Dec. 27, 1949 W. C. HIGLEY 2,492,697

ACCESSORY DRAWER

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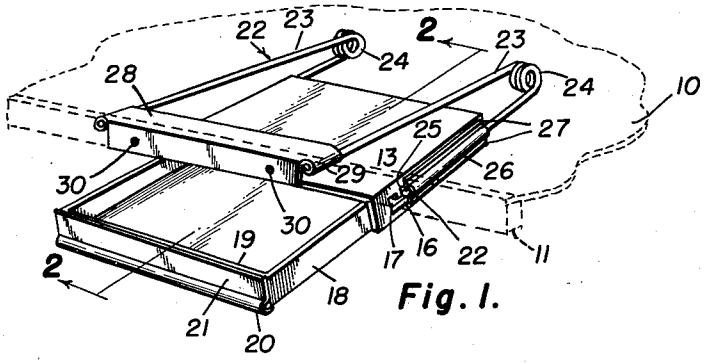


Fig. 1.

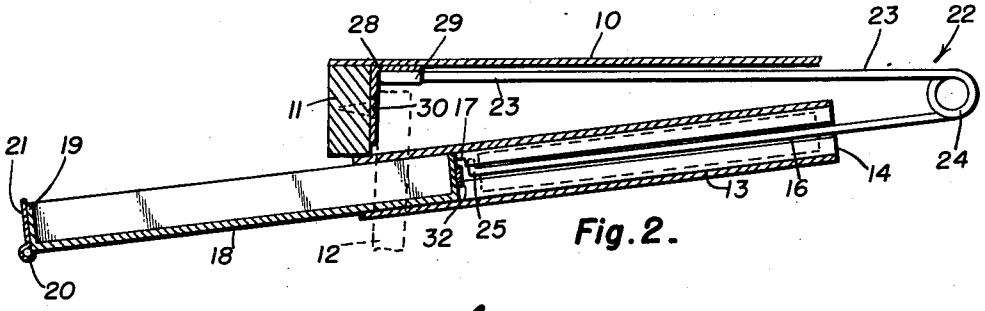


Fig. 2.

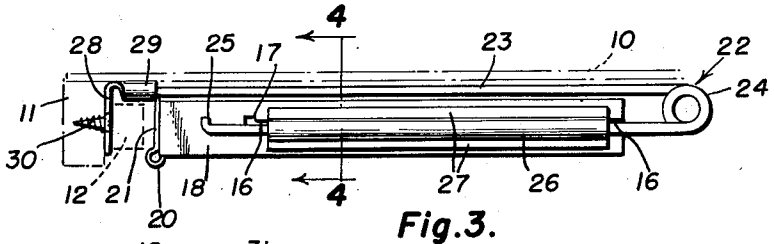


Fig. 3.

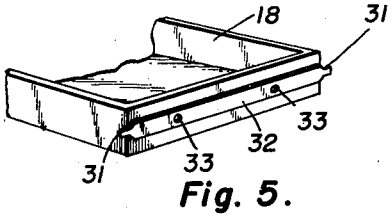


Fig. 5.

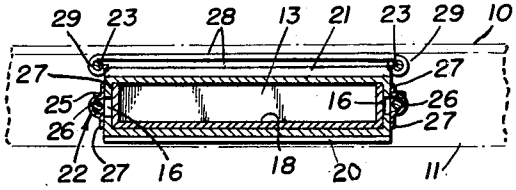


Fig. 4.

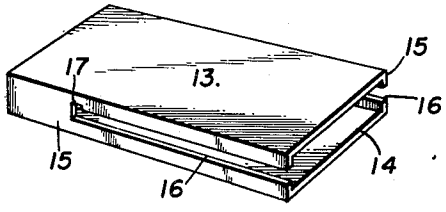


Fig. 6.

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ACCESSORY DRAWER

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10 Claims. (Cl. 45—96)

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This invention relates to accessory drawers adapted to many types of furniture, especially articles of furniture having a drop border, such as desks, utility tables, game and card tables, stands, work benches, shelving and the like, the object thereof being to hold and contain cards, chips, checkers and other game pieces or equipment so that they will be readily accessible and will be securely retained in convenient position for use when needed without getting loose, scattered about or lost.

Another object of the invention is to provide a convenient and simple mounting for an accessory drawer especially designed to be mounted beneath a horizontal support having a ledge or rim for retaining the drawer in closed or retracted position beneath the horizontal supporting surface, where it is precluded from view and closed but adapted to be conveniently pulled out for obtaining access to the contents of the drawer.

