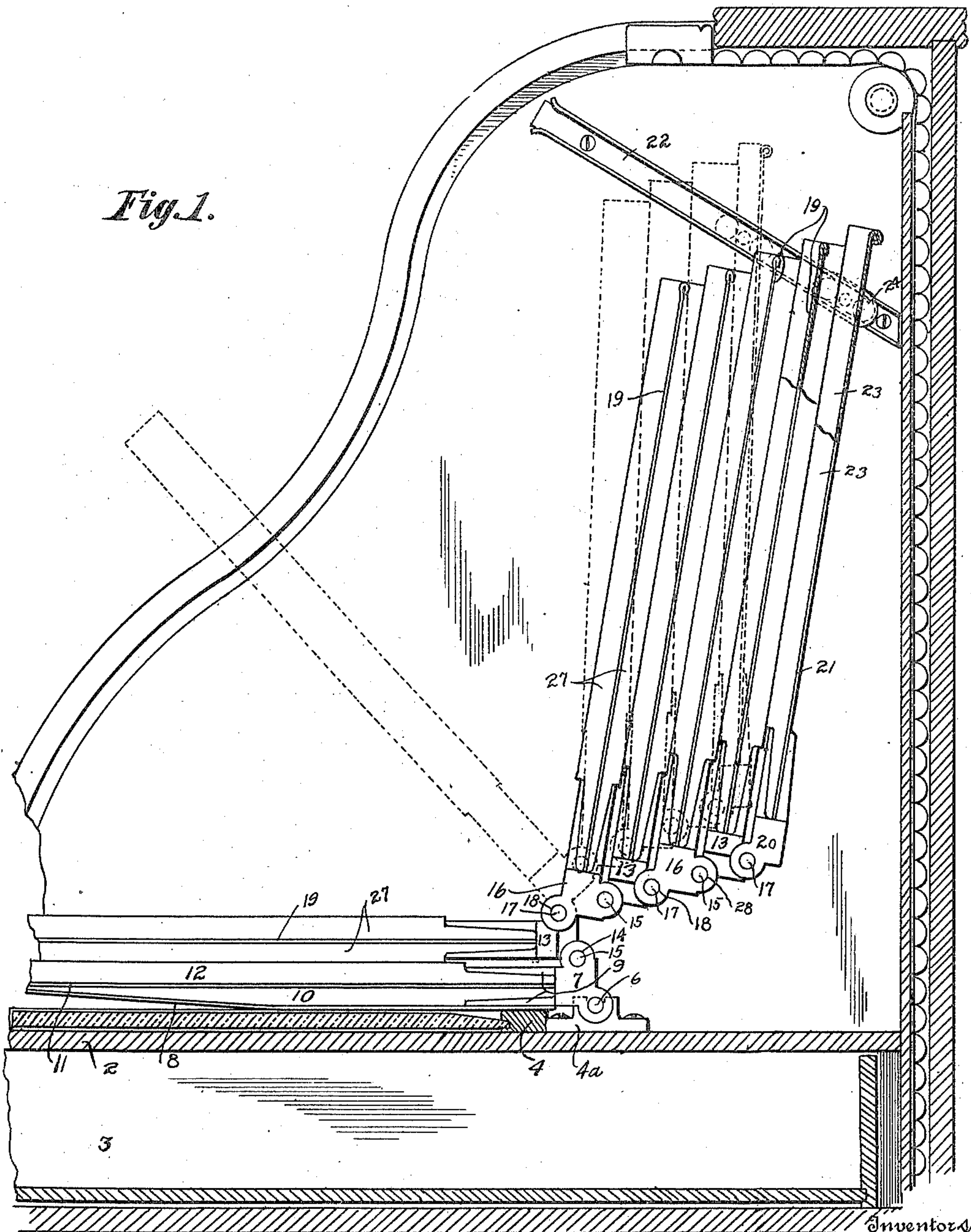
APPLICATION FILED MAY 24, 1909.

947,610.

Patented Jan. 25, 1910.

