March 4, 1924. 1,486,094

E. G. LEHMAN

SECTIONAL CASE LOCK

Filed Sept. 28, 1918 8 Sheets-Sheet 1

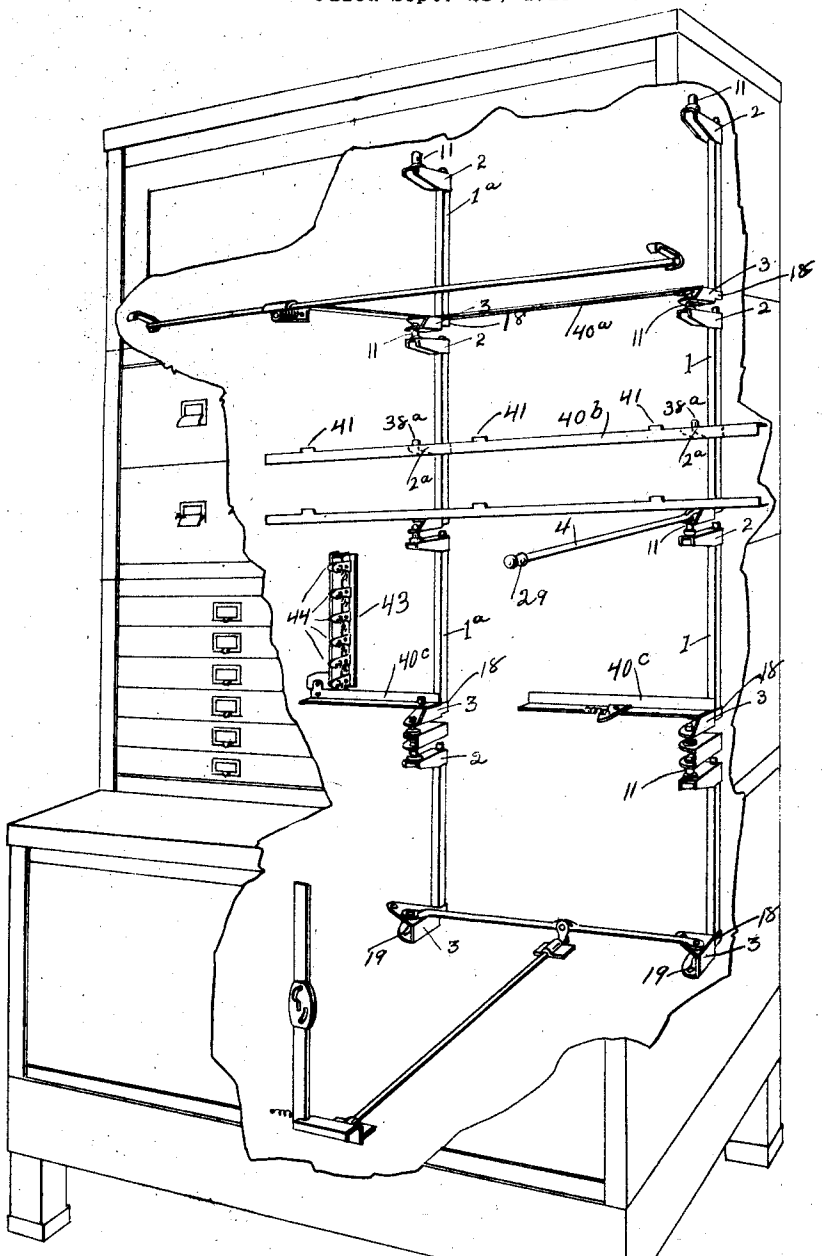


Fig. 1

Witness
W. H. Stough

Inventor
Edward G. Lehman
By Harry Grease
Attorney

March 4, 1924. 1,486,094

E. G. LEHMAN

SECTIONAL CASE LOCK

Filed Sept. 28, 1918 8 Sheets-Sheet 2

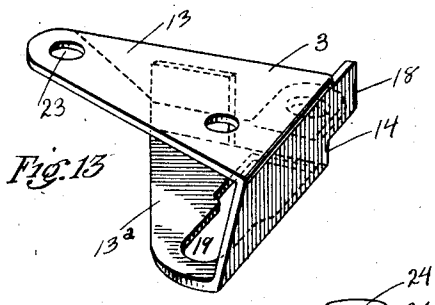