Another object of the invention is to provide an accessory drawer which has a two-way movement for opening and closing the same, and so that accidental opening thereof will be avoided, by necessitating a downward movement prior to an outward movement for pulling the drawer open, thereby avoiding the disturbance of the appearance of the article of furniture or rendering the same unsightly when the drawer is in closed position.

Another object of the invention is to provide a mounting for the drawer of a resilient character and adapted to normally retain the drawer in a closed position so that it is precluded from view, and permit dropping thereof in order to open or pull out the drawer, while so mounting the drawer that it is out-of-the-way, when closed and not in use.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view showing the drawer mounted in position and opened;

Figure 2 is an enlarged sectional view taken on the line 2—2 of Figure 1;

Figure 3 is a sectional elevation corresponding to Figure 2, but showing the drawer in closed position and precluded from view;

Figure 4 is a vertical transverse sectional view taken on the line 4—4 of Figure 3;

Figure 5 is a fragmentary perspective view of one end of the drawer showing means to cooperate with the drawer case for limiting the outward pull of the drawer to open position, and

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Figure 6 is a perspective view of the drawer case.

Referring to the drawings in detail, in which like reference characters designate corresponding parts throughout the several views, 10 designates a horizontal supporting surface such as of many types of articles of furniture, game or card tables, desks, utility tables, stands, work benches, shelves and the like, preferably having a drop border, molding or frame 11 around the outer edge thereof, to which the top 10 forming the horizontal supporting surface is secured and suitably reinforced if desired. In the case of game or card tables, the usual foldable legs are designed to fit or fold in rear of the border or molding 11 forming a drop ledge beneath the surface or top 10 as indicated at 12, if desired.

Adapted to be mounted beneath the surface or top 10 is a drawer comprising a sheet metal or plastic rectangular case 13 relatively elongated with open ends 14 and narrow sides 15 having longitudinal slots 16 therein opening at the rear end of the case and provided with enlarged portions or upwardly off-set angular end portions 17 at their forward ends, in spaced relation to the forward open end of the case 13. The drawer 18 is designed to slidably fit in the drawer case 13 and is shown of shallow rectangular tray-like form open at the top so as to partially project into the case and drawn outwardly for use in open position, and to telescope or slide into the case when closed. To facilitate this, the front end 19 of the drawer may be provided with a finger or hand-gripping portion 20 which may be in the form of a strip or bracket piece 21 fastened to the front of the drawer and bent at its finger gripping portion or handle 20 to extend under the bottom of the drawer for convenient grasping, to pull the drawer out.

In order to mount the drawer case in position beneath the supporting surface or top 10, a substantially U-shaped spring structure is provided as indicated at 22 made of a spring strand, strip or wire and as shown, comprising elongated U-shaped spring members 23 each formed of a section of spring material or wire provided intermediately of the ends thereof with one or more spring coils 24 with upper and lower spring arms. The lower arms are slidably mounted on or connected to the drawer case 13, and have stops or upwardly bent ends at their forward extremities, as indicated at 25, so that they can be sprung together to pass within the sides 15 of the case 13 and to spring outwardly through the slots 16 and angular enlarged portions 17 at the forward

ends thereof, within retaining and guide members 26 formed or secured at the sides 15 lengthwise thereof. These guides 26 are shown as formed of elongated strips of metal or plastic of outwardly bowed formation and substantially U-shaped or concavo-convex cross section with outturned wings 27 along the opposite edges thereof, suitably secured to the sides 15 of the case 13 on opposite sides of the slots 16 to slide over the spring arms at the lower portions of the springs 23 so as to slidably mount the case thereon and support the latter in a normally raised position beneath the supporting surface 10 and in back of the molding or border 11 forming the frame as described. The rearward movement of the case 13 on the lower arms of the springs 23 may be limited by the coils 24 or otherwise, though ordinarily, the case 13 will not have sufficient rearward movement to engage the coils. The forward movement of the case is limited by the bent ends 25 engaging the forward ends of the guides 26 in a manner clearly shown in Figures 1 and 2 of the drawings. In this position, it will be noted that the drawer and case are swung downwardly at an acute angle so as to be extended forwardly in open position or drawn out from beneath the border or molding 11 forming the frame when it is desired to obtain access to the drawer 18 which is slid outwardly in its sliding support formed by the case 13 to obtain access to the equipment or game apparatus contained in the drawer.

