June 26, 1945. J. R. JONES 2,379,157

LOCKING MECHANISM FOR FILE DRAWERS

Original Filed Sept. 26, 1940 2 Sheets-Sheet 1

Fig. 2.

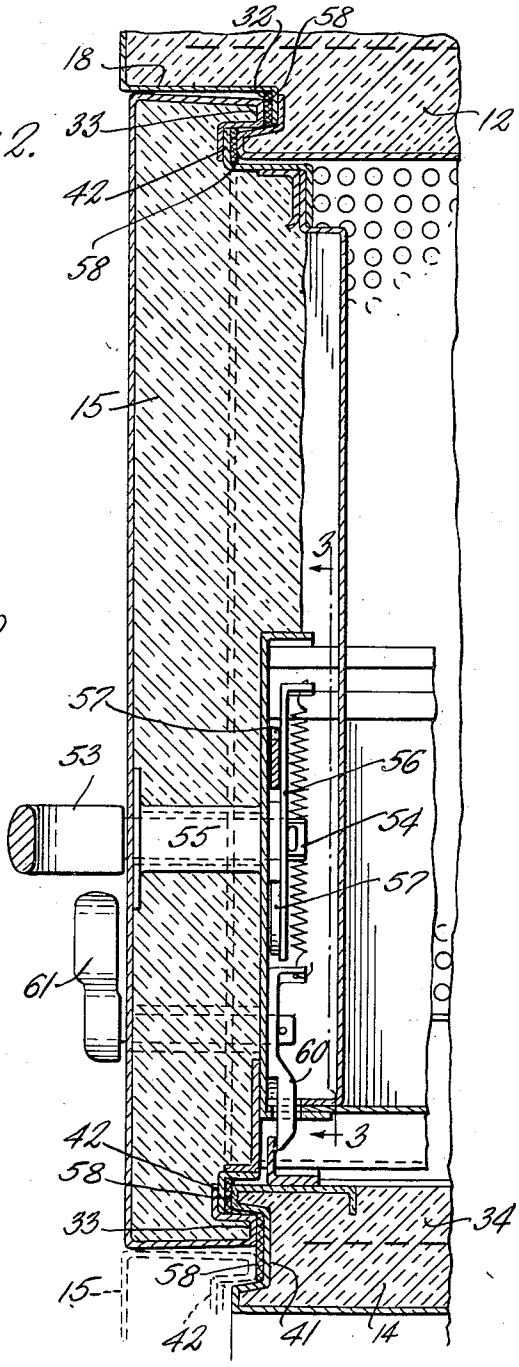
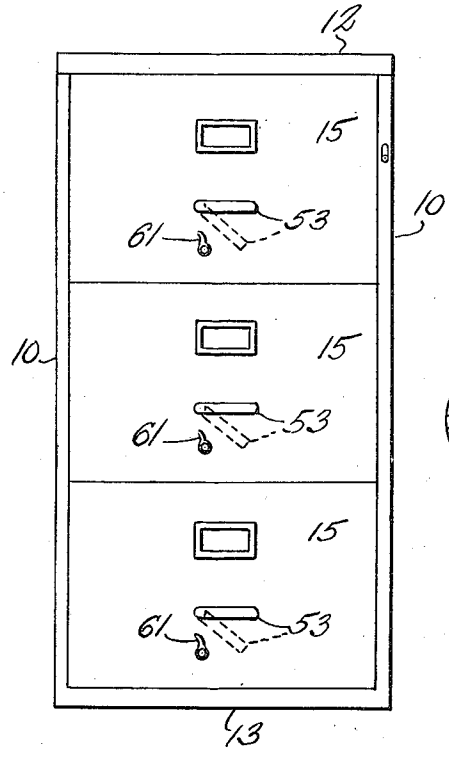



Fig. 1.