Fig. 13

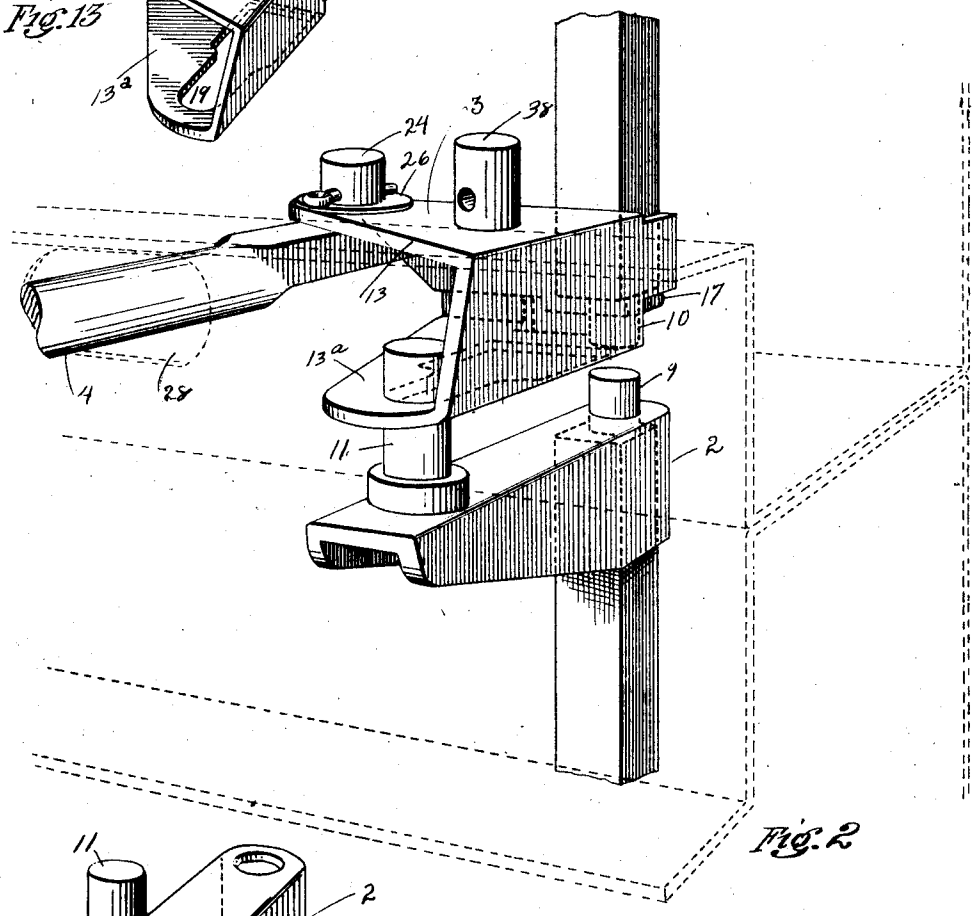


Fig. 2

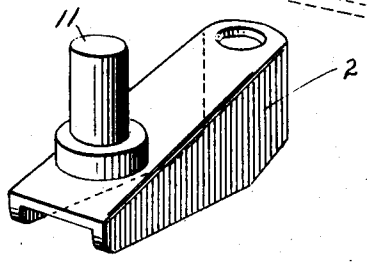


Fig. 14

Witness
W. H. Stough

Inventor
Edward G. Lehman
By Young Crease
Attorney

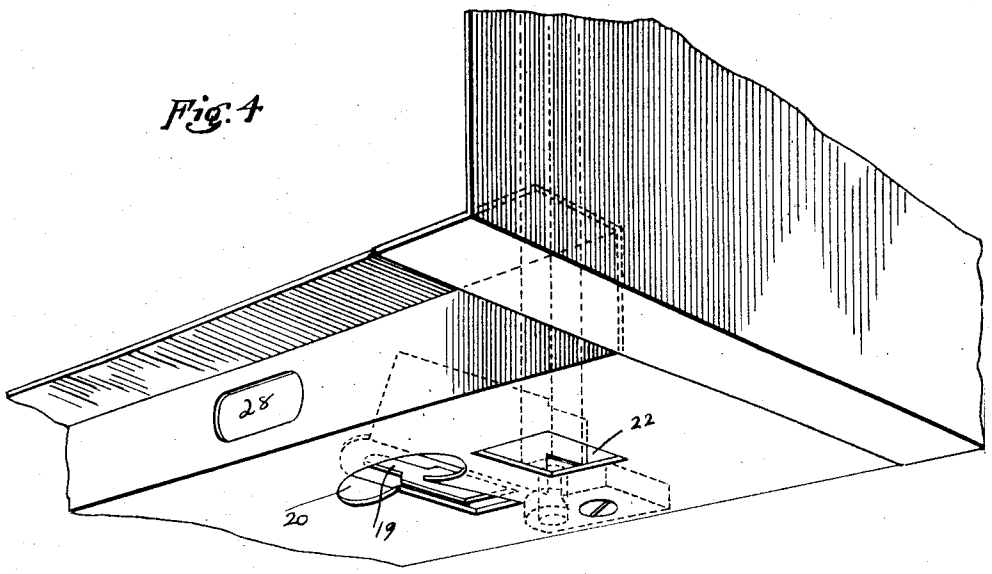
March 4, 1924. 1,486,094

E. G. LEHMAN

SECTIONAL CASE LOCK

Filed Sept. 28, 1918 8 Sheets-Sheet 3

Fig. 4



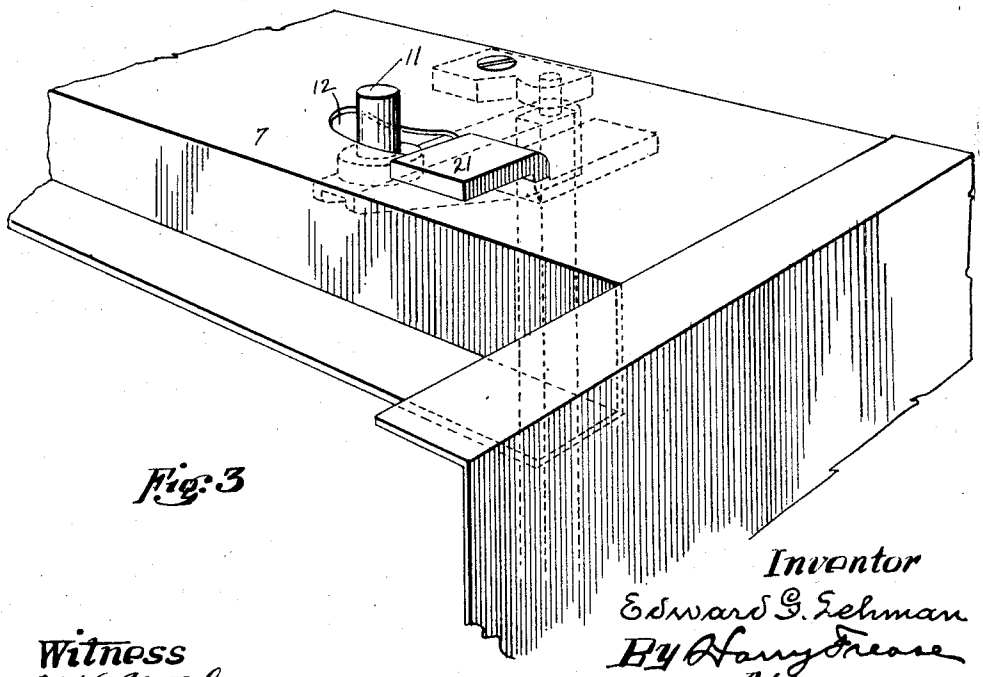