2 SHEETS—SHEET 1.

*Fig. 1.*



Witnesses

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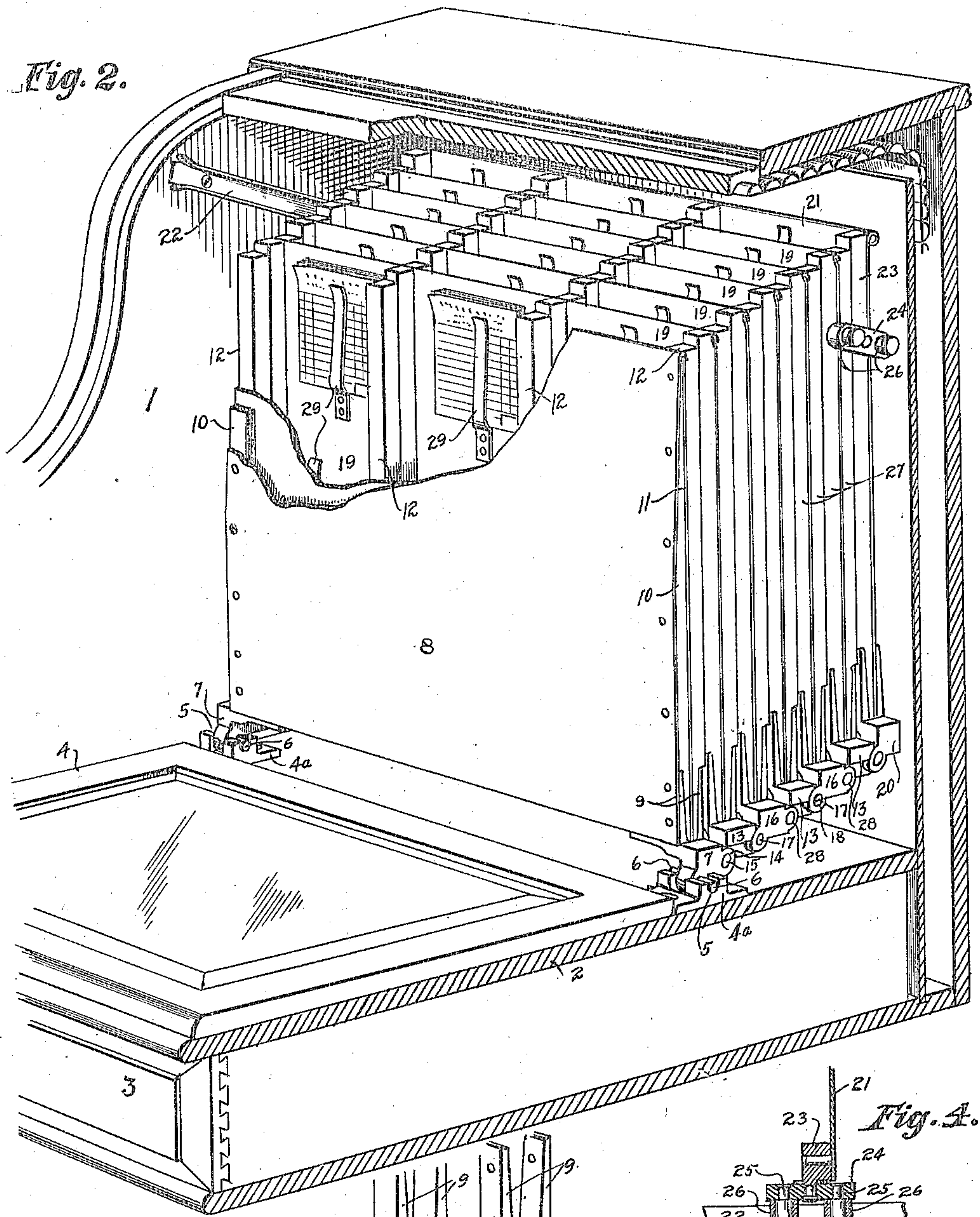
