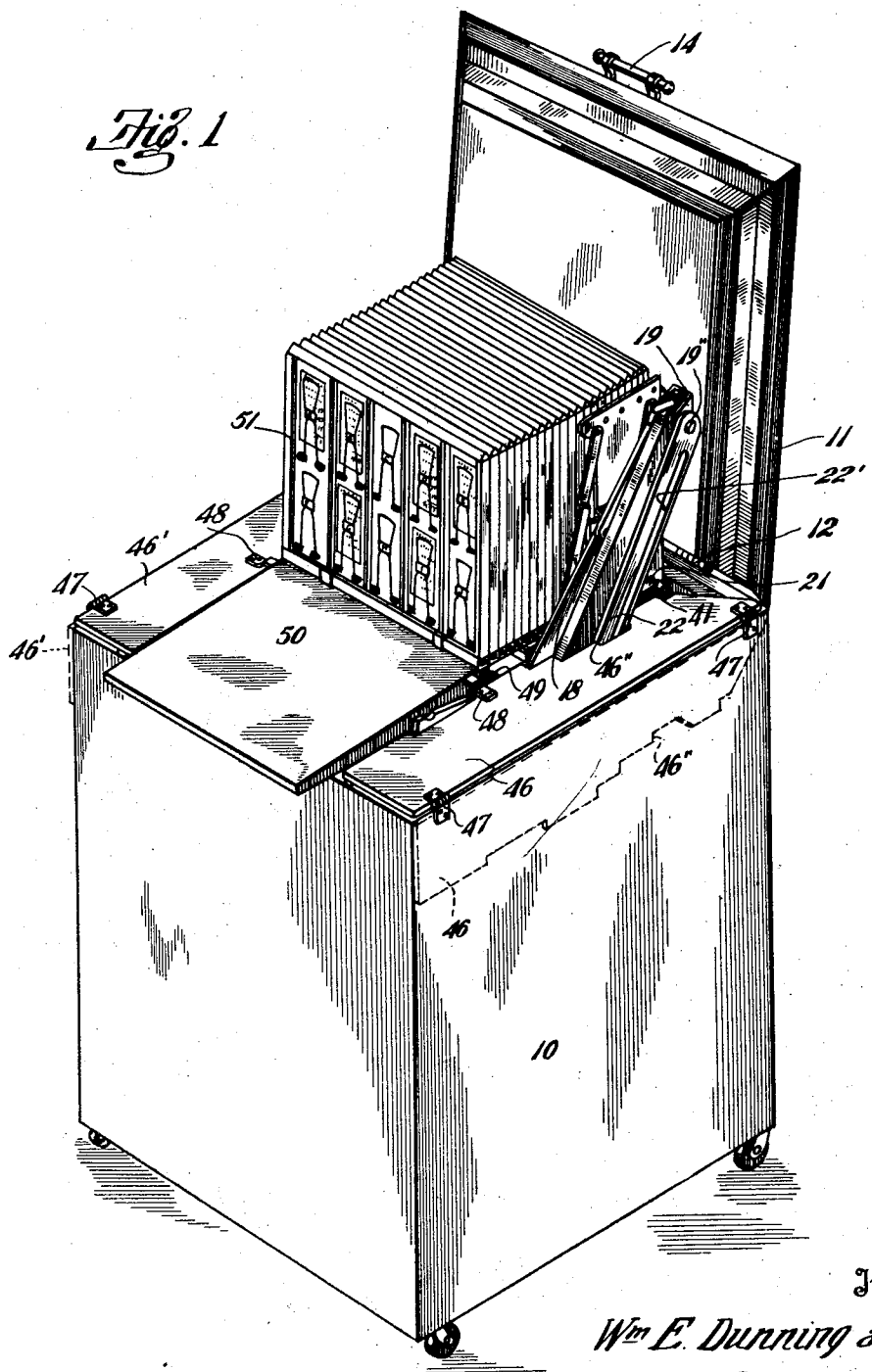
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FILING APPLIANCE CASE