Fig. 3

Witness
W. H. Slaugh

Inventor
Edward G. Lehman
By Harry Grosse
Attorney

March 4, 1924. 1,486,094

E. G. LEHMAN

SECTIONAL CASE LOCK

Filed Sept. 28, 1918 8 Sheets-Sheet 4

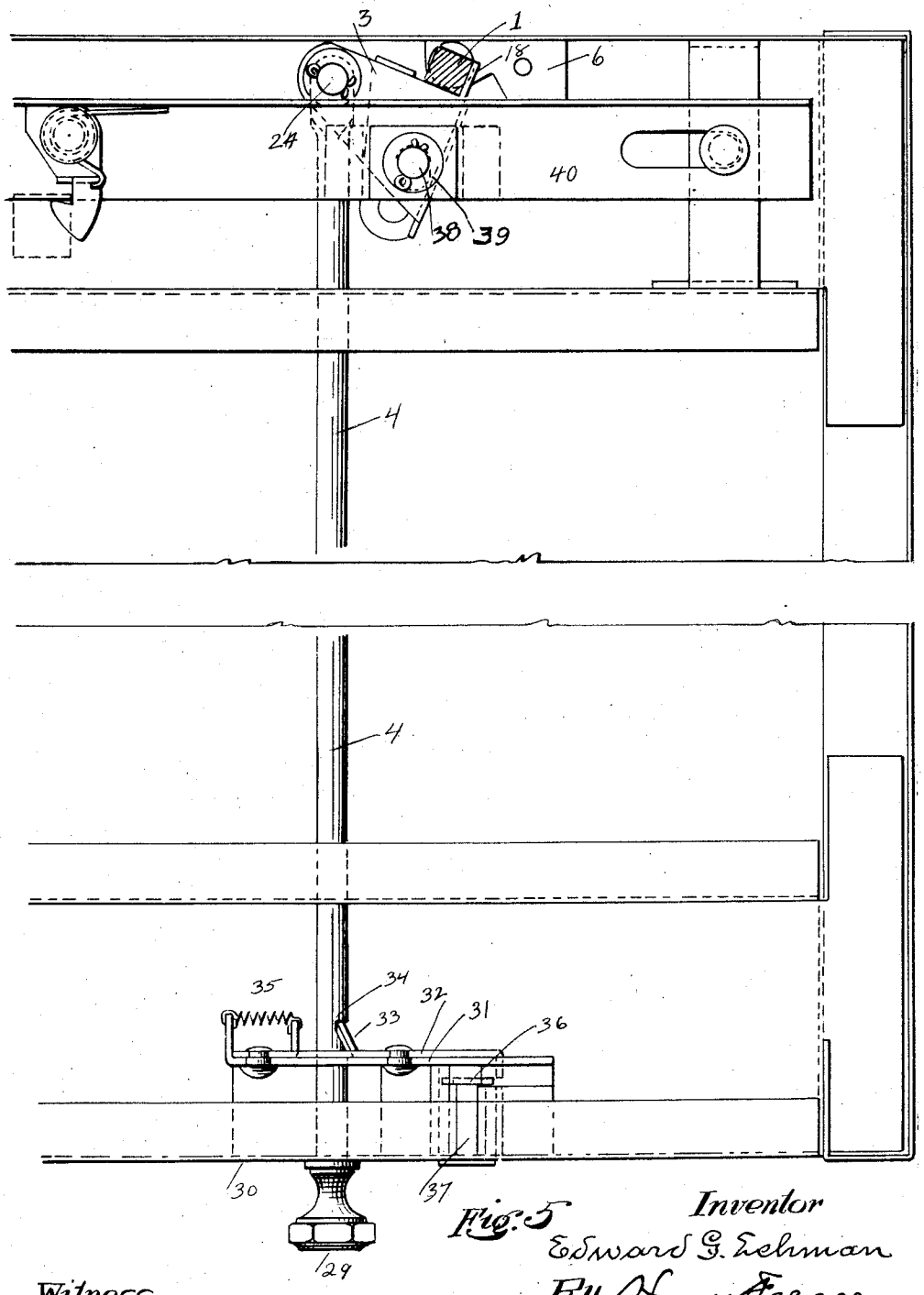


Fig. 5

Witness
W. K. Stough

Inventor
Edward G. Lehman
By Harry Grease
Attorney

March 4, 1924. 1,486,094

E. G. LEHMAN

SECTIONAL CASE LOCK