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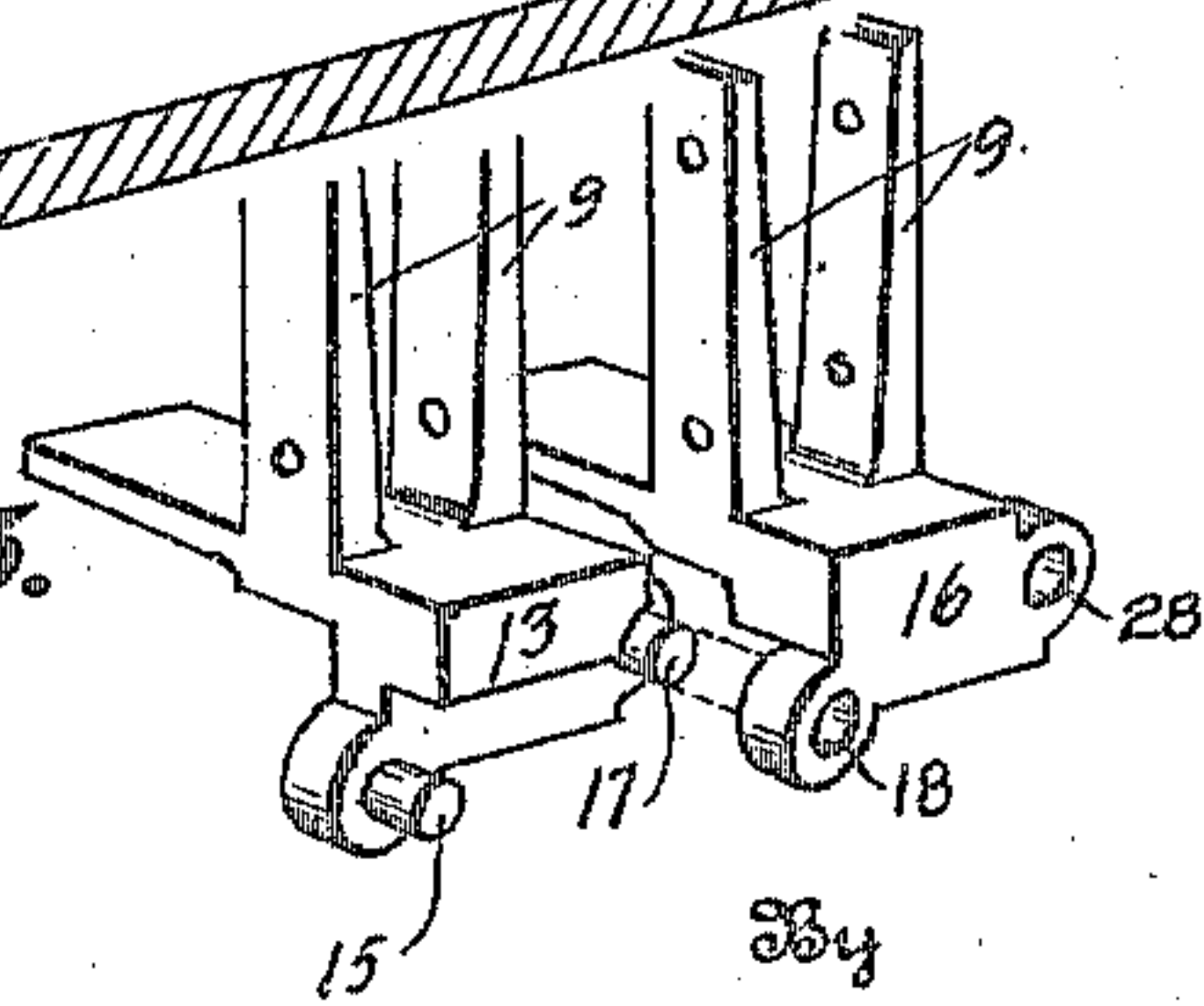
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2 SHEETS—SHEET 2.