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Fig. 1



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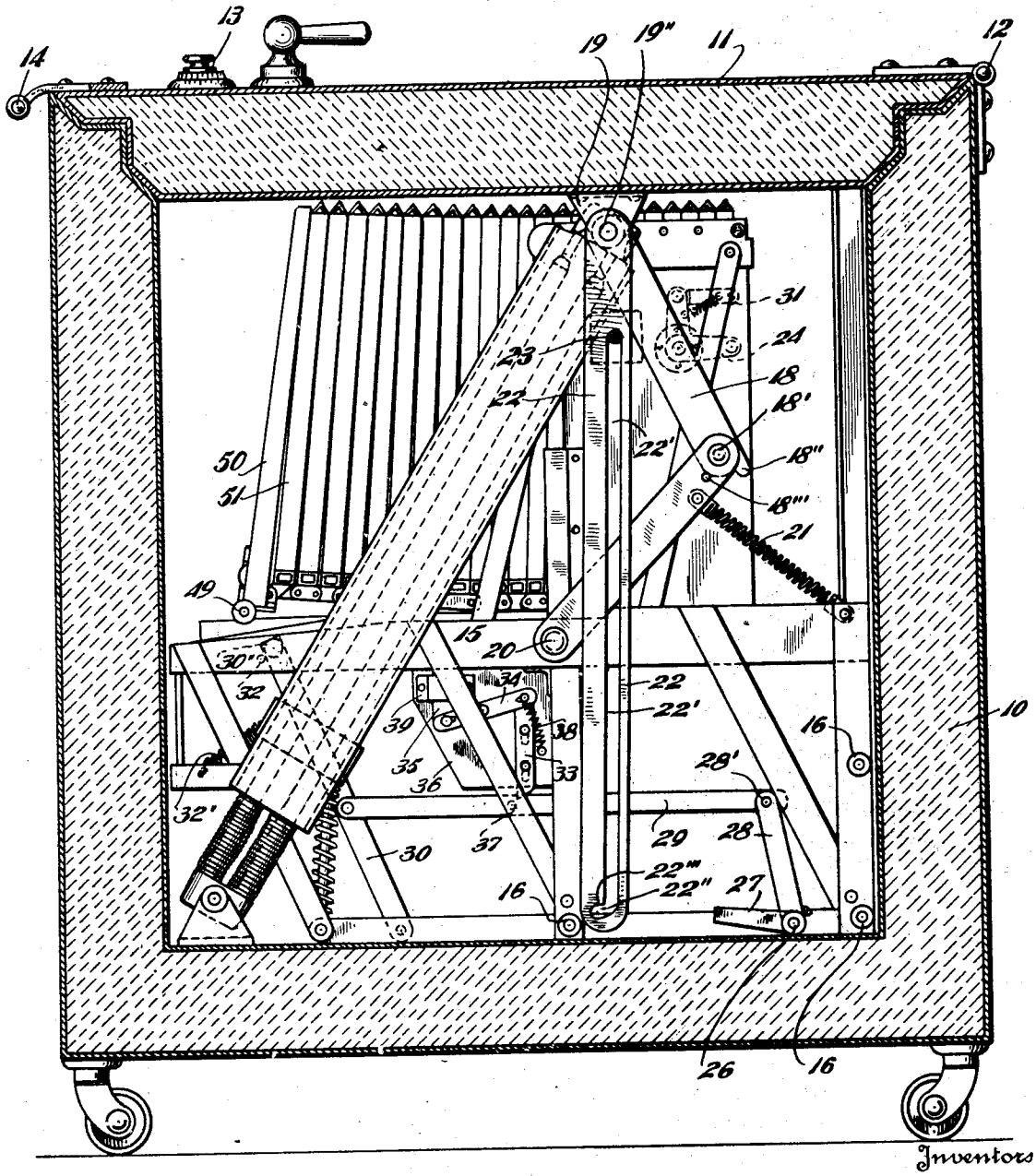
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Fig. 2