Filed Sept. 28, 1918 8 Sheets-Sheet 5

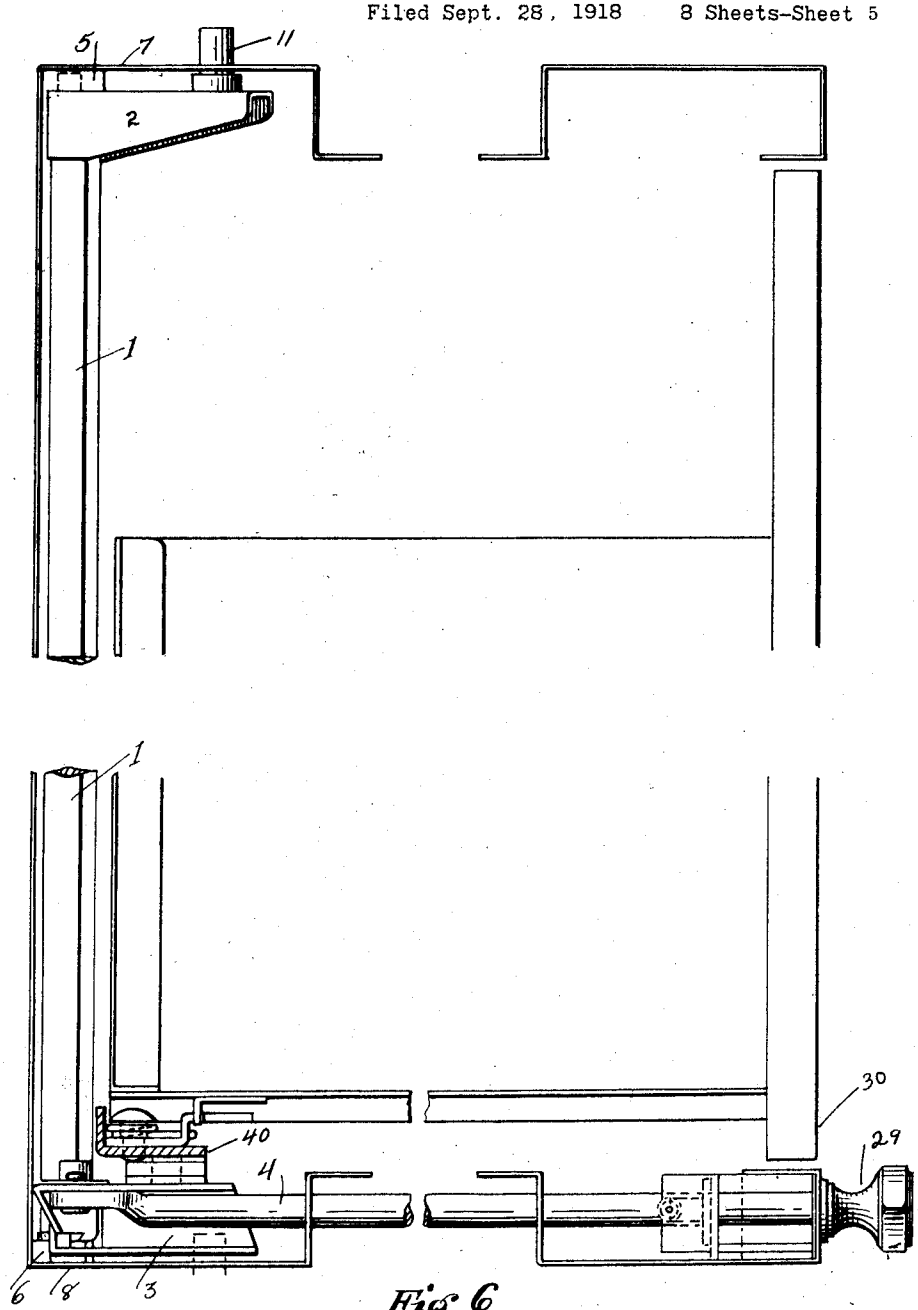


Fig. 6

Witness
W. H. Stough

Inventor
Edward G. Lehman
By Harry Frease
Attorney

March 4, 1924. 1,486,094

E. G. LEHMAN

SECTIONAL CASE LOCK

Filed Sept. 28, 1918 8 Sheets-Sheet 6

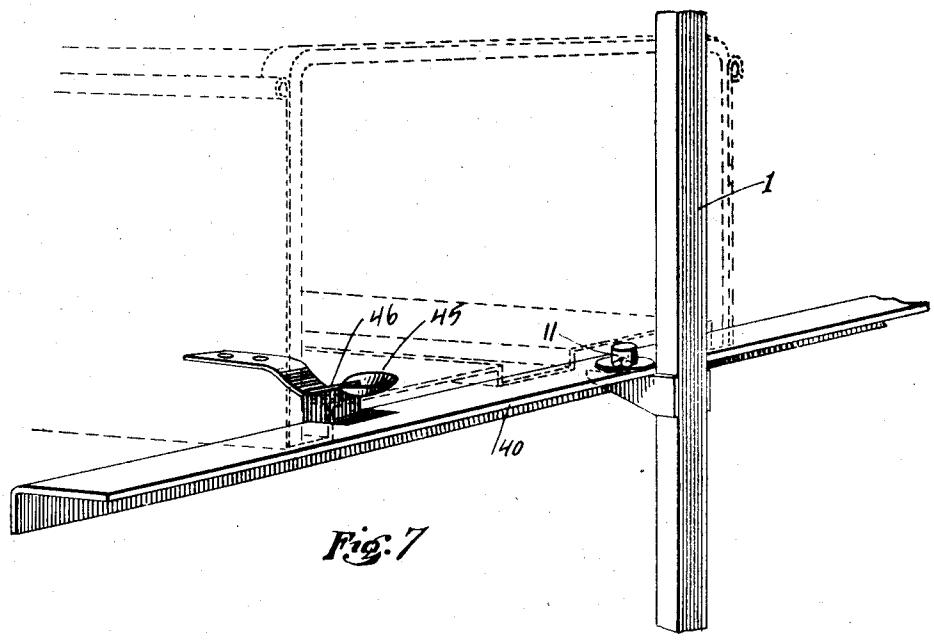


Fig. 7

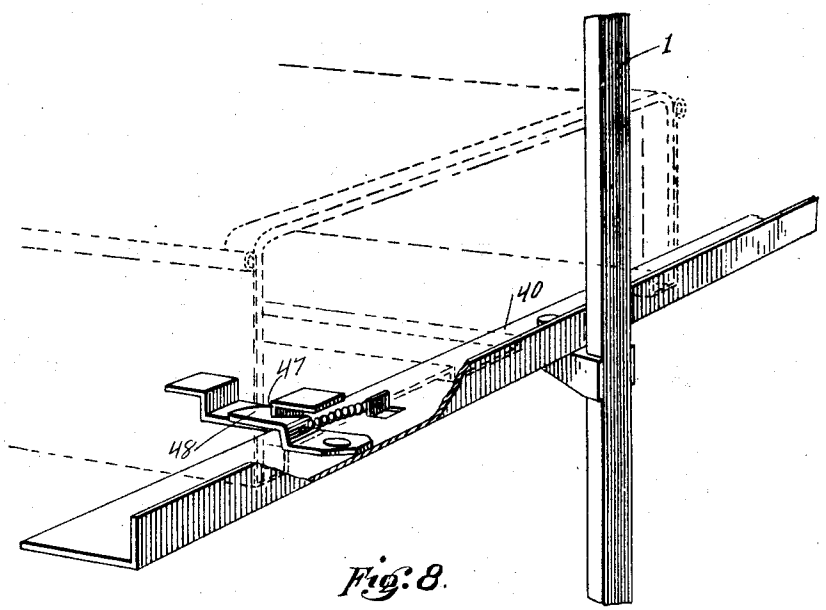


Fig. 8.