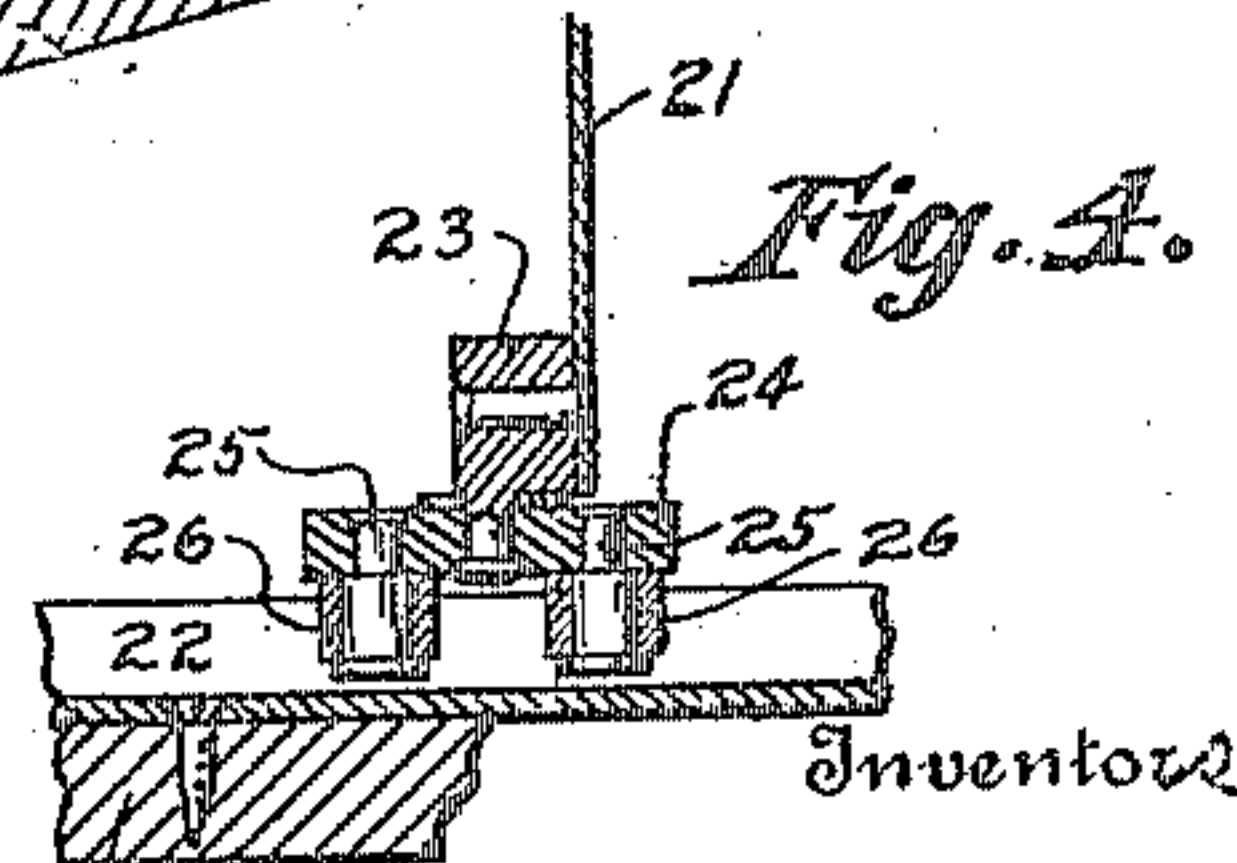
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*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

