

May 24, 1949.

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2,471,245

TABLE

Filed March 16, 1946

2 Sheets-Sheet 1

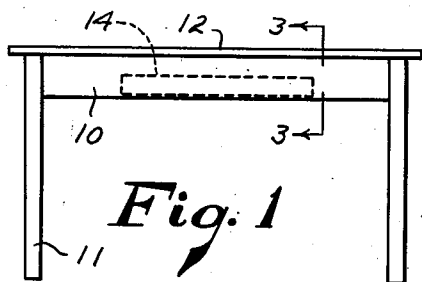


Fig. 1

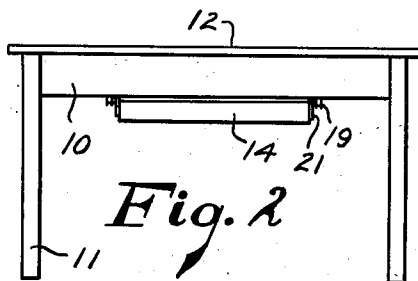


Fig. 2

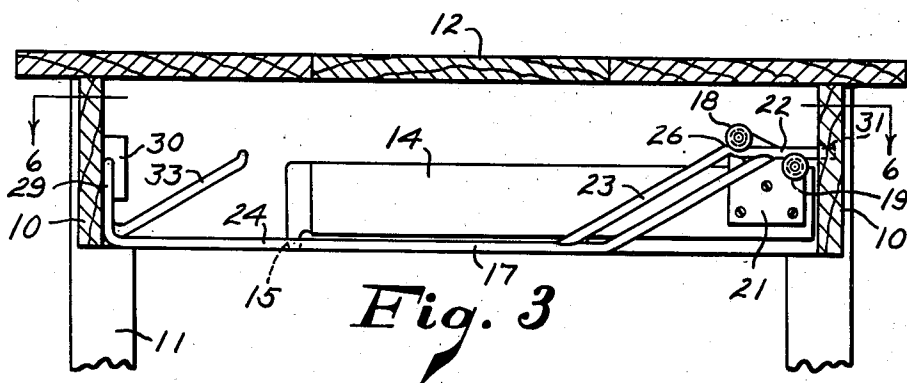


Fig. 3

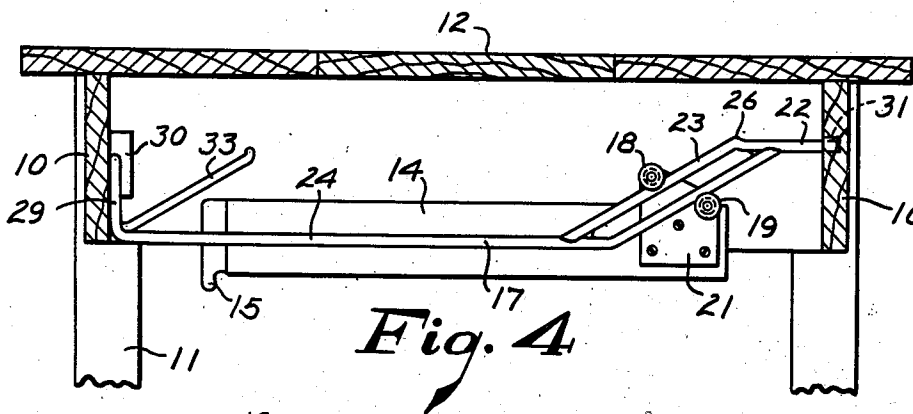


Fig. 4

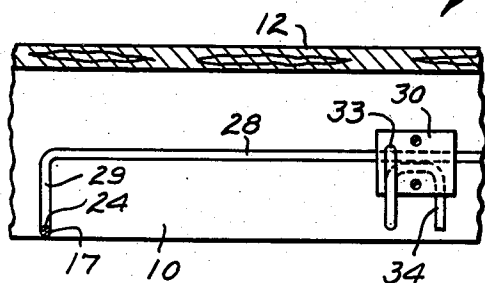


Fig. 7

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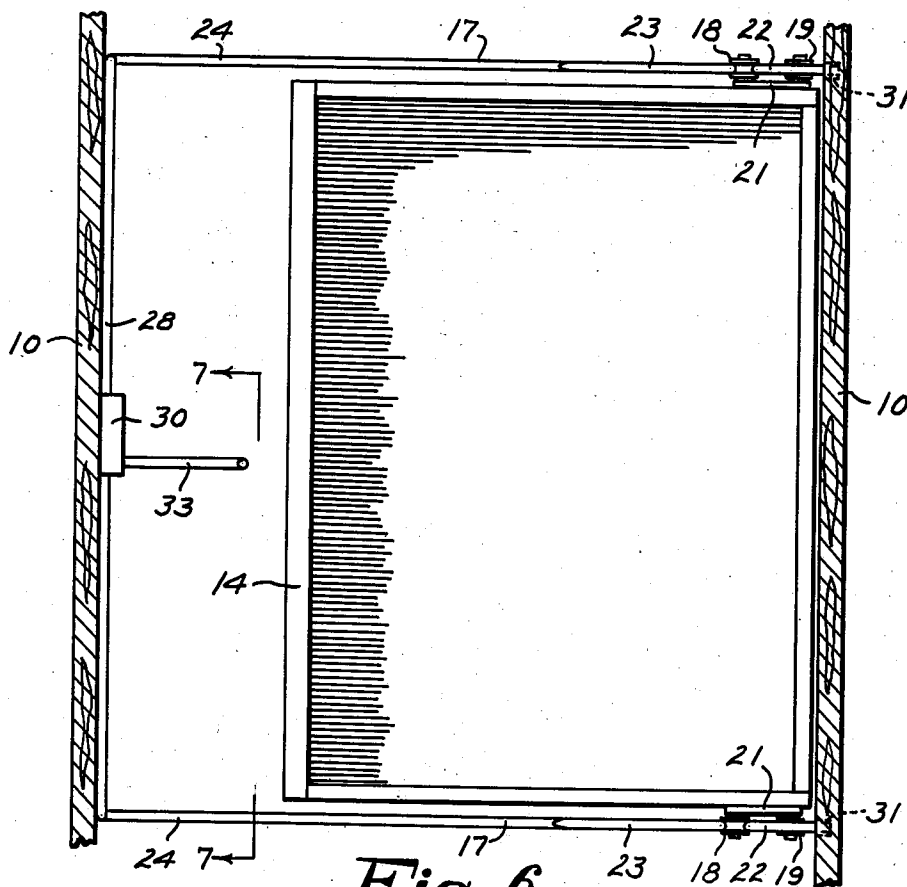
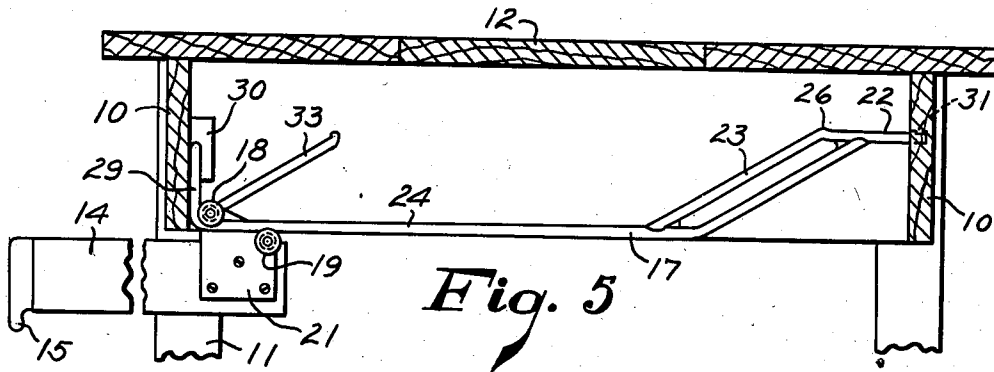
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TABLE

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UNITED STATES PATENT OFFICE

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TABLE

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7 Claims. (Cl. 45-77)

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This invention relates to tables, and more particularly to tables of the type having slidable drawers for the storage of various articles.

One form of table in common use comprises a rectangular frame supported by four legs and covered by a flat top. The frame includes four members known as aprons, which are usually wooden boards with their wide surfaces in vertical planes. When a drawer is to be supplied with such a table, it is customary to provide one of the aprons with a rectangular opening of the proper size and shape for the drawer to slide therethrough. This weakens the apron and detracts from the appearance of the table. Furthermore, it makes it necessary for a manufacturer to carry in stock a larger inventory of tables so that he may make prompt delivery of tables either with or without drawers, as his customers may require.

It is accordingly one object of the invention to provide a table having a slidable drawer, the construction being such as to require no opening through the table frame.

It is a further object of the invention to provide a table having a slidable drawer which will be entirely concealed when in its closed position.

It is a further object of the invention to provide a table having a slidable drawer and supporting guides which may be readily installed in the table frame without cutting any opening therethrough.

It is a further object of the invention to provide a storage unit in the form of a slidable drawer and supporting guides therefor adapted for ready installation in an existing table frame without requiring the cutting of an opening through the frame.