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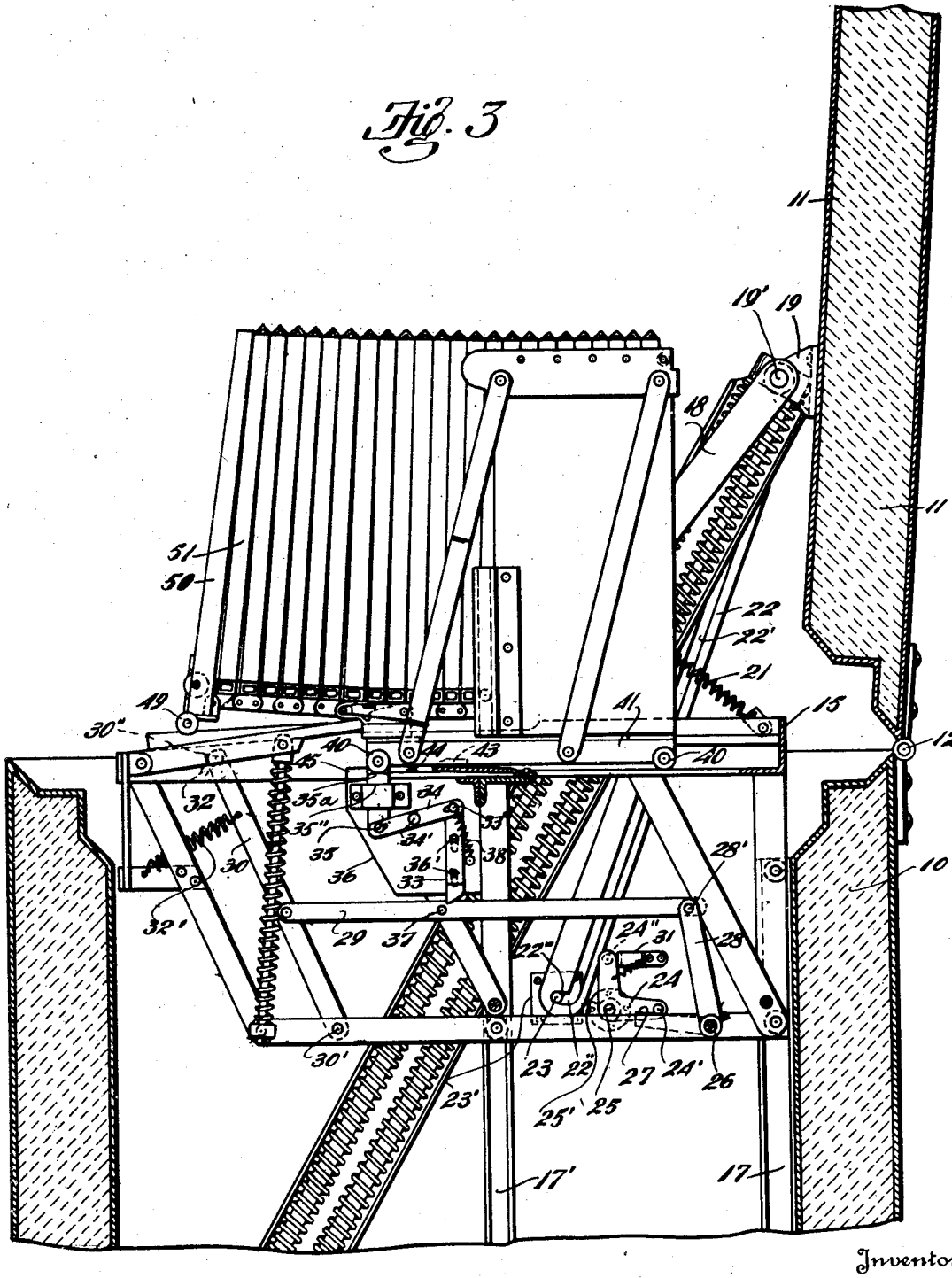
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Filed Aug. 30, 1924 6 Sheets-Sheet 3

Fig. 3



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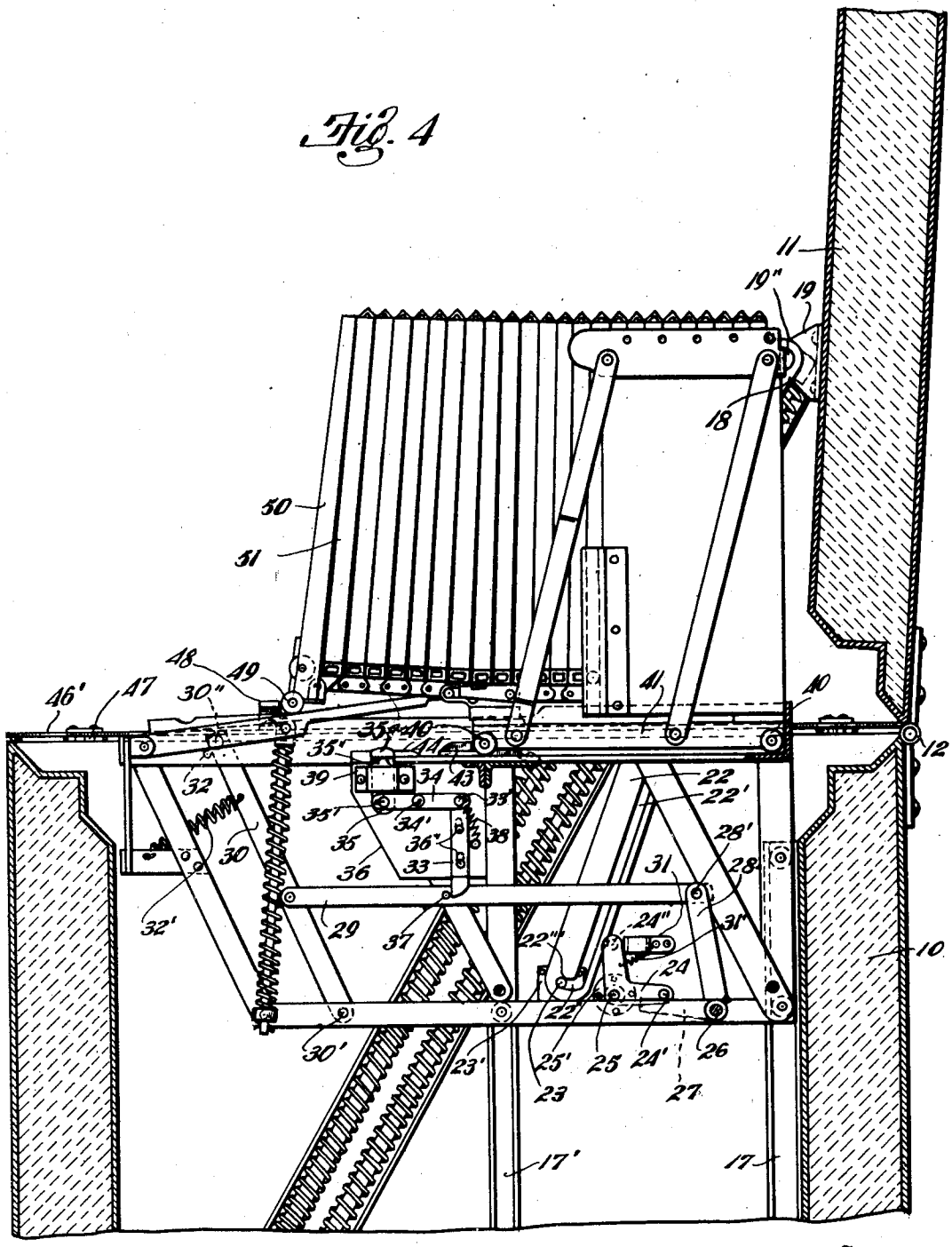
June 5, 1928. 1,672,022