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## ACCOUNT-REGISTER.

947,610.

Specification of Letters Patent.

Patented Jan. 25, 1910.

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*To all whom it may concern:*

Be it known that we, JOSEPH E. CUNIN and WILLIAM G. FERGUSON, both residing at Alliance, in the county of Stark and State of Ohio, citizens of the United States, have invented certain new and useful Improvements in Account-Registers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to improvements in account registers.

The object of the invention is to improve the construction and operation of account registers, which construction is such that the various leaves co-act with each other in such a manner that when a given leaf is brought from a vertical position or substantially a vertical position to a horizontal or substantially a horizontal position the weight of the vertical leaves will assist in counterbalancing the weight of the leaf or leaves during the time they are shifted from a vertical to a horizontal position and vice-versa.

Another object of the invention is to provide means whereby the back or rear leaf is prevented from following the forward movement of the series of leaves.

In the drawings: Figure 1 is a side elevation, showing the near side of the case removed showing some of the leaves in horizontal position and others in substantially vertical position, also illustrating the two rear leaves partially in section. Fig. 2 is a perspective view, showing a part of the case removed and illustrating all of the leaves in substantially vertical position, showing the front leaf partially broken away. Fig. 3 is a view showing two of the leaf hinge or connecting blocks and the leaf connecting straps or tangs. Fig. 4 is a longitudinal section showing a portion of one of the channel rails and a portion of one side of the case and a section of the follower head.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, 1 represents the case or cabinet, which may be of any desired size, reference being had to the size of the account register designed to be

constructed. The cabinet may be of any desired style or design, reference being had to the proper adjustment and manipulation of the various leaves designed to carry credit slips or other articles designed to be carried by the leaves.

The case or cabinet is provided with the desk portion 2, which desk portion is spaced from the bottom of the cabinet 1, between which bottom and desk may be located a drawer 3. Upon the desk 2 may be located the frame 4, to which frame may be attached a pane of glass, under which glass and frame may be located an index sheet. These parts form no specific part of the present invention; that is to say the frame or cabinet, the desk and the arrangement of the frame to receive a drawer and a frame having a pane of glass connected thereto.

Upon the desk 2 or its equivalent are located the bearings 4<sup>a</sup>, which bearings are provided with the open recesses 5, which recesses are for the purpose of receiving the pintles 6, which pintles are extended from the opposite sides of the front or forward hinge blocks 7. To the hinge blocks 7 is attached the front leaf 8 by means of the integral spaced straps or tangs 9, said straps or tangs being riveted or otherwise connected as hereinafter described. The front leaf 8 is preferably formed of two sheets of metal spaced apart by the spacing strips 10, which spacing strips are tapered as best illustrated in Fig. 2, and the top edge of the forward sheet bent or hemmed over and upon the top of the rear sheet 11. To the rear face of the rear sheet 11 are attached the spacing bars 12, which spacing bars, spacing strips and the tangs are riveted together.

It will be understood that the sheets constituting the front leaf and the tapered strips should be riveted together above the tangs 9, so as to produce a substantial front or forward leaf. The purpose of forming the front leaf as above described is to give said leaf a neat and finished appearance. To the hinge-blocks 7 are connected the hinge-blocks 13 by means of the apertures 14 and the pintles 15. To the hinge-blocks 13 are hinged the hinge-blocks 16 by means of the pintles 17 and the apertures 18. The hinge-blocks 13 and 16 are for the purpose of providing means for connecting the leaves 19 by means of tangs 9. The hinge-blocks 13 and 16 are formed in pairs and the num-



ber of pairs corresponding with the number of leaves 19. To the rearmost hinge-block 20 is attached the rear or back leaf 21.

For the purpose of holding the rearmost leaf 21 in proper elevation, the inner faces or sides of the cabinet 1 are provided with the channel bars 22, which channel bars are inclined in an upward direction from the back of the cabinet toward the front of said cabinet and are so inclined for the purpose hereinafter described. To the spacing bars 23 or their equivalents are pivotally attached the rock-bars 24, to which rock-bars are connected the short studs 25, upon which studs are mounted the anti-friction rollers 26, which rollers are located between the upper and lower flanges of the channel bars 22.

It will be understood that by providing the channel bars 22 and connecting the rock-bars 24 to the rearmost spacing bars 23, the rearmost leaf 21 will be held in proper elevation. The channel bars 22 should be so adjusted that when all of the leaves are brought into substantially a vertical position as shown in Fig. 1, the leaves will be held in proper elevation, the front leaf being supported by the bearings 4<sup>a</sup> and the pintles; and by reason of the rear leaf being held in proper elevation there can be no sagging or moving down of the intermediate leaves, by reason of the spacing bars 27 located upon the opposite sides of the intermediate leaves coming in contact with each other and with the outermost spacing bar 12. It will be noticed that the pintles 15 are located in a plane below the pintles 17 and the apertures 18 in a plane below the apertures 28, by which arrangement two pivotal points are provided as between the hinge-blocks, the forward pivotal point of each block being in a plane below the rear pivotal plane of each block, by which arrangement a stepped relationship is given to the various leaves when they are brought into the position illustrated in Fig. 1 and they are held in such position by reason of the various spacing strips upon the various leaves abutting or pressing against each other.