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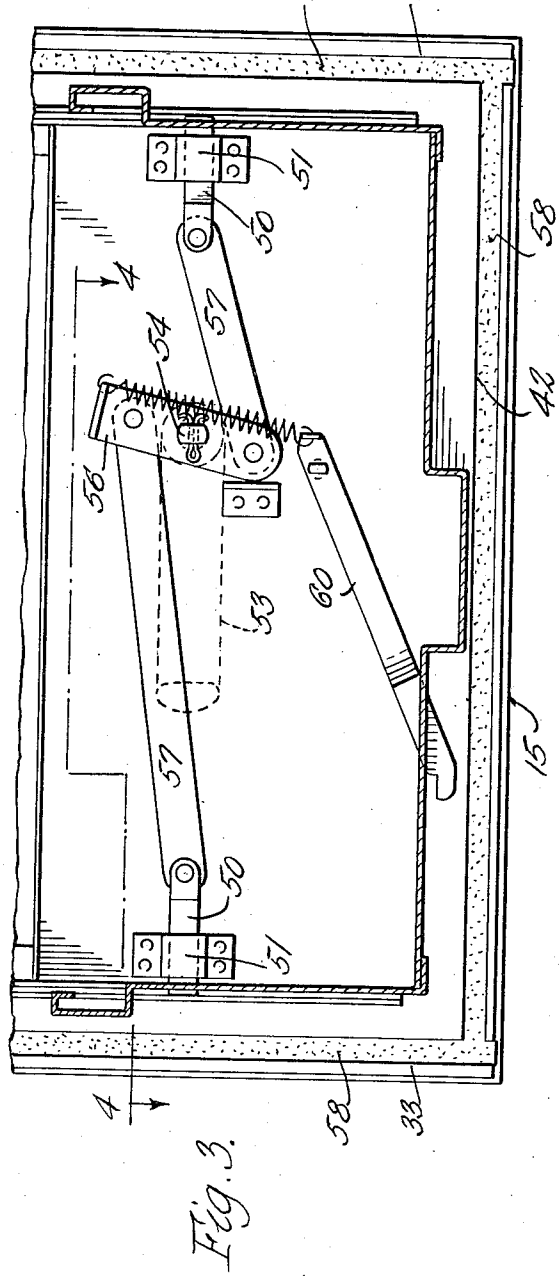



Fig. 3.

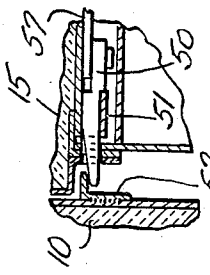



Fig. 5.

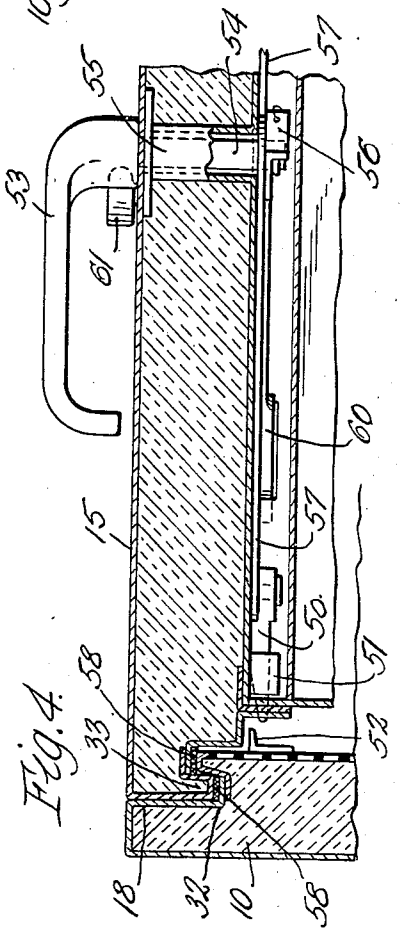



Fig. 4.

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# UNITED STATES PATENT OFFICE

2,379,157

## LOCKING MECHANISM FOR FILE DRAWERS

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Original application September 26, 1940, Serial No. 358,490. Divided and this application November 25, 1942, Serial No. 466,904

2 Claims. (Cl. 45—94)

This invention relates to drawer files or drawer filing cabinets, and more particularly to drawer files of the type having walls of a heat insulating or fire resisting construction suitable for protecting the contents of the drawer or drawers from fire or destructive heat. For accomplishing this purpose, the walls of the cabinet or casing that form the housing compartment for the drawer, or for each drawer in multiple drawer files, and the head or front end wall of each drawer are commonly made of heat insulating or fire resisting construction, and the head of each drawer is intended to cooperate, when the drawer is closed, with a closure seat on the cabinet surrounding the end of the drawer compartment to close the compartment.

This application is a division of my application for U. S. Letters Patent, Ser. No. 358,490, filed Sept. 26, 1940.

