May 26, 1942. C. A. JOHNSON ET AL 2,284,092

LOCKING MEANS FOR LOCKERS AND THE LIKE

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Fig. 1.

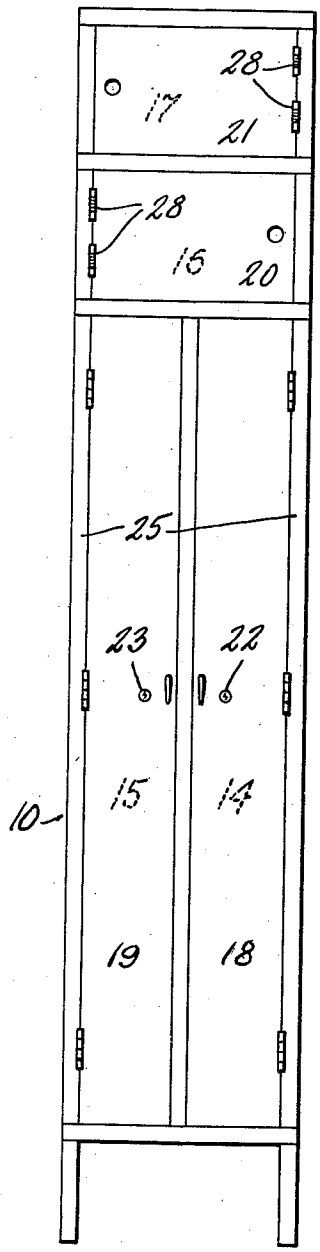


Fig. 4.

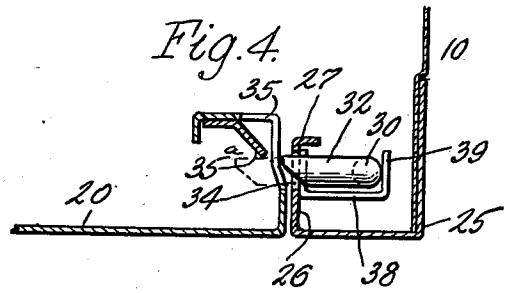
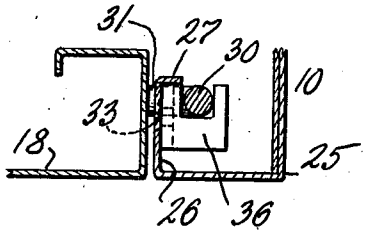


Fig. 5.



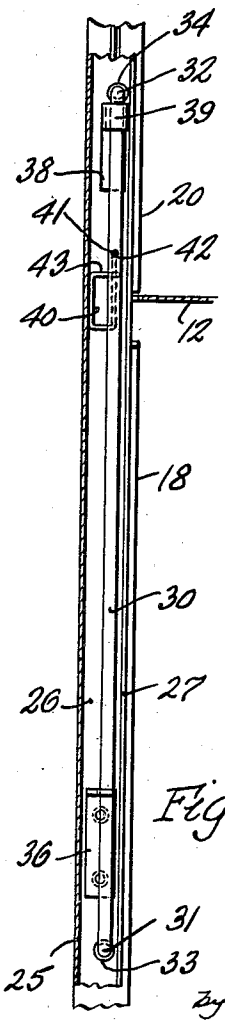


Fig. 3.

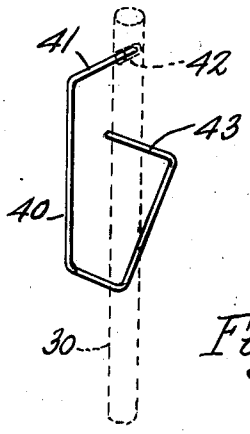


Fig. 6.

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LOCKING MEANS FOR LOCKERS AND THE LIKE