When the front or forward leaf 8 is brought from a vertical position into a horizontal position the hinge-blocks will turn upon their pivotal points, which pivotal points are upon the bearings 4<sup>a</sup> and as said leaf turns the hinge blocks 7 are brought from a horizontal position into substantially a vertical position or in the position illustrated in Fig. 1, and as the hinge-blocks 7 move from a horizontal position to a vertical position the next rear leaf 19 will be elevated and moved forward at its bottom or lower end, carrying with it the remaining series of leaves by reason of the pivotal connections of the various hinge-blocks. After the front leaf has been turned down or brought from a vertical position to a hori-

zontal position, the next or second leaf can be brought down and the remaining leaves elevated and moved forward at their bottom or lower ends. Any leaf in the series may be moved forward, one at a time or a series of leaves may be moved forward at one and the same time. It will be understood that when a leaf or leaves are brought forward or turned from a vertical position to a horizontal one the leaves back of the one or ones moved into a horizontal position including the rearmost leaf will all be moved forward at their lower ends and will all be slightly elevated. The leaf or leaves back of any leaf turned into a horizontal position will be held against forward movement except when force is applied by reason of the weight of the leaves back of the one last brought from a vertical position into a horizontal position, and when all of the leaves have been brought forward the rearmost leaf will be prevented from moving forward and falling to a horizontal position by reason of the channel bars 22 and the anti-friction rollers 26, which anti-friction rollers are located in the channel bars 22, but the rearmost leaf is free to move upward and forward equal to the distance moved by the movement of the hinge blocks.

It will be understood that when a portion of the leaves are brought into a horizontal position or substantially a horizontal position as illustrated in Fig. 1 the remaining leaves will be partially supported upon the series of hinged blocks located directly beneath the foremost vertical leaf; but when the horizontal leaves are brought into an angle the connecting blocks or hinged blocks will be brought out of a true horizontal position and the weight of the vertical leaves will assist in elevating and bringing the lifted horizontal leaf into a vertical or substantially a vertical position. It will be understood that the weight of the rearmost leaf is also utilized to hold the leaves in front of said rearmost leaf in a vertical position by reason of the channel bars 22 being inclined downward toward the rear of the case, owing to the fact that by providing the anti-friction rollers 26 the rearmost leaf has a tendency to move downward to a certain extent. By providing a series of hinge-blocks and connecting said blocks or hinging said blocks at their front and rear edges in different planes we are enabled to provide a series of leaves and locate them in stepped relationship with reference to each other and at the same time provide, what might be termed counterbalances for all of the leaves designed to be moved from a vertical position to a horizontal one and vice-versa. In lowering the leaves a slight pull upon the top or upper edge of any given leaf is necessary, but as the leaves move forward and approach



a horizontal position the hinge-blocks assume substantially a vertical position. When the leaves are in a horizontal position they will remain where placed or in their lowermost position and it will require a slight lift upon the forward edges of the leaves to bring them into a vertical position; but after they have passed an angle of say 45° the weight of the leaves back of the one to be moved will have a tendency to turn or swing the leaves into vertical positions, by which arrangement we are enabled to use the weight of the various leaves to hold the leaves either in horizontal or vertical position without the use of springs or counterweights.

When it is desired to remove the leaves from the cabinet to be placed in a safe or other receptacle, or upon a table or desk the leaves are brought into a vertical position; the front leaf lifted from its bearings, after which all of the leaves can be moved upward and forward until the rear leaf together with the rock arms and the anti-friction rollers have been detached from the channel bars 22.

For the purpose of providing means to temporarily connect credit slips or other articles to the various leaves the spring clips 29 are provided, which spring clips may be of the form shown or they may be of any other desired form as the only purpose is to provide means for holding slips in proper position and any ordinary and common clip may be employed.

