May 29, 1951 I. MUSHTA 2,555,149

COMBINATION STEPLADDER AND CABINET THEREFOR

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Fig. 2.

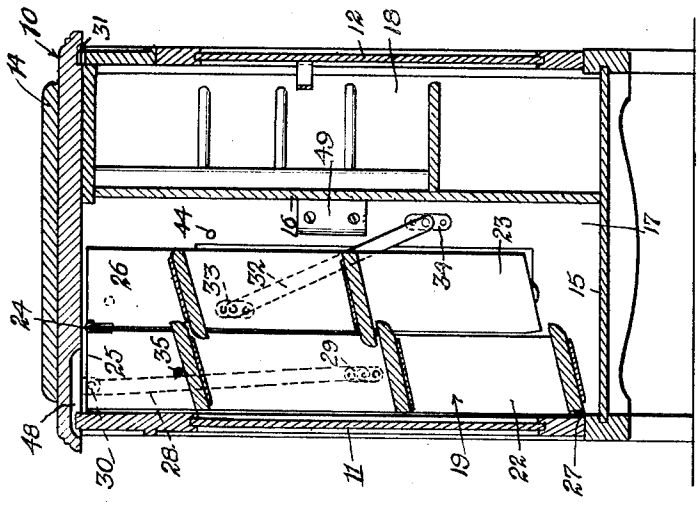
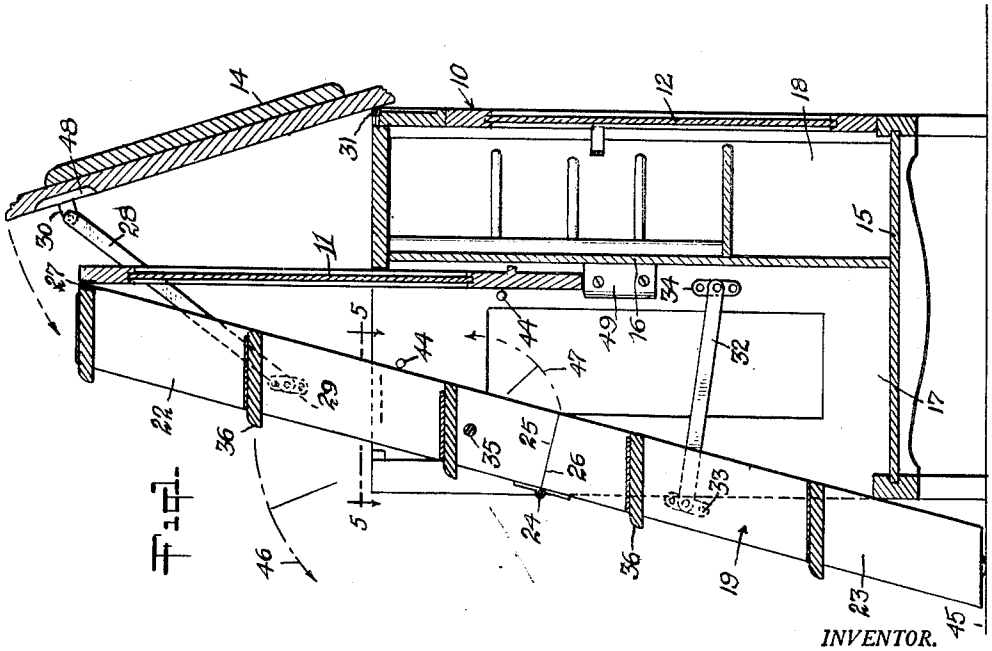


Fig. 1.