Filed March 7, 1940 2 Sheets-Sheet 2

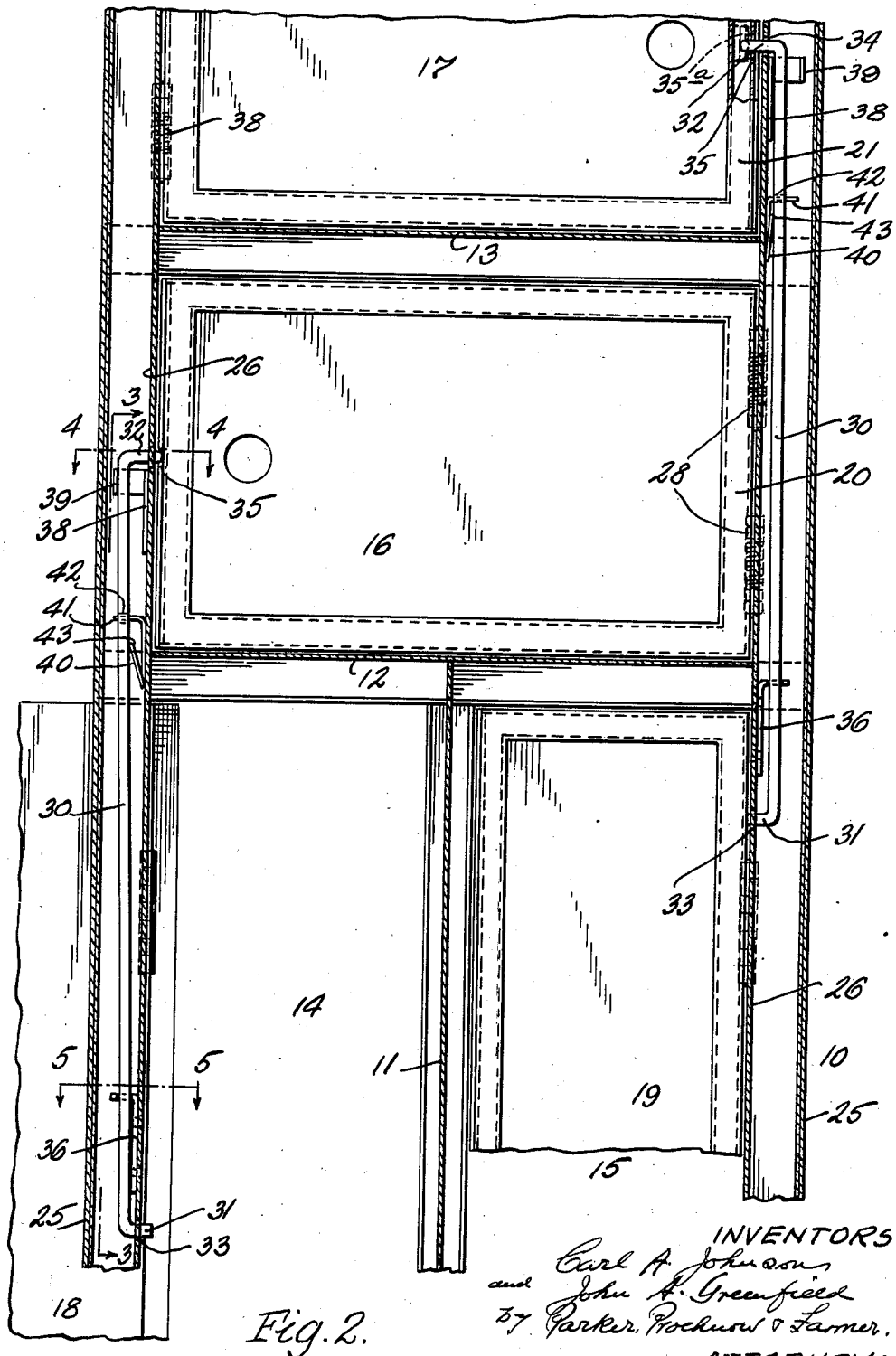


Fig. 2.

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Patented May 26, 1942 2,284,092

UNITED STATES PATENT OFFICE

2,284,092

LOCKING MEANS FOR LOCKERS AND THE LIKE

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Application March 7, 1940, Serial No. 322,776

7 Claims. (Cl. 312—193)

This invention relates to locking means for the doors or closures of lockers and analogous cabinets or devices, and more specifically to improvements in locking means for lockers and the like which have doors for different compartments and are equipped with locking means whereby the closing of one door acts to lock another door. For instance, the invention is applicable to double or two-person lockers which have two main compartments with a door for each and two hat compartments arranged one over the other above the main compartments, and are equipped with means whereby the closing of the door of one main compartment operates to lock the door of the companion hat compartment, and the closing of the second main compartment door operates to lock the second hat compartment door.

One object of the invention is to provide effective and reliable locking means of simple and inexpensive construction suitable for purposes such as mentioned.

Other objects of the invention are to provide, in a locker having doors for main or lower compartments and doors for hat compartments arranged one over the other above the lower compartments, means, operated by the closing of each main compartment door, to lock its companion hat compartment door; also to provide a locking mechanism which consists of the minimum number of parts of simple construction and can be installed with the minimum of labor and expense, for locking one door or element by the operation of another door or element.

Further objects and advantages of the invention will appear from the following specification of the preferred embodiment of the invention, shown in the accompanying drawings, and the novel features of the invention are set forth in the appended claims.

In said drawings:

Fig. 1 is a small scale front elevation of a two-person locker having two lower doors and two upper doors, and equipped with mechanism, embodying the invention, whereby the closing of each lower door operates to lock its companion upper door.