In order to anchor the springs in position, the upper arms of the springs 23 may be suitably secured to the horizontal supporting surface 10, or to the border or frame 11 forming part thereof and to which the bight or connecting portion of the U-shaped spring structure 22 is anchored as shown. For this purpose, the upper arms are shown connected by a continuation of the spring wire structure, or by means of a metal or plastic sheet bracket 28 which is shown of right angular formation with rearwardly extending upper and downwardly extending forward flanges, the ends of the upper flange being coiled or otherwise suitably anchored to the sides or arms at the top of the springs 23, such as at the forward ends of the arms as indicated at 29. The connecting member or bracket 28 may be suitably secured to the inner surface of the molding or frame 11, through holes in the depending vertical flange, as indicated at 30, so as to mount the device in position precluded from view by the frame in back of which it is disposed, and with the upper arms of the springs 23 disposed against the horizontal supporting surface or top 10 at the bottom of the latter. Incidentally, the bracket 28 serves as a reinforcement of the connection between the top 10 and the molding 11 as will be seen from Figure 2 of the drawings.

In order to limit the movement of the drawer when pulled out, to open position, the back of the drawer 18, may be provided with suitable stops or projections 31 extending outwardly from the sides thereon, and formed as reduced portions of a strip 32 suitably secured to the inner end of the drawer, as indicated at 33, or otherwise suitably formed. These stops are designed to engage the forward ends of the slots 16 when the drawer is pulled out, in order to limit the forward displacement thereof in the case 13, which also moves outwardly to a lesser degree in pulling the drawer to an open position. This will permit the drawer to be extended forwardly of the adjacent edge of the top 10 and molding 11 for obtaining convenient access to the equipment in the drawer,

such as cards, chips, checkers or other game pieces in convenient position for use. When the drawer is pushed in to closed position, it will move into the case 13 and the latter will be moved rearwardly on the lower arms of the springs 23 to a limited position, when the springs 22 at their lower arms, will automatically raise the case and drawer to the upward position behind the frame or molding 11 at the border of the horizontal supporting surface or table top 10 so as to be precluded from view beneath the latter and behind the molding 11. In this way, spilling of the contents or accidental opening of the drawer will be prevented. In opening the drawer, the same is first gripped between a thumb and forefinger or otherwise at the finger piece or handle portion 20 and pulled downward and then outward toward the person opening the same, so as to escape and move beneath the ledge formed by the frame, border or molding 11 in a forwardly inclined position at the acute angles to the top 10 to be pulled out to its fullest extent so that the equipment may be removed from the drawer. On the other hand, when the drawer is pushed in to closed position, it will be automatically engaged behind the stop formed by the frame or border 11 and may be frictionally retained against the same with the finger piece or handle portion 20 hanging below the bottom edge thereof, in convenient position to be grasped for opening or pulling out the drawer. Of course, frictional engagement of the front end of the drawer in back of the drop rim or border 11 at the bracket or attaching plate 28 of the spring structure is not essential, since the lower arms of the springs exert sufficient tension when the drawer is pushed in, to hold the drawer and its case firmly to the underside of the table top or supporting surface and likewise, against the bottom of the frame or border 11 when the drawer is pulled out for obtaining access thereto.

While in the foregoing there has been shown and described the preferred embodiment of this invention it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

While the device may be applied to any horizontal supporting surface 10 with or without a drop ledge, border or molding 11 at the edge, such as an article of furniture and the like as enumerated above, in the case of card or game tables, with the collapsible or foldable legs 12 as seen in Figures 2 and 3, the extended upper front edge of the drawer 18 or strip 21 may engage the back edge or in back of the bracket 28 or coiled portions 29 thereof so that the finger grip portion or handle 20 will not interfere with the movements of the legs 12 in extending or folding the same. In this way, when the table is folded up or resting on the rim 11 at the accessory drawer side, the back edge of the bracket plate 28 will form a stop to any forward movement of the drawer and case assembly.

What I claim is:

1. An accessory drawer for articles of furniture and the like, comprising a spring structure having arms for attachment to a horizontal supporting surface thereof and lower spring arms extending forwardly in spaced relation beneath the aforesaid arms and normally held upwardly, a guide member carried by the latter arms, and a drawer slidable in said guide member and adapted to be normally held upwardly against

the bottom of said surface and to be depressed and slid forwardly to open position.