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Filed Aug. 30, 1924 6 Sheets-Sheet 4

Fig. 4



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June 5, 1928. 1,672,022

W. E. DUNNING ET AL

FILING APPLIANCE CASE

Filed Aug. 30, 1924 6 Sheets-Sheet 5

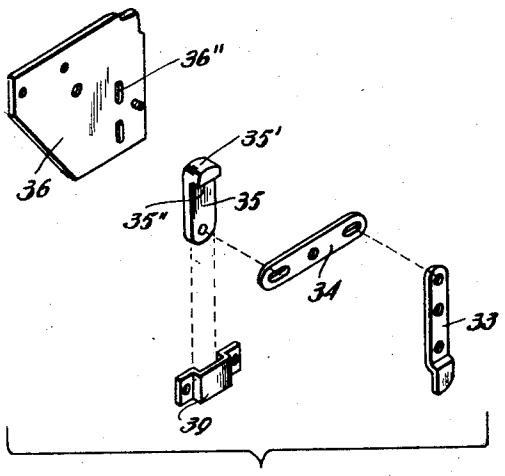


Fig. 9

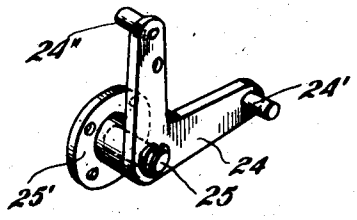


Fig. 8

Fig. 5

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June 5, 1928. 1,672,022

W. E. DUNNING ET AL

FILING APPLIANCE CASE

Filed Aug. 30, 1924 6 Sheets-Sheet 6

Fig. 7

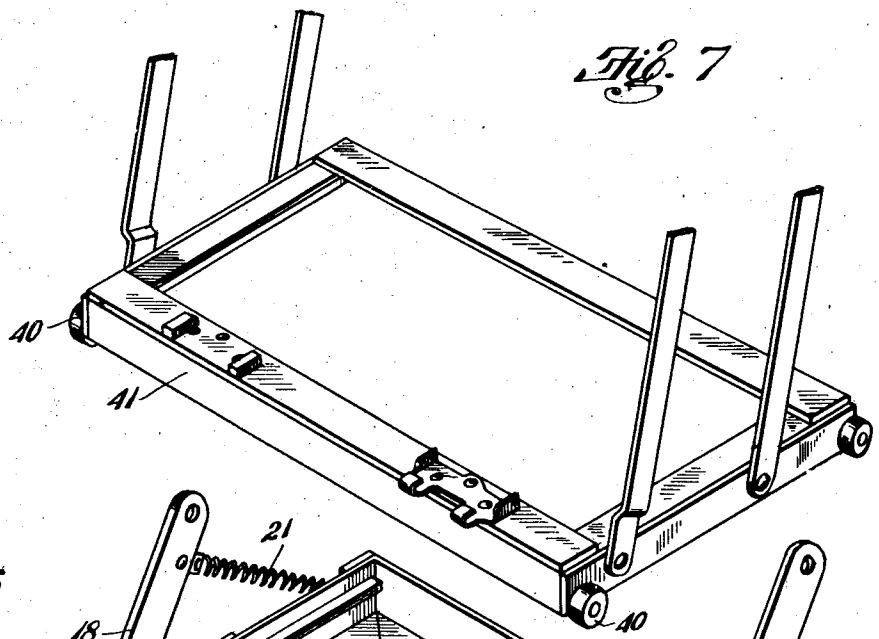
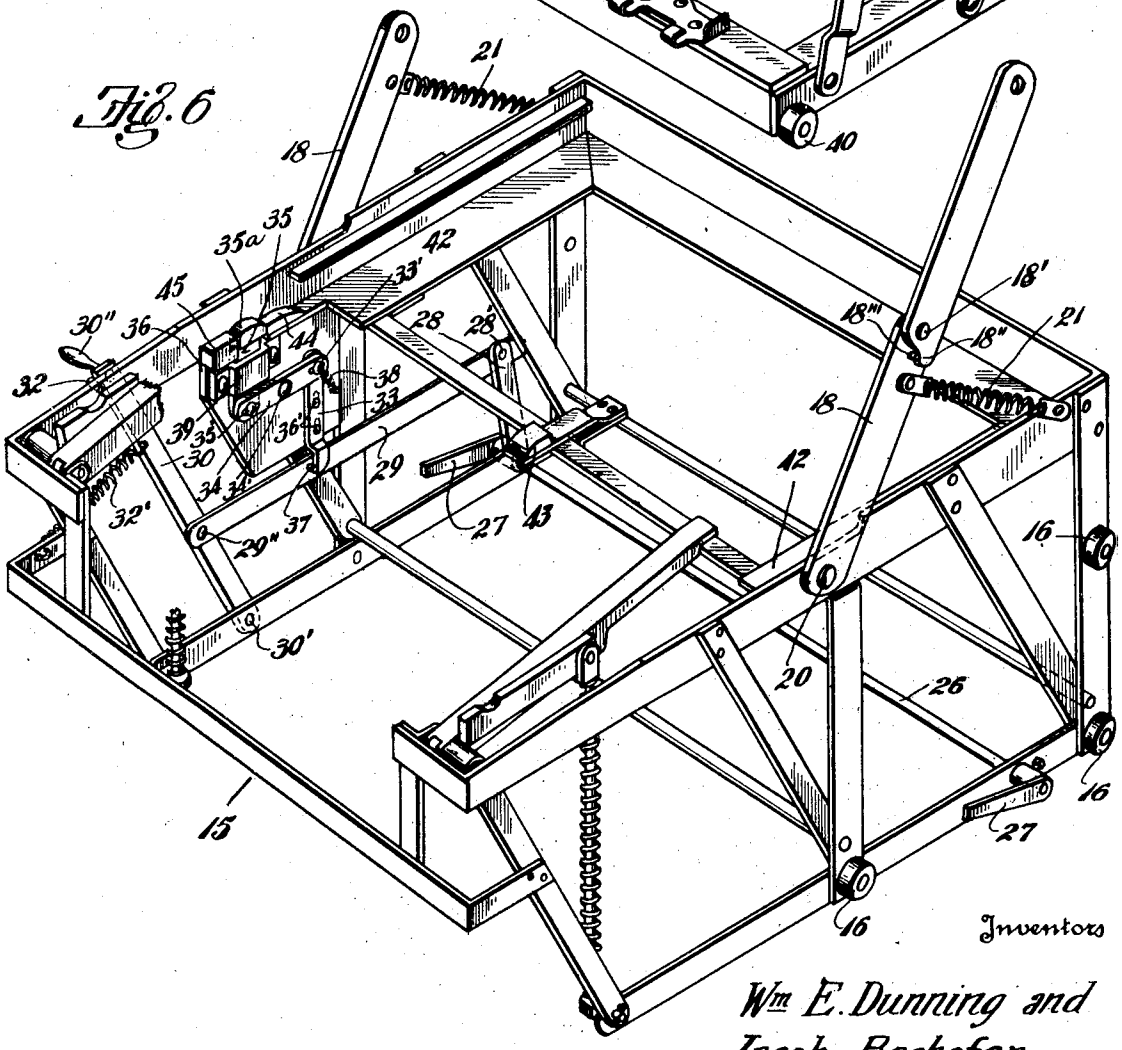


Fig. 6



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UNITED STATES PATENT OFFICE.

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FILING-APPLIANCE CASE.

Application filed August 30, 1924. Serial No. 735,095.

The invention relates to a filing appliance for sales bills and other similar papers in which a series of hinged holders or leaves are operatively mounted upon a carriage movable forward and rearward upon an elevator frame, so as to be raised and lowered in a case having a cover lid hinged to its rear rim, with connections between the lid and the elevator frame for raising and lowering the same by the opening and closing of the lid, as set forth in our pending applications filed July 16, 1923, Serial Nos. 651,814 and 651,815.