Fig. 2 is a sectional elevation, on a larger scale, looking from the rear toward the front of the locker, showing one main door open and the locking mechanism for one upper door in locking position and that for the second upper door in released position.

Fig. 3 is a side, sectional elevation, of one of the locking mechanisms on line 3—3, Fig. 2.

Figs. 4 and 5 are full size, sectional plan views thereof on lines 4—4 and 5—5 respectively, Fig. 2.

Fig. 6 is a perspective view of the actuating spring for the locking rod.

The locker to which our improved locking mechanism is applied, as shown in the drawings, comprises an outer casing 10 of generally rectangular form which is divided by a vertical partition 11 and horizontal partitions 12 and 13 into two main or lower compartments 14 and 15, arranged side by side, and hat or upper compartments 16 and 17, one over the other, above the main compartments. The two main compartments have doors 18 and 19 and the two hat compartments have doors 20 and 21.

The locker may be of any usual or suitable construction and the doors 18 and 19 for the main compartments may be provided with key-actuated or other locks (not shown) of any suitable construction for separately locking said doors in closed position, the keyholes for the locks being indicated at 22 and 23 in Fig. 1. The locker shown, however, is of metal construction having sheet metal outer and partition walls and front corner posts 25 at opposite sides of the locker which are of channel-shape cross section having rearwardly directed inner flanges 26 with outturned or laterally directed rear upright edges 27.

Preferably the doors 20 and 21 for the hat compartments are hinged at the opposite sides of the locker. For instance, the lower hat compartment door is hinged at the left side and the upper hat compartment door is hinged at the right side of the locker. Each of these doors may be provided with spring hinges 28 of any suitable construction, or other suitable means for self-closing and yieldingly holding the doors closed.

The locking mechanism for each hat compartment door is arranged to cooperate with the free edge of the door and except as to their location and reversed arrangement, hereinafter explained, the two locking mechanisms are alike and indicated by like reference characters in the drawings, and the following detailed description of one locking mechanism will suffice for a proper understanding of the invention.

30 represents a locking rod which is arranged vertically in one of the channel corner posts, in position for a laterally extending arm 31 at its lower end to be engaged by the hinged edge of the main door 18, which is hinged to said post, and a laterally extending arm 32 at its

upper end in position for locking relation with the adjacent free edge of the hat compartment door **20**. As shown, the lower arm **31** passes through a hole **33** in the inner flange of the post **25** for engagement with the main door, and the upper arm **32** projects through a hole **34** in the inner flange of the post **25** and is adapted to be projected through a notch **35** in the free edge of the hat compartment door **20** to engage an angle keeper **35***a* in the door for locking this door. Between its ends, preferably near its lower end, the rod **30** is adapted to fulcrum on a stationary bracket **36**. An angle bracket **36** is shown having a vertical leg secured by screws to the inner flange of the post **25**, and an outwardly extending, slotted upper arm through which the rod **30** passes and on which it is adapted to fulcrum, so that outward movement of the lower end of the rod produced by closing the main door **18** will move the upper arm **32** of the rod through its guide hole **34** in the corner post into engagement with the keeper **35***a* in the free edge of the hat compartment door **20** and lock the latter. The outward movement of the upper end of the locking rod is limited by a stationary bracket or stop device **38**, which as shown, consists of a metal plate bent to provide a vertical flange which is affixed, as by welding, to the inner flange of the corner post, and an opposite flange **39**, against which the rod is adapted to strike to limit its outward movement.

Preferably, the locking rod is normally held in unlocking or door-releasing position, by a suitable spring **40**. The spring may consist, as shown, of a spring wire bent into the form of an open, substantially rectangular loop with one end **41** of the wire bent outwardly and inserted into a transverse hole **42** in the locking rod **30**, and the other end **43** of the wire extending across and bearing against the inner side of the locking rod. The looped portion of the spring is located between the locking rod and the inner flange **26** of the corner post, and is confined forwardly and rearwardly between the front wall and the outturned edge **27** of the inner flange of the corner post. Thus, the spring is held in place simply by the insertion of its end **41** in the hole **42** in the locking rod.

In the operation of the device, when the main or lower door **18** is swung to close it, its hinged edge will engage and push the arm **31** at the lower end of the locking rod outwardly, thus rocking the rod on its fulcrum bracket **36** and throwing its upper arm **32** inwardly so as to engage the keeper **35***a* in the free edge of the hat compartment door **20**, which is normally held yieldingly closed by its spring hinges in position for the upper arm **32** of the locking rod to enter the notch **35** and lock the door **20** in closed position. When the main door is opened, it will release the lower end of the locking rod and the spring **40** will retract the upper arm **32** of the locking rod from the keeper in the edge of the hat compartment door and permit the latter to be opened. The end of the locking arm **32** is bevelled at its front side, so that if the main door **18** should happen to be closed before the hat compartment door, the latter, in closing, will, by pressure on said bevel face, spring the upper end of the locking rod out far enough to allow the door to close completely, when the locking arm can spring back into the hole **35** into engagement with the keeper **35***a* and lock the door.