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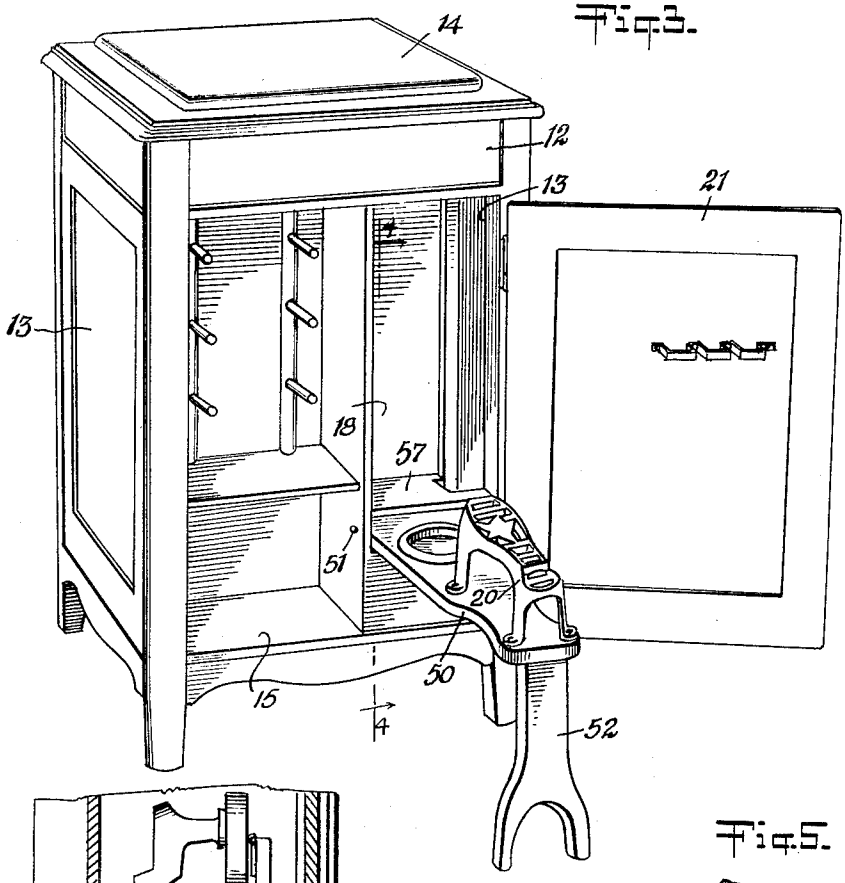
Attorneys

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Fig. 3.



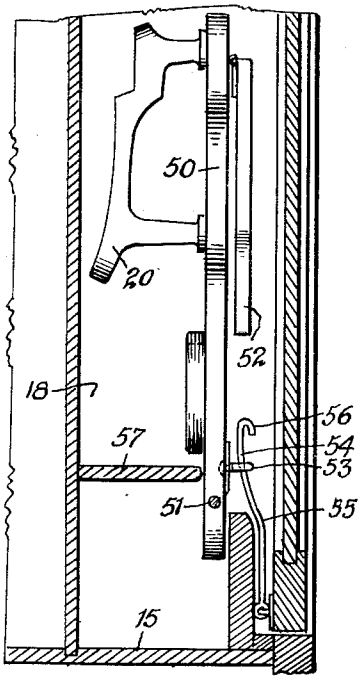
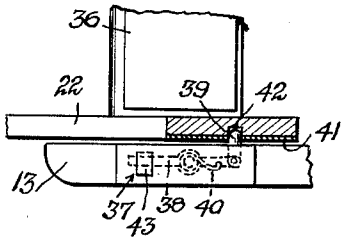


Fig. 4.

Fig. 5.



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COMBINATION STEPLADDER AND CABINET THEREFOR

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Application April 2, 1948, Serial No. 18,576

4 Claims. (Cl. 228—30)

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This invention relates to household furniture and more specifically to an article of furniture that is capable of being utilized for many and varied purposes.

The principal objective was to design and construct an article of furniture that not only may be used for many purposes but which also presents an extremely neat and attractive appearance. In achieving my objective I have provided a cabinet in which are incorporated a stepladder and disappearing shoeshine support.

Another feature of my device is that it is small and compact, occupying a minimum of space and when not in use as a stepladder may be utilized as a stool.

Another feature is the unique construction of the folding ladder which in its collapsed position is entirely housed within the cabinet.

Further advantages and unique features of my invention will be apparent as I proceed with the description.

With reference to the drawings—

Fig. 1 shows a sectional side elevation illustrating the position of the ladder in its extended position;

Fig. 2 shows a sectional side elevation illustrating the position of the ladder when in its retracted position within the cabinet;

Fig. 3 shows a perspective view illustrating the footrest in an extended position;

Fig. 4 shows a sectional view on line 4—4 of Fig. 3, with the compartment door closed and the footrest in the retracted position, and

Fig. 5 shows a sectional view on line 5—5 of Fig. 1.