With these and other objects in view, as will be apparent to those skilled in the art, the invention resides in the combination of parts set forth in the specification and covered by the claims appended hereto.

Referring to the drawing illustrating one embodiment of the invention, and in which like reference numerals indicate like parts,

Fig. 1 is a front elevation of a table, with its drawer in the closed position;

Fig. 2 is a view similar to Fig. 1, but showing the drawer in the open position;

Fig. 3 is an enlarged section taken on the line 3-3 of Fig. 1;

Fig. 4 is a view similar to Fig. 3, but showing the drawer moved a short distance forwardly toward its open position;

Fig. 5 is a view similar to Fig. 3, but showing the drawer fully open;

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Fig. 6 is a section taken on the line 6-6 of Fig. 3; and

Fig. 7 is a section taken on the line 7-7 of Fig. 6.

The table illustrated comprises a rectangular frame including four aprons 10 shown as wooden boards with their wide surfaces in vertical planes. This frame is supported at its corners by four vertical legs 11, and it is covered by a flat top 12 of any suitable construction. The table further includes a drawer 14 of the usual rectangular shape, with a depending lip 15 at its front edge so that it may be pulled forwardly to the open position.

In accordance with the invention the drawer 14 is so supported and arranged that it will normally rest in its closed position within the space surrounded by the frame aprons 10, and it may be moved forwardly and downwardly beneath the lower edge of the front apron 10 into its open position. During this movement, the drawer preferably remains in a substantially horizontal position at all times.

In the embodiment illustrated, there is provided a track or guideway 17 at each side of the drawer 14, these tracks extending between the front and rear aprons 10, which serve to support the tracks. Each track is engaged by a pair of small wheels 18 and 19 carried by the adjacent portion of the drawer and grooved peripherally to fit the track. The wheels 18, which run along the upper surfaces of the tracks, are positioned somewhat above and in front of the wheels 19, which run along the lower surfaces of the tracks. As shown, each pair of wheels is mounted on a separate metal plate 21 which is suitably secured to the side of the drawer near the rear thereof. Each track 17 includes a comparatively short horizontal rear portion 22, a downwardly and forwardly inclined intermediate portion 23, and a comparatively long horizontal front portion 24. The depth of the inclined portion 23, i. e. the distance between its upper and lower surfaces, is greater than the depth of the front and rear portions, and it is so related to the spacing of the wheels 18 and 19 as to maintain the drawer substantially level while the wheels are passing over the inclined portion of the track, as shown in Fig. 4. In order to retain the drawer in its closed position except when it is intentionally pulled forwardly, each rear track portion 22 is provided with a small upward projection 26 adjacent its junction with the inclined portion 23. The front of the drawer must be raised slightly to bring the front wheels 18 over these projections.

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The tracks 17 may be constructed in various ways within the scope of the invention. In the drawings they are shown as made from metal rods of circular cross section, the inclined portions 23 including two parallel rods one above the other, to provide the required depth. The front horizontal portions 24 are integral with the lower bars of the inclined portions 23, while the rear horizontal portions 22 are integral with the upper bars of the inclined portions 23. The separate pieces may be joined by welding. The front ends of the two portions 24 are integrally connected by a transverse horizontal portion or bar 28 having short vertical branches 29 at its ends. This transverse portion 28 is held against the rear surface of the front apron 10 by a clamping block 30. The rear ends of the rear track portions 22 are supported in holes 31 bored in the front surface of the rear apron 10.

If the front edge of the drawer 14 is lifted appreciably as the drawer is pulled forwardly, it might engage the front apron 10. In order to prevent this from happening, a bar 33 is provided. This bar slopes upwardly and rearwardly from the front apron 10 in a position to overlie the front edge of the drawer as it moves forwardly and downwardly, as shown in Fig. 4. The bar 33 is integral with a supporting portion 34 (Fig. 7) shaped as an inverted U and secured to the rear surface of the front apron by the clamping block 30.

The operation of the invention will now be apparent from the above disclosure. With the drawer 14 in its closed or rearmost position, as shown in Fig. 3, the wheels 18 and 19 will engage the rear track portions 22. Since the center of gravity of the drawer is well in front of the front wheels 18, the drawer will tend to swing downwardly about these wheels, but this will be prevented by the engagement of the rear wheels 19 with the bottom surfaces of the tracks. The projections 26, which lie directly in front of the front wheels 18, will prevent accidental forward movement of the drawer. When the drawer is to be opened, it will be grasped by the lip 15 and pulled forwardly. During the initial portion of this movement, the front edge of the drawer will be slightly lifted so that the front wheels 18 may pass over the projections 26. The wheels 18 and 19 will now travel downwardly along the inclined portions 23 of the tracks, as shown in Fig. 4, the drawer moving downwardly and forwardly while remaining substantially level. The bar 33 will overlie the front portion of the drawer and thus prevent it from being lifted appreciably, which might cause it to strike the rear surface of the front apron 10. As the wheels reach the lower portions 24 of the tracks, the drawer will be pulled directly forward beneath the front apron, as shown in Fig. 5. This movement will be limited by the engagement of the front wheels 18 with the vertical branches 29. The drawer may be closed by pushing it rearwardly.