2. An accessory drawer of the class described, comprising a spring structure having upper arms, means for attaching said arms beneath the bottom of a supporting surface having a rim depending therefrom, lower arms extending forwardly from the rear ends of said first arms and normally sprung upwardly, a case slidable mounted on the lower arms and limited in its forward movement, and a drawer slidable in said case and adapted to be lowered therewith beneath said rim to pull the same outwardly to open position.

3. An accessory drawer of the class described, comprising a spring structure having upper arms, means for attaching said arms beneath the bottom of a supporting surface having a rim depending therefrom, lower arms extending forwardly from the rear ends of said first arms and normally sprung upwardly, a case slidably mounted on the lower arms and limited in its forward movement, and a drawer slidable in said case and adapted to be lowered therewith beneath said rim to pull the same outwardly to open position and means to limit the opening movement of the drawer with respect to the case.

4. An accessory drawer for card tables or the like having a top supporting surface and a drop border, a spring structure comprising divergent spring arms consisting of upper arms with coils at their rear ends, means for attaching said upper arms to the back of the border against said top, the lower arms diverging forwardly and normally held upwardly, a case having guide means slidably receiving the lower arms for movement downwardly and forwardly thereon beneath said border, and a drawer slidable in said case and limited in its forward movement therein extended beyond the border when open in a lower inclined position forwardly beneath the border.

5. An accessory drawer comprising a bracket adapted to be anchored to a support, a case, a drawer slidably mounted in said case, at least one spring having a first and second arm projecting therefrom, said first arm being attached to said bracket, a guide attached to said case, said second arm slidably received in said guide, means integral with said second arm and engaging said guide limiting the travel of said case, and said spring normally biasing said bracket and said plate relative to each other.

6. An accessory drawer comprising a bracket adapted to be anchored to a support, a case, a drawer slidably mounted in said case, at least one spring having a first and second arm projecting therefrom, said first arm being attached to said bracket, a guide attached to said case, said second arm slidably received in said guide, means integral with said second arm and engaging said guide limiting the travel of said case, and said spring normally biasing said bracket and said plate relative to each other, said case having sides with slots therein, means on said drawer slidably received in said slots limiting the travel of said drawer relative to said case.

7. An accessory drawer comprising a bracket adapted to be anchored to a support, a case, a drawer slidably mounted in said case, at least one spring having a first and second arm projecting therefrom, said first arm being attached to said bracket, a guide attached to said case, said second arm slidably received in said guide, means integral with said second arm and engaging said guide limiting the travel of said case, and said spring normally biasing said bracket and said plate relative to each other, said case having sides with slots therein, means on said drawer slidably received in said slots limiting the travel of said drawer relative to said case, said case limiting means comprising a bent end on said second arm whereby said drawer may be slid a maximum relative to said case and then the case slid a maximum relative to the second arm.

8. For use in an article of furniture having a relatively stationary element, a bracket mounted in proximity to the element, a spring structure having a first spring arm attached to said bracket, a second spring arm normally substantially parallel to said first spring arm, a case including a bottom and sides, said sides having slots therein, guides attached to said sides and having said second arm slidably received under one of said guides, means associated with said second arm engaging said guide limiting the travel of said case, a drawer having protuberances thereon slidably received in said slots.

9. For use in an article of furniture having a relatively stationary element, a bracket mounted in proximity to the element, a spring structure having a first spring arm attached to said bracket, a second spring arm normally substantially parallel to said first spring arm, a case including a bottom and sides, said sides having slots therein, guides attached to said sides and having said second arm slidably received under one of said guides, means associated with said second arm engaging said guide limiting the travel of said case, a drawer having protuberances thereon slidably received in said slots, said case adapted to engage the element to retain the case in a predetermined position, and a finger grip at the lower front edge of said drawer.

10. For use with an article of furniture including a relatively stationary element, a bracket mounted in proximity to the element, a spring structure including a first coil having a first arm and a second arm projecting therefrom, a second coil having a third arm and a fourth arm projecting therefrom, said first and third arms being rigidly attached to said bracket, a case having a top, bottom and side walls, said side walls having longitudinal slots therein, said second and fourth arms resting on the exterior surface of said side walls, guides attached to said side walls overlying said last-mentioned arms, said second and fourth arms having bent terminal portions engageable with said slots for limiting the travel of said case relative to said second and fourth arms, a drawer slidably received in said case, protuberances attached to said drawer slidably received in said longitudinal slots, said protuberances engaging the end walls of said slots, thereby limiting the travel of said drawer relative to said case, whereby upon reaching the travel limit of said drawer sliding movement thereof is imparted to said base.

WALTER C. HIGLEY.

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