One object of my invention is to provide desirable and readily operable drawer locking means, especially for drawer files of the type mentioned, by which the drawer, or each drawer in a multiple drawer file, can be forcibly shoved in to press and hold the drawer head tightly against its closure seat on the casing, whenever this may be desired, as for instance, at the close of the day or period of active use of the file, to thereby further ensure the contents of the file from injury.

The drawers of such files are ordinarily equipped with latch means that operate automatically when the drawers are closed, to releasably retain them in closed position, and another object of my invention is to supplement such usual latch means with practical pressure locking mechanism adapted to function effectually as just above explained.

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 apppended claims.

In said drawings:

Fig. 1 is a front elevation, on a reduced scale, of a drawer file embodying the invention.

Fig. 2 is a fragmentary, sectional elevation of a portion of the cabinet and one of the drawers.

Fig. 3 is a rear sectional elevation of a portion of one of the drawers of the cabinet on line 3—3, Fig. 2, showing the mechanism for pressing the drawer head into contact with its seat on the front of the cabinet.

Fig. 4 is a fragmentary, horizontal section thereof on line 4—4, Fig. 3.

Fig. 5 is a detail section showing one of the bolts of the locking mechanism in operative position.

The drawer file may be of any suitable construction. As herein shown, and more fully disclosed in my aforesaid original application, it comprises an open front cabinet or casing having side, top, bottom and partition walls, designated respectively 10, 12, 13 and 14, all of heat insulating or fire resisting construction, and file drawers provided with front walls or heads 15, also of heat insulating or fire resisting construction which cooperate with seat portions of the walls of the cabinet surrounding the front ends of the drawer compartments to close the latter against the entrance of fire or gases thereinto. The side, back, top and bottom walls of the cabinet may be formed in a single integral casting or monolithic body of molded heat insulating or fire resistant material, which may be of any suitable composition, covered and protected externally by an outer sheath or sheet metal casing and having an inner lining of sheet construction.

Preferably the front portions of the side, top and bottom walls of the metal sheathed cabinet are suitably constructed to provide tongue and groove formations 32 adjacent the inner ends of the inturned flanges 18 of these walls for interfitting cooperation with corresponding tongue and grooved formations 33 on the heads of the drawers to provide barriers in the joints between the drawer heads and the walls of the cabinet at these points to better prevent the passage therethrough of flames or hot gases. As shown, these tongue and groove joint formations are produced by suitably bending the adjoining portions of the inturned flanges 18 and the front edge portions of the metal lining. The front edges of the partitions are also grooved at 41 to form tongue and groove portions for interfitting cooperation with complementary tongue and groove formations 42 at the top and/or bottom of the heads of the drawers, as indicated most clearly in Fig. 2 of the drawings.

The means, as herein disclosed, for pressing the perimeter of the head of each drawer into firm contact with the seat provided therefor on the front of the cabinet around the drawer opening, so as thereby to ensure tight closures of the drawer compartments when the drawers are secured in their closed position and thus increase the fire resisting or heat insulating efficiency of the file, are constructed as follows. Each drawer is preferably provided at its front end with bolts 50 arranged to be engaged with keepers or parts

on the cabinet and thereby pull the drawer head into tight contact with its closure seat. As shown, the bolts are arranged to slide in guides **51** on the rear fixed metal wall of the drawer head and are adapted to be projected into engagement with angle bars **52** fixed, as by welding, to the metal cabinet lining at opposite sides of the drawer, the bolts being bevelled as shown, so that when they are projected into engagement with the fixed bars **52**, they will press the drawer head in firmly against its seat on the cabinet. The bolts are preferably actuated by a handle **53** with which the drawer is provided at its front end for moving the drawer out and in. As shown, this handle is in the form of a U-shaped drawer-pull fixed at one end to a pivot pin or shaft **54** which extends through and is adapted to turn in a bearing tube **55** extending between and suitably secured to the outer and inner walls of the drawer head. A cross head or bar **56**, rigidly secured on the inner end of shaft **54**, is pivotally connected at its ends to two links **57**, each pivotally connected to one of the bolts **50**.