In this kind of an appliance, the carriage is preferably moved to and locked in a rearward position on the elevator frame for an operation of the bill holders, and the carriage is preferably moved forward upon the elevator frame for lowering into the case. Furthermore, the elevator frame is carried and supported by tension links depending from the lid of the case, and the lid in turn is supported in open position by depending strut links releasably engaged with the elevator frame.

An important object of the present improvement is to provide the disengaging means for the strut links with interlocking means, so that the disengaging means can not be operated unless the supporting carriage is moved forward on the elevator frame, and to provide interlocking means on the case to prevent a forward movement of the carriage when the same is moved rearward to bring the bill holders in operating position; thereby rendering it impossible for the lid to be accidentally or maliciously closed during a normal use of the appliance.

The invention is illustrated in the accompanying drawings forming part hereof, in which—

Figure 1 is a perspective view of the improved filing appliance case showing the lid opened and the bill holder elevated and moved rearward into operating position.

Fig. 2, an elevation section of the case with the lid closed showing in side elevation the filing appliance lowered and enclosed therein;

Fig. 3, a fragmentary elevation section of the case with the lid raised showing in side elevation the filing appliance elevated through the open top of the case;

Fig. 4, a similar view showing the carriage with the bill holders thereon in operating position;

Fig. 5, a similar view without the carriage frame and bill holders;

Fig. 6, a detached perspective view of the elevator frame;

Fig. 7, a detached perspective view of the carriage frame;

Fig. 8, a detached perspective view of one bell crank; and

Figs. 9 are detached perspective views of the interlocking latch devices.

Similar numerals refer to similar parts throughout the drawings.

The case for the filing appliance may comprise a box body 10 open at the top, a lid 11 hinged at 12 to the rear rim of the body and provided with a combination lock 13 and a handle bar 14 along the forward edge, by means of which handle the lid can be readily raised and lowered.

The elevator supporting frame 15 is provided with a plurality of guide rollers 16 extending laterally from each side, which are adapted to operate in the guide ways 17 and 17′ provided therefor on the inner side of the side walls of the body of the case; two guide rolls spaced one above the other being preferably provided near the rear end of the elevator frame and a third guide roll being preferably spaced a substantial distance forward therefrom, so as to give triangular points of support for holding the elevator frame from tilting.

Elevator supporting links 18 are provided on each side of the elevator frame, the upper ends of which may be pivotally connected at 19′ with brackets as 19 secured to the underside of the lid, and the lower ends of these links are pivotally connected at 20 to the sides of the elevator frame. These links are pivotally jointed intermediate their ends at 18′, and are connected near the joints by expansion springs 21 with the rear end of the frame, to flex them rearward; and each link is preferably provided with stop shoulders 18″ and a stop pin 18‴ to prevent them from flexing forward beyond a straight line.

The elevator supporting links are normally held by tension in straight line when they carry the weight of the filing appliance, but when the elevator frame is lowered to rest upon the bottom of the case, the rear-

ward inclination of the links permits them to flex rearward by gravity supplemented by the action of the expansion springs, so that the lid may be completely closed, as shown in Fig. 2.

These jointed elevator supporting links are more immediately positive in action and more economical to manufacture than slotted unjointed elevator supporting links which have heretofore been used.

Lid supporting links 22 may be pivotally connected above at 19″ with the bracket 19 secured to the underside of the lid, whence they depend for a releasable supporting engagement with posts 23 extending inward from brackets 23′ secured to the inner sides of the case. The releasable connection of these posts may be and preferably is provided by a longitudinal slot 22′ with a forward L-extension 22″ on its lower end forming a shoulder 22‴ adapted to bear upon the supporting post when the lid is fully opened, and the links swing rearward by gravity so as to engage the posts in the L-portion of the slot, as shown in Figs. 3, 4 and 5; in which position the links act as strut members to positively hold the lid in open position.

Disengaging means for the strut links may include a bell crank 24 mounted on pivotal posts 25 extending inward from brackets 25′ secured to each inner side of the casing; a rock shaft 26 journaled in the elevator frame and provided with a further extending crank arm 27 on each end and an upwardly extending crank arm 28 on one end of the shaft; a connecting bar 29 extending forward from a pivotal connection at 28′ with the upright crank arm; and an operating lever 30 extending upward from a pivotal connection 30′ with the elevator frame, having a laterally extending handle 30″ on its upper end, and being pivotally connected at 29″ intermediate its ends with the forward end of the connecting bar 29.

One arm of each bell crank 24 extends rearward and is provided with an inwardly extending finger 24′ contacting with the upper side of the corresponding crank arm 27 when the elevator frame is raised in the case; and the other arm of each bell crank extends upward and is provided with an outwardly extending finger 24″, contacting with the rear edge of the corresponding strut link 22, when the same is swung rearward into supporting engagement with the post 23; as well shown in Figs. 3, 4 and 5.