In the drawings I show my cabinet 10 having front and rear walls 11 and 12, side walls 13 and a top and bottom 14 and 15. Positioned inside the cabinet 10 is a transverse partition 16 which divides the cabinet into front and rear compartments 17 and 18. The front compartment 17 in which the collapsible ladder 19 is housed has a movable front wall or panel 11 while the rear compartment 18 in which the disappearing footrest 20 is housed has a door 21 in the rear wall 12.

Fig. 1 shows the ladder 19 in its extended position ready for use. The ladder 19 consists of an upper and lower section 22 and 23 which are connected by a hinge 24 at the lower edge 25 of the upper section and the upper edge 26 of the lower section. The upper portion of the upper section is connected by a hinge 27 to the lower end of the front panel 11. In addition, the upper section 22 is connected to the movable

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top 14 through a link 28, the ends of the link being pivotally connected to fittings 29 and 30 which are attached on the ladder and movable top respectively. The movable top 14 has a hinge 31 at its rear edge which allows upward movement. The lower section 23 of the ladder is connected to the side walls 13 of the cabinet 10 through links 32 whose opposite ends are pivotally connected to fittings 33 and 34 secured to the lower section of the ladder and the side wall of the compartment respectively.

Figs. 1 and 2 are sectional views and therefore show only one set of links 28 and 32, however, each section of the ladder 19 has a pair of links connected to the movable top and side walls of the cabinet, which are not shown in the sectional views.

Transversely mounted within the front compartment 17 is a shaft 35 on which the upper section 22 of the ladder 19 is pivotally mounted. In addition each section of the ladder is equipped with a plurality of steps 36 that have the conventional rubber treads mounted thereon. In order to limit the extent of movement of the ladder while moving from its normal or collapsed position to its extended position, a locking device 37 is provided as illustrated in Fig. 5. This device 37 consists of a rod 38 having a projecting pin 39 at one end. The rod 38 is tensionally held by a spring 40 which causes the pin 39 to project out beyond the edge of the side wall of the cabinet. A portion of the frame of the ladder is equipped with a reinforced metal plate 41 in which is positioned a slot 42 and when the ladder 19 reaches its fully extended position, the pin 39 will engage in the slot 42 preventing any further movement of the ladder towards either an extended or collapsed position. When it is desired to collapse the ladder, a button 43 is pushed which cams the rod 38 out of position pulling the pin 39 out of the slot 42 and allowing the ladder to move.

Projecting guides 44 are also provided in the side walls to prevent the upper section of the ladder from moving and to maintain the front panel 11 in position when the ladder is in an extended position.

Fig. 2 shows the normal retracted position of the ladder inside the cabinet and Fig. 1 shows the extended position of the ladder. In order to place the ladder in the extended position, the top cover 14 is pivoted upwardly and due to the link 28 connecting the upper section of the ladder to the cover 14, the upper section of the ladder is pulled outwardly and upwardly. The

front panel 11 which is hinged to the upper section of the ladder will pivot upwardly with the ladder and rest on the ladder until the upper section of the ladder reaches a position past the vertical at which point the front panel 11 will swing away from the ladder and drop down to a position between the guide 44 and partition 16, with the upper edge of the panel 11 resting on the supports 49. The supports 49 assure strength and rigidity to the ladder while in its extended position and prevents the ladder from collapsing when a person is on the upper steps. Meanwhile, the lower section of the ladder will swing into position through the opening formerly occupied by the front panel. Obviously the movement of the lower section of the ladder will be controlled by the links 32 and the latter structure is so designed that when the upper and lower sections of the ladder meet at its midpoint, the locking device 37 will function preventing any further movement of the ladder, and at the same time the extreme lower end of the lower section will be resting on the floor 45. In order to collapse the ladder and to return it to its normal position within the compartment 17 the button 43 is pressed downwardly in order to release the pin 39 from the slot 42. While the button 43 is held in this depressed position, the cover 14 is pivoted downwardly. As indicated by the arrows 46 and 47, as the cover 14 is pushed downwardly the link 26 will force the upper section of the ladder down while the lower section will be caused to move inwardly and upwardly inside the compartment 17. At the same time the front panel 11 will be moving to its normal position and when the ladder is totally collapsed it will occupy a position within the cabinet as indicated in Fig. 2. In order to provide clearance for the upper edge of the front panel as it moves with the ladder, a groove 48 is provided in the undersurface of the top 14. This not only allows free movement of the front panel when moving into or out of its normal position, but the upper edge of the top extends below the top portion of the panel thereby holding the front panel in position.