Inventor
Edward G. Lehman
By Harry Grease
Attorney

Witness
W. K. Stough

March 4, 1924. 1,486,094

E. G. LEHMAN

SECTIONAL CASE LOCK

Filed Sept. 28, 1918 8 Sheets-Sheet 7

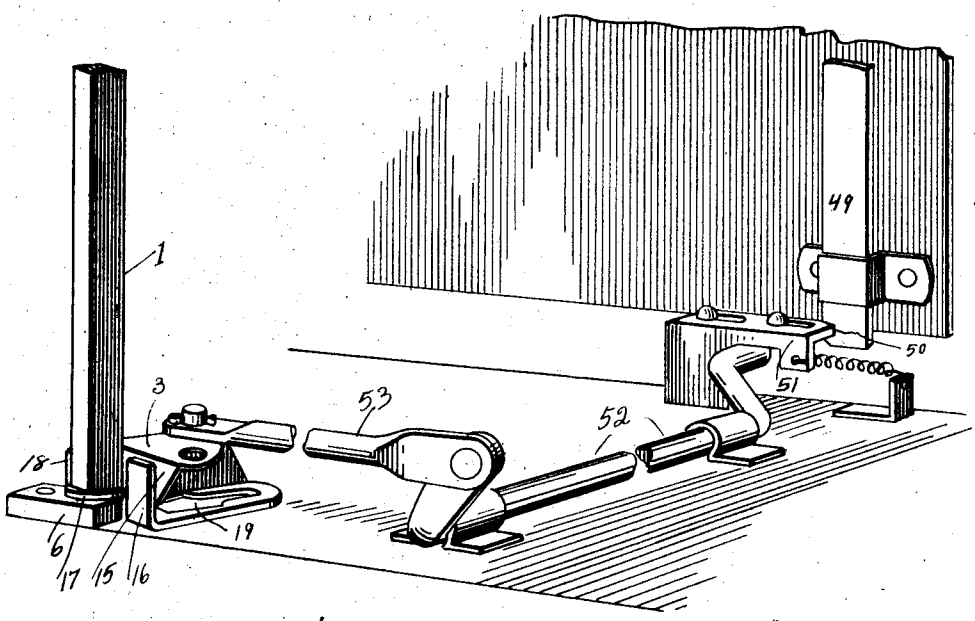


Fig. 9

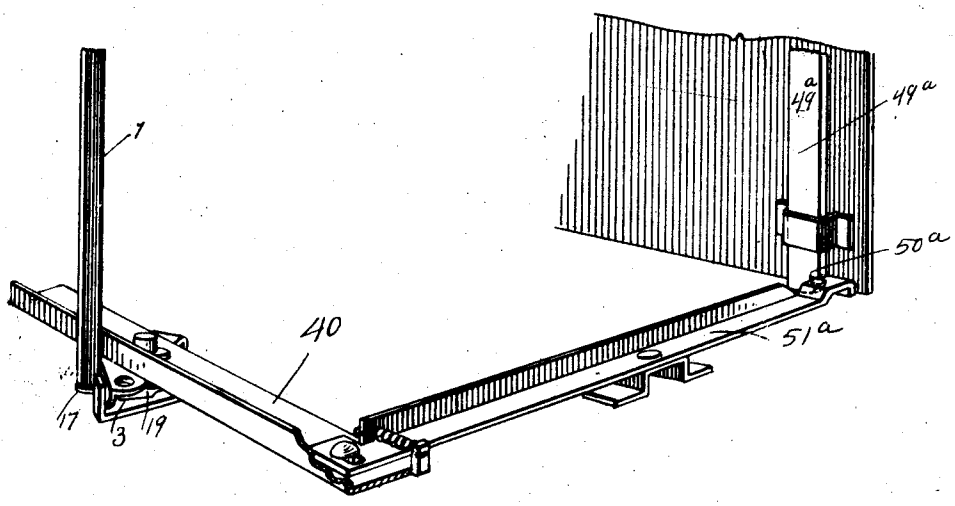


Fig. 10

Witness
W. K. Stough

Inventor
Edward G. Lehman
By Harry Greene
Attorney

March 4, 1924. 1,486,094

E. G. LEHMAN

SECTIONAL CASE LOCK

Filed Sept. 28, 1918 8 Sheets-Sheet 8

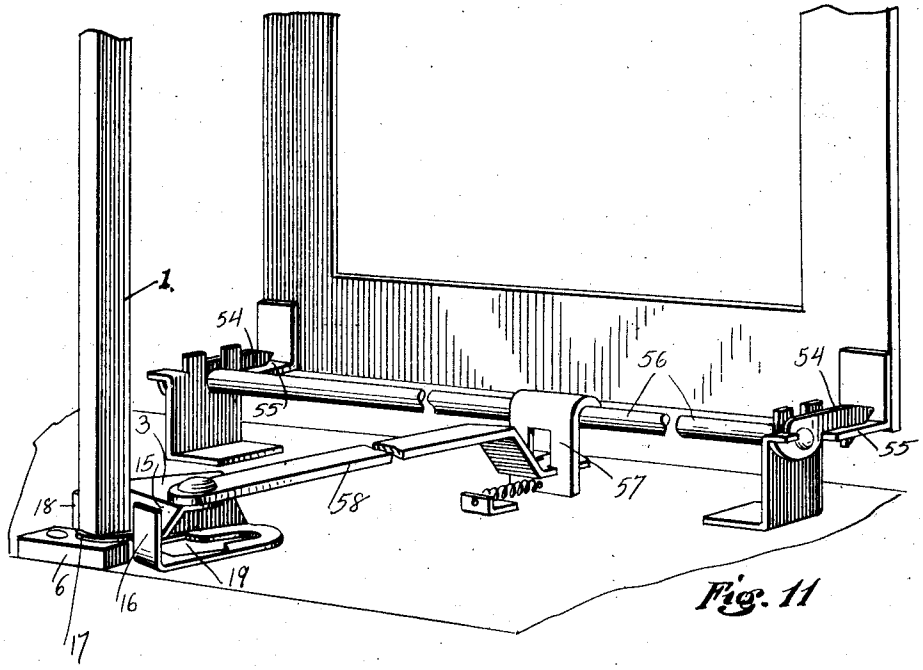


Fig. 11

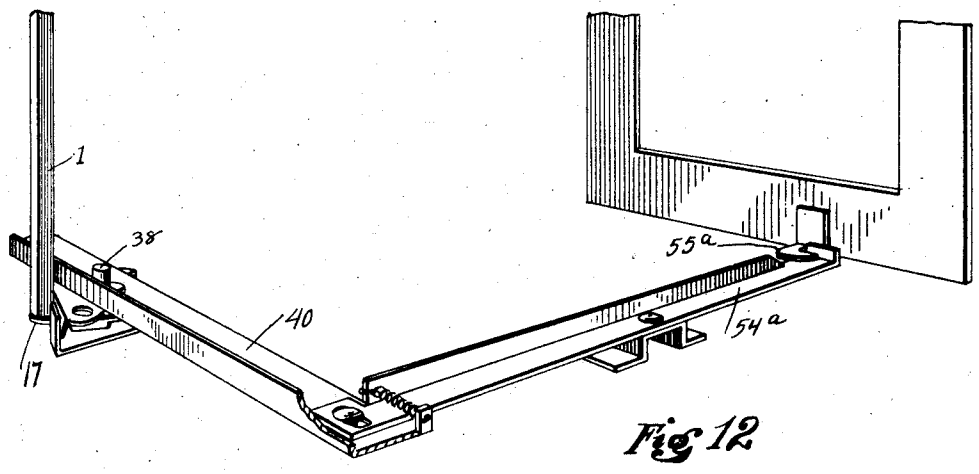


Fig 12

Witness
W. A. Stough

Inventor
Edward G. Lehman
By Harry Frease
Attorney

Patented Mar. 4, 1924. 1,486,094

UNITED STATES PATENT OFFICE.

EDWARD G. LEHMAN, OF CANTON, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO UNITED ALLOY STEEL CORPORATION, OF CANTON, OHIO, A CORPORATION OF NEW YORK.

SECTIONAL-CASE LOCK.

Application filed September 28, 1918. Serial No. 256,018.

To all whom it may concern:

Be it known that I, EDWARD G. LEHMAN, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Sectional-Case Locks, of which the following is a specification.

The invention relates to locking devices for the various units of a sectional case or cabinet, and the object of the improvement is to provide each unit with one or more simple and self-contained lock operating or actuating devices, which may be operatively engaged with the like element of another unit when the one is superposed upon another in the usual manner, without the use of supplemental connecting means; such devices being readily connected to and co-ordinated with various types of locking devices required for the different kinds of receptacles making up a composite case or cabinet.

Further objects of the invention relate to the design and construction of such devices so that the operation thereof will not be affected by slight variations due to manufacturing methods; and also to so interengage the unitary actuating devices that the series thereof as well as the locks operated thereby, may be operated and locked as a whole, by a single operating handle or arm connected with any one of the unitary devices.