The invention has several practical advantages. When the drawer is closed it is entirely concealed within the table frame, and there is nothing in the outward appearance of the table to indicate that there is a drawer. No opening is required through the front apron, so that the table frame retains its full strength. The drawer and its supporting tracks can be easily installed in a table whenever a customer's order includes a drawer. The only requirement is the boring of the two holes 31 and the addition of the clamping block 30. If desired the holes 31 may be provided in

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all the frames at the time of manufacture, to facilitate the addition of drawers later when required. Thus the manufacturer can supply tables either with or without drawers, from his regular stock.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A table comprising a frame, a drawer located within the frame, a track at each side of the drawer, and a pair of wheels on each side of the drawer near the rear thereof, one of the wheels in each pair being located somewhat above and in front of the other wheel, the front wheels engaging the upper surfaces of the tracks, and the rear wheels engaging the lower surfaces of the tracks, each track having a substantially horizontal rear portion, a downwardly and forwardly inclined intermediate portion, and a substantially horizontal front portion arranged to support the drawer as it moves forwardly beneath the front portion of the frame toward its open position, the inclined portions of the tracks having a depth greater than that of the horizontal portions and such as to support the drawer substantially level during its downward and forward movement.

2. A table as set forth in claim 1, in which a slight upward projection is provided upon the rear portion of each track and near the junction of the rear portion with the inclined portion.

3. A table comprising a frame, a drawer located within the frame, a track at each side of the drawer, and a pair of peripherally grooved wheels on each side of the drawer near the rear thereof, one of the wheels in each pair being located somewhat above and in front of the other wheel, the front wheels engaging the upper surfaces of the tracks and the rear wheels engaging the lower surfaces of the tracks, each track having a substantially horizontal rear portion formed by a single rod, a downwardly and forwardly inclined intermediate portion formed by two rods one above the other, and a substantially horizontal front portion formed by a single rod arranged to support the drawer as it moves forwardly beneath the front portion of the frame toward its open position.

4. A table comprising a frame including front and rear aprons, a drawer located within the frame, a track at each side of the drawer, wheels on the drawer engaging the tracks, each track having a substantially horizontal rear portion, a downwardly and forwardly inclined intermediate portion, and a substantially horizontal front portion arranged to support the drawer as it moves forwardly beneath the front apron, the rear apron having two holes in its front surface to receive the rear ends of the tracks, and means attaching the front ends of the tracks to the front apron.

5. A table comprising a frame including front and rear aprons, a drawer located within the frame, a track at each side of the drawer, wheels on the drawer engaging the tracks, each track having a substantially horizontal rear portion, a downwardly and forwardly inclined intermediate portion, and a substantially horizontal front portion arranged to support the drawer as it moves forwardly beneath the front apron, the rear apron having two holes in its front surface to receive the rear ends of the tracks, a transverse horizontal bar extending along the rear surface of the front apron, means securing the bar to the front apron, and vertical branches connecting

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the ends of the bar with the front ends of the tracks.

6. A table comprising a frame including front and rear aprons, a drawer located within the frame, a track at each side of the drawer, wheels on the drawer engaging the tracks, each track having a substantially horizontal rear portion, a downwardly and forwardly inclined intermediate portion, and a substantially horizontal front portion arranged to support the drawer as it moves forwardly beneath the front apron, and an upwardly and rearwardly inclined stationary bar located behind the front apron in a position to overlie the front portion of the drawer as it approaches the front apron.

7. A storage unit for installation within a table frame, said unit comprising a drawer, a track at each side of the drawer, and a pair of wheels on each side of the drawer near the rear thereof, one of the wheels in each pair being located somewhat above and in front of the other wheel, the front wheels engaging the upper surfaces of the tracks, and the rear wheels engaging the lower surfaces of the tracks, each track having a substantially horizontal rear portion, a downwardly and forwardly

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wardly inclined intermediate portion, and a substantially horizontal front portion arranged to support the drawer as it moves forwardly toward its open position, the inclined portions of the tracks having a depth greater than that of the horizontal portions and such as to support the drawer substantially level during its downward and forward movement.

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