The upright arm of each bell crank is normally held rearward against a stop 31 on the side of the case by an expansion spring 31′ connecting the crank with the case; and the operating lever 30 is normally held forward against a stop 32 on the frame by an expansion spring 32′ connecting the lever with the frame; so that the disengaging means are normally held inoperative by the action of these expansion springs.

When, however, it is desired to disengage the strut links from the supporting posts, the same is done by grasping the handle 30″ and swinging the operating lever 30 rearward, which swings the crank arms 27 upward and the upright arms of the bell cranks forward, thereby swinging the lower ends of the strut members forward until the supporting posts 23 are free of the shoulders 22‴; whereupon the lid is free to be closed downward by a sliding of the supporting post 23 in the longitudinal slots 22′ in the strut links, as shown for the closed position of the lid in Fig. 2.

Interlocking means for the strut link disengaging means may include a latch bar 33, a rock bar 34, and a pedal bar 35 mounted on a supporting plate 36 secured in one side of the elevator frame. The rock bar 34 extends forward and rearward from a pivotal post 34′ on the supporting plate, the latch bar 33 depends from a slotted pivotal connection 33′ with the rear end of the rock bar, and the pedal bar 35 extends upward from a slotted pivotal connection 35′ to the forward end of the rock bar.

The latch bar has a limited longitudinal sliding engagement, as by bolts 36′ in the one and slots 36″ in the other, with the supporting plate, and its rear end normally depends downward in rear of a stop pin 37 on the side of the connecting bar 29, so as to prevent an operation of the strut member releasing mechanism; in which normal position the latch bolt is held by an expansion spring 38 connecting the rear end of the rock bar 34 with the supporting plate.

The pedal bar 35 likewise has a limited longitudinal sliding movement in a guide bracket 39 secured to the supporting plate, above which the bar is provided with a pedal 35^a forming a shoulder 35″ for stopping its downward movement against the upper edge of the guide bracket. The pedal is normally held upward by action of the spring 38 so as to be depressed, as by a wheel 40 on a forward corner of the carriage frame 41, for lifting the latch bar upward above the stop pin 37 on the connecting bar 29 for permitting an operation of the strut link disengaging mechanism.

The carriage frame 41 rides forward and rearward on wheels 40 at each corner on tracks 42 in each side at the top of the elevator frame; and the carriage may be locked in rearward operating position by a spring latch 43 secured to the elevator frame and acting against the forward edge of the carriage, as shown in Fig. 4.

When the spring latch 43 is released and the carriage moved forward, the forward wheels 40 ride upward upon the inclined rear ends of blocks 44 on the ends of the

tracks, until one of the wheels rides upon and depresses the pedal 35; further forward movement of the carriage being stopped by an abutment block 45 secured to the side of the frame in front of the pedal, as shown in Fig. 3. Thus the strut lever mechanism is automatically released from the interlocking mechanism, whenever the carriage and superposed bill holders are moved forward into position on the elevator frame for lowering the same into the case, as shown in Fig. 3.

Further means for preventing a careless, accidental or malicious disengagement of the lid supporting links, when the lid is opened and the filling appliance in operating position, may be provided by marginal plates 46 and 46′ secured by hinges 47 to the side rims of the case, which plates serve to cover the interval between the filling appliance and the sides of the case, as shown in Fig. 1.

These covering plates not only finish the appearance of the appliance by closing the gaps which would otherwise appear between the elevator frame, and supporting links and the sides of the case; but one of them prevents access to the operating handle for the strut link disengaging mechanism, and renders impossible an operation of the same in a normal manner.

The cover plates 46 and 46′ are furthermore provided with stop fingers 48 extending in front of the supporting rollers 49 on the forward corners of the series of bill holders, when the same are moved rearward into operating position, as shown in Figs. 1 and 4, and positively prevent the same from being moved forward into position for lowering into the case and from automatically releasing the strut link disengaging mechanism.

The table leaf 50 which is hinged to the lower edge of the foremost bill holder 51 which is swung forward to prone position and closes the opening of the case in front of the bill holders when the same are moved rearward into operating position, as shown in Fig. 1, forms another means for protecting the holders from being moved forward, by preventing access to the spring latch 43 which must be disengaged with the carriage frame before the same can be moved forward.

And finally, the inner edges of the marginal cover plates 46 and 46′ are notched so as to neatly fit around the supporting levers and a shoulder 46″ is formed in the inner edge of each plate which abuts the forward edge of the corresponding lid supporting link 22 and prevents a forward disengaging swinging movement of the same, even though the bill holders and the carriage therefore should be moved forward from operating position; thereby preventing the lid from being closed at any time under any circumstances, without swinging the marginal cover plate upward and outward upon their hinges, it being understood that before closing the lid these cover plates are swung upward and outward to hang downward along the outerside of the case, as shown in broken lines, Fig. 1.