A preferred embodiment of the invention as applied to and connected with sectional cases having various kinds of locking devices, is illustrated in the accompanying drawings forming part hereof, in which—

Figure 1 is a perspective view of the improved operating and locking devices as assembled in a case or cabinet, outlined in broken lines, comprising a variety of different kinds of units or sections;

Fig. 2, a fragmentary perspective view showing the engagement of two operating units with each other;

Fig. 3, a fragmentary perspective view showing the top of a sectional case with the upper end of an operating unit therein;

Fig. 4, a fragmentary perspective view showing the bottom of the sectional case with the lower end of an operating unit therein;

Fig. 5, a plan section of a case section showing an operating bar connected with the operating unit;

Fig. 6, a side elevation section of a case section;

Fig. 7, a fragmentary perspective view showing a drawer locking device;

Fig. 8, a similar view showing another drawer locking device;

Fig. 9, a similar view showing a cupboard locking device;

Fig. 10, a similar view showing another cupboard locking device;

Fig. 11, a similar view showing a book case locking device;

Fig. 12, a similar view showing another book case locking device;

Fig. 13, a detached perspective view of an upper crank arm; and

Fig. 14, a detached perspective view of a lower crank arm.

Similar numerals refer to similar parts throughout the drawings.

The unitary operating or actuating device for each case section comprises an upright shaft 1, an upper crank arm 2, and a lower crank arm 3; and to the lower crank arm of any unit, may be connected an operating arm 4, as shown in Fig. 2.

Bearings 5 and 6 are secured to the upper and lower walls 7 and 8 of the case section in which the axial pivots 9 and 10 of the upper and lower ends of the shaft 1 are journalled.

The upper crank arm 2 is preferably made of heavy sheet metal pressed into channel form having an aperture in one end of its channel through which the axial pivot 9 is passed before being entered in the bearing 5, so that the sides of the channel bar will fit against the sides of the shaft 1 which is preferably formed square for that purpose, and to which the side of the arm may be secured as by spot-welding.

The upright post 11 is secured to the free end of the upper crank arm 2, and protrudes upward through the arc-slot 12 in the top 7 of the case for engagement with the lower

crank arm 3 of the operating unit in a superposed case.

The lower crank arm 3 of each operating unit is made of heavy sheet metal cut and shaped to form upper and lower plates 13 and 13ª connected at one side by the wall 14 and at the rear end by the overlapping flanges 15 and 16, with an ear 17 extending rearward from the lower plate 13ª having an aperture through which the axial pivot 10 on the lower end of the shaft 1 is passed before being entered in its journal bearing 6; the sides of which shaft are abutted on one side by the flange 18 extending from the side wall 14, which flanges are secured to the shaft as by spot-welding.

The lower plate 13ª of this crank arm is provided with the radially-located pear-shaped slot 19, having its wider end in rear of its narrower end, for receiving and engaging the upright post 11 upon the upper crank arm of the next lower operating unit; and the arc T-shaped slot 20 is provided in the bottom of the upper case section through which the upright post 11 is adapted to pass for engagement and operation with the lower crank arm in said upper section, as illustrated and described.

The case sections are adapted to be engaged together by means of flat hooks 21 on the top of one section, adapted to enter through the corresponding aperture 22 in the bottom of an upper section when said upper section is off-set forward upon the lower section, after which the bottom of the upper section in front of the aperture is engaged under the hook by sliding the upper section directly rearward into alinement with the lower section.

The parts are so arranged that by rotating the shafts 1 in the two sections so that the crank arms and the radial slots therein will stand straight forward from the axes of the shafts in the normal or unlocked position of the mechanism, as shown in Figs. 3 and 4, so that the upright post 11 which protrudes through the top of the lower section, may enter the stem of the T-slot 20 in the bottom of the upper section and will readily enter the wider end of the pear-shaped slot 19 in the lower crank arm in the upper section, and that when the upper section is moved directly rearward for engagement with the hooks on the lower section, the upright post will be located for operation in the T-portion of the slot 20, and in the narrower end of the slot 19.

The upper plate 13 of the lower crank arm is laterally elongated and is provided in its extended end with the bearing aperture 23 for receiving the pivot post 24 extending upward from the inner end of an operating bar 4; the post being preferably entered from below the aperture and is provided with a washer 26 on top of the arm plate and with a cotter pin above the washer for holding the post for pivotal operation in the bearing.

The operating bar 4 extends forward through suitable apertures as 28 in the walls of the case and is provided with a shouldered handle 29 in front of the forward wall 30 of the case; and on the inner side of said wall is mounted a lock bracket 31 having a laterally sliding latch 32 thereon with a detent 33 adapted to engage in a notch 34 in the side of the operating bar for stopping it from forward movement when its shouldered handle is against the forward wall, which lock plate and latch are connected by a spring 35 for normally holding the detent in the notch.

A suitable lock is provided having a cam tumbler 36 adapted to be operated by a key, not shown, entered in a socket 37 for sliding the latch endwise to disengage its detent from the arm notch: and the parts are so arranged that when the operating arm is punched inward, it will swing the crank arm for rotating the upright shafts in the direction for locking the various drawers and doors of the sectional case, such position being shown in Figs. 5 and 6, and that by disengaging the detent 33 from the arm notch, and pulling the operating form forward, the lower crank arm connected therewith will be swung for rotating the upright shafts in the proper direction for unlocking the various drawers and doors of the sectional case; by these means all the compartments in the case or cabinet may be locked and unlocked by reverse movements of the single operating bar 4, and the entire series of devices may be locked and unlocked by the sliding latch 32 controlled by the single lock 37.