By making the locking rods of a length substantially longer than the height of the hat compartment door, one locking rod can be arranged, as shown at the right side of Fig. 2, with its lower end projecting far enough below the lower hat compartment for actuating engagement with the main door **19**, and its upper end projecting far enough above the lower hat compartment for locking engagement with the door **21** of the upper hat compartment. The two locking rods and the other parts of the locking mechanism therefore can be made alike, except that they may be made rights and lefts, and installed in place in the locker by arranging one locking rod at the proper height for locking engagement with the lower hat compartment door, and the other locking rod arranged at a higher elevation in proper position for locking engagement of its upper arm **32** with the upper of the two hat compartment doors. With the two locking mechanisms thus arranged, one main door controls the locking of the lower hat compartment door while the other main door controls the locking of the upper hat compartment door.

We claim as our invention:

1. A locker or the like having doors arranged one above another to swing about vertical hinge axes, a locking rod extending lengthwise of said hinge axes with one end positioned to be engaged and moved by one door when closing it and the other end positioned adjacent the second door, said rod being fulcrumed between its ends for swinging movement, and spring means acting to normally hold the second end of said rod out of locking position, said first door when closed engaging one end of said rod and swinging the rod about its fulcrum and throwing the other end of the rod against the action of said spring means into its locking position in which it obstructs opening movement of said second door, and said rod being resilient and adapted to yield to allow the closing and locking of said second door when the first door is closed and holds the locking rod in locking position.

2. A locker or the like having two lower doors arranged side by side and two upper doors arranged one over the other above said lower doors, a locking rod arranged in position to be moved by one of said lower doors and having a portion which by such movement of the rod is engaged with and locks one of said upper doors, a second rod arranged in position to be moved by the second lower door and having a portion which by such movement of the rod is engaged with and locks the second upper door, and means for normally holding said rods out of locking position, said lower doors being hinged at opposite sides of the locker and the upper doors being hinged to open in opposite directions, and each of said locking rods being arranged to be moved by the hinged edge of the lower door when closing the latter into locking relation with the free edge of the companion upper door.

3. A locker or the like comprising two doors arranged with the free edge of one door adjacent to and extending in a similar direction with the hinged edge of the other door when the doors are closed, and a locking rod arranged lengthwise along said adjacent hinged and free edges of said doors in position to be moved by the hinged edge of one door when closing it, said rod having a part which by such movement of the rod is engaged with the free edge of the other door and locks the door, and means which normally hold the rod out of locking position, said

rod being shifted against the action of said holding means by the closing of said one door to lock said other door.

4. A locker or the like comprising two hinged closure elements arranged with the hinged edge of one substantially alined end to end with a free side edge of the other, a locking rod arranged lengthwise of said edges with one end of the rod positioned to be moved laterally by said hinged edge of one element when closing the element and the opposite end of the rod positioned for locking engagement with said free edge of the other element, said rod being movably supported, and a spring which normally holds the rod out of locking position, said rod being moved by the closing of one element to throw said other end of the rod against the action of said spring into locking engagement with the other element.

5. In a locker or the like, the combination of a door, a post to which the door is hinged, a second door arranged with one edge thereof adjacent said post when the door is closed, a locking rod extending lengthwise in said post with one end projecting into position to be moved by the closing of the door that is hinged to said post to project the other end of the rod into locking engagement with said second door, a bracket secured in said post in which said rod fulcrums, and a spring acting between said rod and said post for normally holding the locking end of said rod out of locking position.

6. In a locker or the like, the combination according to claim 5, in which said spring is formed by a looped wire having one end extending into a hole in said locking rod for retaining the spring loop in position between the side of said rod and said post.

7. In a locker or the like, the combination of a door, a post to which the door is hinged, a second door arranged with one edge thereof adjacent said post when the door is closed, a locking rod extending lengthwise in said post with one end projecting laterally through a hole in the side of the post into position to be moved by the closing of the door that is hinged to the post and the other end of the rod projecting laterally through a hole in the side of the post into position to be thrown into locking engagement with said second door when the first end of the rod is moved by the first door, a bracket secured in said post on which said rod is loosely seated to fulcrum, and a spring acting between said rod and said post for normally holding the locking end of said rod out of locking position.

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