By these means it is evident that the bill holders cannot be moved forward and the interlocking mechanism operated to release the mechanism for disengaging the lid supporting links 22, without first, swinging the marginal cover plates outward to free the supporting links for giving access to the operating handle 30″; second, raising the bill holders and more particularly the table leaf 50 into upright position for giving access to the spring latch 43; third, disengaging the spring latch from the carriage frame 41 and moving the same forward to depress the pedal 35′ for releasing the disengaging mechanism for the lid supporting links 22; and fourth, pushing the handle 30″ forward for disengaging the lid supporting links to permit a closing of the lid.

We claim:

1. A case for a filing appliance or the like including a box base open at the top, a rigid elevator frame mounted in the base for moving directly upward and downward, a cover lid hinged to the rear rim of the base, releasable means for holding the lid in upright position, and jointed links connecting the lid and elevator frame for bodily raising and supporting the same by the opening and closing of the lid, stop means preventing flexing of the links in one direction and means for flexing the links in the other direction when relieved of the weight of the elevator frame.

2. A case for a filing appliance or the like including a box base open at the top, a rigid elevator frame mounted in the base for moving directly upward and downward, a cover lid hinged to the rear rim of the base, releasable means for holding the lid in upright position, jointed links connecting the lid and elevator frame for bodily raising and supporting the same by the opening and closing of the lid, stop means preventing flexing of the links in one direction the links being inclined to flex in the other direction by gravity when relieved of the weight of the elevator frame, and springs between the links and the base supplementing the action of gravity for flexing the links.

3. A case for a filing appliance or the like including a box base open at the top, an elevator frame operatively mounted in the base, a carriage movable forward and rearward on the elevator frame, a cover lid hinged to the rear rim of the base, means for raising and lowering the elevator frame by the opening and closing of the lid, means releasably engaging the base for supporting the lid in upright position, means for disengaging the

lid supporting means, and releasable means operated by the movable carriage for normally stopping the operation of the disengaging means.

4. A case for a filing appliance or the like including a box base open at the top, an elevator frame operatively mounted in the base, a cover lid hinged to the rear end of the base, means for raising and lowering the elevator frame by the opening and closing of the lid, links depending from the lid and releasably engaging the base for supporting the lid in upright position, marginal cover plates hinged to the sides of the base and provided with shoulders for stopping a disengagement of the links from the base.

5. A case for a filing appliance or the like including a box base open at the top, an elevator frame operatively mounted in the base, a cover lid hinged to the rear rim of the base, a carriage movable forward and rearward on the elevator frame, means for raising and lowering the elevator frame by the opening and closing of the lid, means releasably engaging the base for supporting the lid in upright position, means for disengaging the lid supporting means, and means which is rendered inoperative by the forward movement of the carriage for stopping the operation of the disengaging means.

6. A case for filing appliance or the like including a box base open at the top, an elevator frame operatively mounted in the base, a cover lid hinged to the rear end of the base, means for raising and lowering the elevator frame by the opening and closing of the lid, means releasably engaging the base for supporting the lid in upright position, means for disengaging the lid supporting means including a lever between the elevator frame and one side of the base, and a marginal cover plate hinged to the side rim of the base for closing the interval between the rim and the elevator frame and rendering the lever inaccessible.

7. A case for a filing appliance or the like including a box base open at the top, an elevator frame operatively mounted in the base, a carriage movable forward and rearward on the elevator frame, a cover lid hinged to the rear end of the base, means for raising and lowering the elevator frame by the opening and closing of the lid, means releasably engaging the base for supporting the lid in upright position, means for disengaging the lid supporting means, means which is rendered inoperative by the forward movement of the carriage for stopping the operation of the disengaging means, and marginal cover plates hinged to the side rims of the base and having fingers thereon for stopping a forward movement of the carriage.

8. A case for a filing appliance or the like including a box base open at the top, an elevator frame operatively mounted in the base, a carriage movable forward and rearward on the elevator frame, a series of normally upright holders and a table leaf in front thereof hinged on the case, a cover lid hinged to the rear end of the base, means for raising and lowering the elevator frame by the opening and closing of the lid, means releasably engaging the base for supporting the lid in upright position, means for disengaging the lid supporting means, means which is rendered inoperative by the forward movement of the carriage for stopping the operation of the disengaging means, a spring latch on the elevator frame locking the carriage in rearward position rendered inaccessible by swinging the table leaf forward into prone position.

In testimony that we claim the above, we have hereunto subscribed our names.

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