The upper plate 13 of the lower crank arm is also extended forward, and at a substantial distance in front of the upright shaft is provided with the pivot post 38, which may be engaged in a slotted aperture 39 for operating a transverse bar as 40 mounted for sliding endwise in the case as shown in Fig. 5, or may be pivotally connected with one end of a transverse connecting bar as 40ª, having the other end connected with another crank arm or other locking means or connections of the different kinds shown in the various figures of the drawings.

The series of upright shafts 1 are preferably mounted and alined in the rear portion of the section units near one end thereof, as shown in Fig. 1, and when the case or cabinet is composed of sections or units having two or more laterally adjacent compartments, a series of shafts as 1ª may be mounted and alined and operatively connected together at an intermediate point in the rear of the case or cabinet, as shown in the same figure, which may be operated by connecting corresponding lower crank arms 3; and when a horizontal section is composed of a plural-

ity of superposed compartments, additional crank arms 2^a similar to the upper crank arms may be secured to the upright shafts, upon the pivot posts 38^a thereof transverse operating bars as 40^b may be mounted, having locked detents 41 thereon for laterally adjoining drawers; or such a bar 40^c may be operatively connected by a bell crank with a vertically movable upright bar 43 for actuating a plurality of latches 44 for a superposed series of drawers, all as shown in Fig. 1.

Locking devices for the rear ends of drawers are shown in Figs. 7 and 8, and in both cases the specific locks are adapted to be operated by the lateral movement of transverse bars 40. In the first case a spring cam plate 45 is provided on the drawer having an aperture adapted to be engaged by a detent 46 on the transverse operating bar, and in the latter case, a keeper 47 is provided on the drawer which is adapted to be engaged by the spring controlled hook 48 pivotally mounted on the transverse operating bar; and in each case it is evident that when the transverse bar is moved into locked position by the unitary locking devices, the separate drawer locks will be automatically engaged when the individual drawers are pushed backward into the case, and may then be disengaged by a lateral movement of the transverse operating bar.

Locking devices for bolts on the doors of cupboards or the like, are shown in Figs. 9 and 10. In the first case the bolt 49 is provided with a notch 50 adapted to be engaged by a laterally sliding spring controlled keeper 51 operated by the crank shaft 52 and a connecting bar 53 from one of the lower crank arms 3 of the unitary operating device, and in the second case a similar bolt 49^a is provided with a notch 50^a adapted to be engaged by a spring controlled pivoted keeper 51^a having a slotted connection with a transverse operating bar 40; and in both cases the end of the bolt is bevelled so as to automatically engage the spring controlled keeper when in locking position and the bolt is moved endwise for locking.

And locking devices for pendent doors of book cases are shown in Figs. 11 and 12.

In the first case bevelled nose hooks 54 are adapted to engage with keepers 55 provided on a spring controlled rock shaft 56 with a crank arm 57 having a limited sliding connection with a connecting bar 58 pivoted to a lower crank arm 3 of the unitary lock operating devices; and in the second case, a bevelled nose hook 55^a is adapted to be engaged by a lateral swinging spring controlled keeper 54^a having a slotted connection with a transverse operating bar 40.

And finally, it is evident that after the upright posts 11 are engaged in the slot 19, when the unitary sections and locking devices are assembled, a lateral rotation of the crank arms will prevent a disengagement of the hooks on the unitary sections; and that when the operating devices are locked in such position, the unitary section of the case will be stopped from sliding for disengagement.

But when the operating devices are unlocked and the crank arms are rotated to disengage the hooks on the unitary sections, said sections may be disengaged by sliding one upon the other.

I claim:

1. A lock operating device for a sectional case including means for engagement with an adjacent section by sliding directly rearward thereon, an upright rock shaft mounted in the case, a crank arm at the upper end of the shaft having an upright post protruding above the case, and a crank arm at the lower end normally extending straight forward from the axis of the shaft having a radial slot adapted to be engaged by the upright post of an adjacent section, whereby an engagement and disengagement of the case sections may be normally made, and disengagement is prevented when they are swung to an inclined position by a rotation of the rock shaft.

2. A lock operating device for a sectional case having an arcuate aperture in its upper wall and an arcuate T-shaped aperture in its lower wall, including means for engagement with an adjacent section by sliding directly rearward thereon, an upright rock shaft mounted in the case, a crank arm at the upper end of the shaft having an upright post protruding upward through the arcuate aperture in the upper wall, and a crank arm at the lower end normally extending straight forward from the axis of the shaft having a radial slot therein for engaging the upright post of a subsidiary section when the same is passed through the arcuate T-shaped aperture in the bottom wall.

3. Unitary locking devices for sectional cases including means for engagement by sliding one directly rearward upon the other alined rock shafts in the several sections, each shaft having a crank arm with an upright post at one end, and a crank arm with a radial slot at the other end normally extending straight forward from the axis of the shaft, the upright posts being adapted to engage in the radial slots of adjacent units for operating the one from the other when the sections are assembled, whereby an engagement and disengagement of the case sections may be normally made, and disengagement is prevented when they are swung to an inclined position by a rotation of the rock shaft.

4. Unitary locking devices for sectional cases having an arcuate aperture in its upper wall and an arcuate T-shaped aperture in its lower wall, including means for en-

gagement by sliding one directly rearward upon the other alined shafts in the several sections, each shaft having a crank arm with an upright post at one end normally extending straight forward from the axis of the shaft, and a crank arm with a radial slot at the other end, the upright posts extending through the arcuate apertures in the upper walls and being adapted to engage in the radial slots of adjacent units for operating the one from the other when the sections are assembled, and the post is passed through the arcuate T-shaped aperture in the bottom wall.

EDWARD G. LEHMAN.