In the normal horizontal position of the handle **53**, the bolts are retracted and the handle serves as an ordinary drawer-pull to open and close the drawer, but when the drawer is closed, if the handle is turned to the dotted-line position shown in Fig. 1, it will project the bolts into engagement with the fixed bars **52** and press the perimeter of the drawer head firmly against its seat, see Fig. 5. This seat and the drawer head perimeter, as before explained, are preferably of complementary stepped or tongue and groove formation, and by providing yielding packing strips or gaskets **58** of asbestos or other suitable material in each groove for engagement by the companion tongue when the drawer head is forced inwardly, a very tight closure of the drawer compartment is effected.

Each drawer is also preferably furnished with a spring-closed latch **60** pivoted on the drawer head and actuated by a thumb piece **61** arranged adjacent to the handle **53**. This latch operates in the well known manner of drawer and door latches, to automatically engage its keeper when closing the drawer and retain the drawer closed. The latch is shifted by means of the thumb piece **61** to release and permit the opening of the drawer. As shown, the latch **60** has its lower end bevelled at its inner side for automatic engagement of the latch with its keeper **60***a* when closing the drawer, and the thumb piece **61** is rigidly connected to the latch by a rotatable shaft which forms a pivot for the latch, and the latch is released by swinging the thumb piece anti-clockwise, as shown in Fig. 1. The actuating spring of this latch, as shown at **62**, Fig. 3, is attached at its opposite ends to the latch and to the upper end of the actuating cross bar **56** for the bolts **50**, and this spring is arranged so that it normally acts to hold the bolts **50** retracted. When the cross bar **56** is swung by turning the handle **53** to throw the bolts into locking position, the spring **62** swings with the cross bar to or beyond a dead center position with reference to the axis of rotation of the cross bar so as to tend to hold the bolts in locking position and prevent retraction thereof. It is intended that during the daytime or active service period, the handle **53** will remain in its horizontal position and will be used as a drawer pull, and the latch **60** can be actuated by the thumb of the hand grasping the pull to release the drawer. After the working day or period is over, if it is desired to obtain additional fire protection, the pull handle can be swung down to cause the bolts to pull the drawer head into snug engagement with its closure seat, as explained. The drawer file provided with the described compression means is a decided improvement over previous filing devices which have no such means, because it corrects a vulnerable condition in previous devices. Where there is no such provision, a slight opening is apt to be left between the drawer head and its seat when the drawer is closed, because a closure intended to exclude hot gases is dependent entirely upon the accuracy of construction and fitting of the sealing parts of the drawer and cabinet, and these cannot be relied upon to give an efficient closure, due to inevitable inaccuracies occurring in the course of production of the drawer files.

I claim as my invention:

1. In a drawer file comprising a cabinet having walls forming a drawer compartment open at its front end and having a closure seat surrounding said open end of the compartment, and a drawer movable inwardly and outwardly in said compartment and having a front head arranged for contact with said closure seat for closing the drawer compartment, the improvement comprising drawer-locking mechanism for forcing said drawer head firmly against said seat to tightly close the drawer compartment including complementary engageable elements on said drawer and cabinet, an actuating device operable manually for engaging said elements and forcibly effecting a movement of one element relatively to the other while in engagement therewith, and one of said elements having a cam portion operable by said relative movement and engagement to force said drawer head firmly against said closure seat, a drawer latch and complementary keeper therefor, and a spring operatively connected with one of said lock elements and with said latch and normally acting to hold said lock element from engagement with its complementary element, and also to engage said latch with its keeper when closing the drawer, to releasably hold the drawer closed.

2. In a drawer file comprising a cabinet having walls forming a drawer compartment open at its front end and having a closure seat surrounding said open end of the compartment, and a drawer movable inwardly and outwardly in said compartment and having a front head arranged for contact with said closure seat for closing the drawer compartment, the improvement comprising drawer-locking mechanism for forcing said drawer head firmly against said seat to tightly close the drawer compartment including complementary engageable elements on said drawer and cabinet, a pivoted actuating member operable manually and connected to one of said elements for engaging the elements and forcibly moving said element relatively to said other element while in engagement therewith, one of said elements having a cam portion operable by said relative movement and engagement to force the drawer head firmly against the closure seat, a drawer latch and complementary keeper, and a tension spring connected at opposite ends to said latch and to said pivoted member and arranged to swing with said pivoted member and normally acting to hold said complementary lock elements disengaged and also to engage said latch with its keeper when closing the drawer to releasably hold the drawer closed.

JAMES R. JONES.