Fig. 3 shows a perspective of the rear of the cabinet showing the door 21 in the rear wall 12. Also shown is the disappearing footrest 20 whose movements correspond with the movements of the door. As the door is moved to the open position as shown in Fig. 3, the footrest 20 will be caused to move from the compartment 18 and assume the position as shown. Likewise, when the door 21 is closed the footrest 20 will be forced back into the compartment 18 and occupy the position as shown in Fig. 4. The footrest 20 is supported by a platform 50, the inner end of the platform being pivotally mounted within the cabinet at point 51 while the outer end of the platform is provided with a pivoting supporting leg 52 which is hinged to the underportion of the platform 50.

Secured to the underportion of the platform 50 near its inner end is a swivel eye 53. Connecting the platform to the door is a link 54 having a curved intermediate portion 55 and a hook member 56 on its inner end. One end of the link is hinged to the door while the other end extends through and beyond the swivel eye 53. When the door is pulled open, the hook member 56 will engage in the eye 53 pulling the platform 50 out of the compartment. As the platform is pulled from the compartment the pivotal supporting leg 52 will automatically move to the position shown in Fig. 3. As the hook member 56 will engage the eye 53, the outward movement of the door will be limited to the extent of the length of the connecting link 54. As the door is moved inwardly to a closed position, the pressure of the hook member 56 on the eye 53 will cause the platform to be pushed upwardly, and as the door continues to close, the curved portion 55 of the link 54 will cam against the eye 53 forcing the platform up into the compartment 18. As shown in Fig. 4, one end of the link is mounted a considerable distance below the end which passes through the swivel eye 53 so that on the inward movement, the platform will be pushed upwardly. The partition 57 which engages the upper surface of the platform 50 when the footrest 20 is in its extended position prevents the platform from pivoting below a horizontal position.

While the invention has been described in detail with respect to a present preferred form which it may assume, it is not to be limited to such details and form since many changes and modifications may be made in the invention without departing from the spirit and scope of the invention in its broadest aspects. Hence, it is desired to cover any and all forms and modifications of the invention which may come within the language or scope of any one or more of the appended claims.

I claim:

1. The combination with a cabinet body having movable top and front panels, of a folding stepladder normally housed within said cabinet, said ladder having upper and lower sections, said upper section being operatively connected to the front panel and lower section, a shaft positioned within the body of the cabinet, said upper section being pivotally mounted on said shaft, means connecting said upper section to the top of the cabinet and additional means connecting said lower section to the body of the cabinet, whereby upward movement of the top of the cabinet causes said upper and lower sections to pivot into a predetermined position forming an extended stepladder.

2. The combination with a cabinet having a hinged top and a shiftable front wall, of a foldable ladder having its upper end hingedly connected with the lower end of the shiftable front wall, links arranged at opposite sides of the ladder and having their opposite ends pivotally connected with the hinged top and the ladder, and links arranged at opposite sides of the ladder and having their opposite ends pivotally connected with the cabinet and the ladder, the provision and arrangement being such that the ladder may be folded within the cabinet with the shiftable front wall shifted into a normal relation to the remainder of the cabinet in response to the movement of the hinged top into a closed position, and the ladder being extended for use with the shiftable front wall shifted to a position behind the ladder in response to the movement of the hinged top into an open position.

3. The combination with a cabinet having a hinged top and a shiftable front wall, of a foldable ladder composed of upper and lower hingedly connected sections, means pivotally connecting the upper section of the ladder with the sides of the cabinet, means hingedly connecting the upper end of the upper section of the ladder with the lower end of the front wall, links having their opposite ends pivotally con-

nected with the hinged top and the upper section of the ladder, and links having their opposite ends pivotally connected with the sides of the cabinet and the lower section of the ladder, the provision and arrangement being such that the ladder may be folded within the cabinet with the shiftable front wall shifted into a normal relation to the remainder of the cabinet in response to the movement of the hinged top into a closed position, and the ladder being extended for use with the shiftable front wall shifted into a position behind the ladder in response to a movement of the hinged top into an open position.

4. The combination as set forth in claim 3, and abutment means on the inside of the cabinet engaged by said front wall to help sustain the

ladder when it is extended for use and said front wall is shifted into position behind the ladder.

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