Having fully described our invention what we claim as new and desire to secure by Letters Patent is:—

1. An account register consisting of a plurality of leaves and hinge blocks connected to said leaves, and the said blocks being pivoted together at their front and rear sides, the forward pivotal connection of the hinge blocks located in a plane below the rear pivotal connection of said blocks, substantially as and for the purpose specified.

2. In an account register, the combination of a cabinet, a series of leaves, the forward leaf of the series supported in fixed bearings, and hinge blocks connected to the leaves and pivotally connected together at their front and rear edges, the forward pivotal connection being located in a plane below the rear pivotal connection of each block, substantially as and for the purpose specified.

3. An account register, the combination of a cabinet, a series of leaves, hinge blocks connected to said leaves, the hinge block of the forward leaf of the series pivoted in fixed bearings, the rear leaf of the series provided with a rock arm, said rock arm provided with anti-friction rollers, and a channel bar adapted to carry the rock arm

and rear leaf, substantially as and for the purpose specified.

4. An account register, the combination of a plurality of leaves and hinge blocks secured to the leaves, said hinge blocks provided with pintles and apertures respectively, the pintles and apertures spaced from each other, said pintles and apertures located upon the front and rear edges of the blocks respectively and in different planes with reference to the hinge blocks, substantially as and for the purpose specified.

5. An account register, the combination of a cabinet, a plurality of leaves and hinge blocks connected to the leaves, the said blocks being pivotally connected together at points in front and rear of the leaves and in stepped relationship, substantially as and for the purpose specified.

6. An account register, the combination of a cabinet provided with channel bars inclined upward from rear to front of the cabinet, a plurality of leaves, and hinge blocks connected to the leaves, the hinge blocks of the foremost leaf pivoted in fixed bearings, the rearmost leaf suspended by means of the channel bars secured to the cabinet and the hinge blocks all pivoted together, the blocks between the rearmost block and foremost block pivoted together in stepped relationship, substantially as and for the purpose specified.

7. An account register, the combination of a cabinet provided with channel bars inclined upward from rear to front of the cabinet, a plurality of leaves detachably connected to the cabinet, and hinge blocks connected to the leaves, the hinge blocks of the foremost leaf pivoted in fixed bearings, the rearmost leaf suspended by means of the channel bars secured to the cabinet, and the hinge blocks all pivoted together, the blocks between the rearmost block and foremost block pivoted together in stepped relationship, substantially as and for the purpose specified.

8. An account register having in combination a plurality of leaves and hinge blocks connected to said leaves, said hinge blocks having each two pivotal connections, said pivotal connections located in different planes, one above the other, substantially as and for the purpose specified.

9. In an account register, the combination of a cabinet, a plurality of leaves, one of the series of leaves pivoted in fixed bearings, hinge blocks pivoted together in stepped relationship with reference to each other, the hinge points of each block being located in different planes, substantially as and for the purpose specified.

10. In an account register, the combination of a cabinet, a plurality of leaves, one of the series of leaves pivoted in fixed bearings, hinge blocks pivoted together in



stepped relationship with reference to each other, the hinge points of each block being located in different planes, and means for guiding the upper free end of the rearmost 5 leaf of the series, substantially as and for the purpose specified.

11. In an account register, the combination of a cabinet, a series of leaves, a series of hinged blocks connected to the series of 10 leaves, said blocks hinged together, the forward pair of the hinged blocks supported in fixed bearings, and the hinged blocks pivoted together in stepped relationship with reference to each other, the rearmost leaf of

the series suspended at its top or upper edge 15 and adapted to be carried upon a track or way, said track or way inclined upward and forward in the cabinet, and the hinge points of each block located in different planes, substantially and for the purpose specified. 20

In testimony that we claim the above, we have hereunto subscribed our names in the presence of two witnesses.

JOSEPH E. CUNIN.

WILLIAM G. FERGUSON.

Witnesses:

IRENE LUTZ,

WILLIAM H. MILLER.