June 2, 1964 P. ERISMANN 3,135,570

CABINET WITH A PIVOTABLE DOOR AND AT LEAST ONE DRAWER

Filed Dec. 29, 1961

Fig. 1

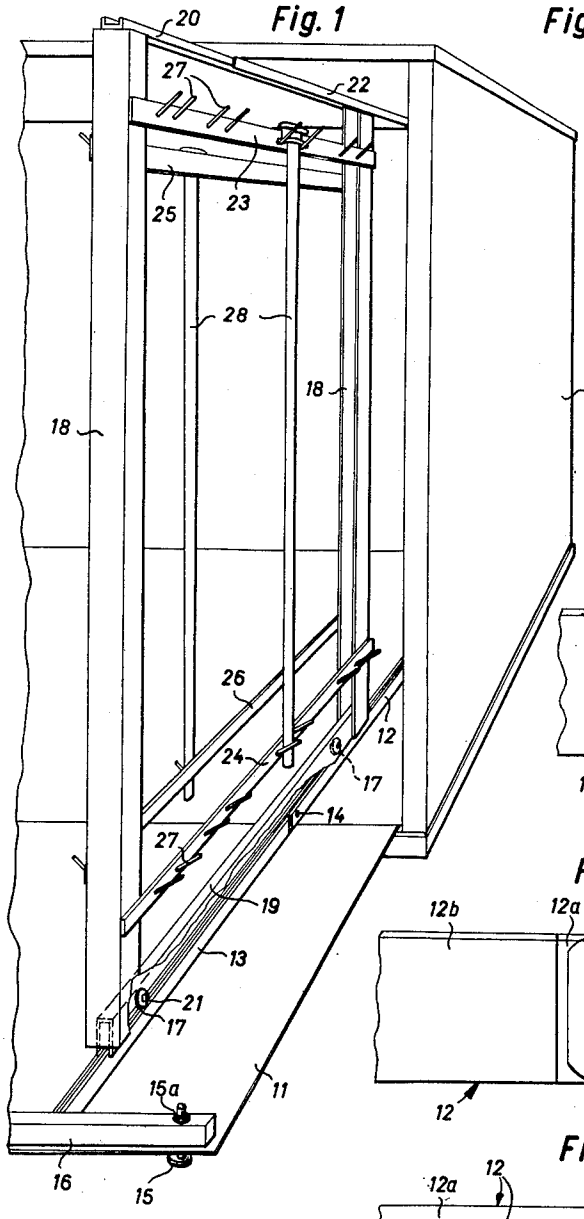


Fig. 2

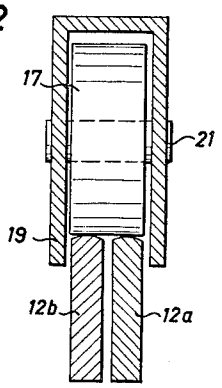


Fig. 5

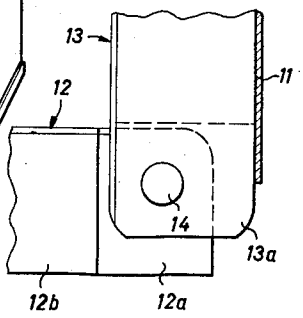


Fig. 3

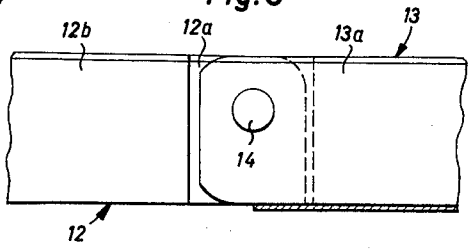
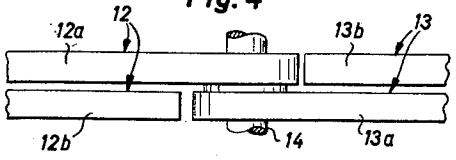


Fig. 4



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CABINET WITH A PIVOTABLE DOOR AND AT LEAST ONE DRAWER

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1 Claim. (Cl. 312—311)

This invention relates to a cabinet with a pivotable door and at least one drawer supported by rollers on at least one rail. Over the conventional cabinets of the type the one according to the invention is principally characterized in that a section of the rail is mounted inside the door serving as bracket and is pivotably connected to the section firmly arranged within the cabinet by means of a joint pin also forming the hinge of the door.

In order that at the passage from one rail section to the other there arises no disturbing joint, but that a continuous track for the rollers be assured in the longitudinal direction of the rail, both rail sections may sideways overlap each other. This may preferably be accomplished in that each rail comprises two profiled pieces arranged in juxtaposed relation, whose ends, at the passage from one rail section to the other, are displaced relative to each other.

Further features of the invention will appear from the following description and claims, taken in conjunction with the accompanying drawing, wherein there is shown, purely by way of example, one preferred form of embodiment incorporating the invention.

In said annexed drawing:

FIG. 1 shows in perspective view an opened cabinet with a vertical drawer that is guided by means of rails at top and bottom, the lower rail carrying the drawer;

FIG. 2 shows on a larger scale a vertical sectional view of the lower rail and the lowermost portion of the drawer; one of the drawer-supporting rollers being also visible;

FIG. 3 is a side view of the pivotal connection between the two sections of the lower rail, the door being indicated in section;

FIG. 4 is a top view of the joint between the two rail sections according to FIG. 3, and

FIG. 5 is a representation similar to FIG. 3, in closed condition of the cabinet, i.e. with upwardly pivoted door.

Referring more particularly to FIG. 1, the cabinet shown exhibits a housing **10** which is open at its front and closable by means of a pivotable door **11**. For opening the cabinet, the door **11** can be pivoted about a horizontal axis down into a horizontal position, in which it forms a bracket, as shown in FIG. 1. The bottom of the cabinet housing **10** and the inner side of the door **11** have mounted thereon two sections **12** and **13** of a rail, as by welding. The rail section **12** fixedly arranged within the housing **10** comprises two juxtaposed and comparatively closely spaced profiled pieces **12** and **12*b*** of substantially rectangular cross-section (FIGS 2–5). The rail section **13** mounted on the door **11** is likewise formed of two juxtaposed and comparatively closely spaced profiled pieces **12*a*** and **13*b*** of the same cross-sectional form. In cross-section the top side of all profiled pieces is convexly curved.

The two profiled pieces **12*a***, **12*b*** and **13*a***, **13*b*** respectively are of varying length and their ends are displaced relative to one another at the joint, as distinctly shown in FIG. 4. One profiled piece **12*a*** of the rail section **12** and one profiled piece **13*a*** of the other rail section overlap each other sideways and are pivotably interconnected by a joint pin **14**. The pin **14** not only serves for connecting the two rail sections **12** and **13**, but forms at the same time a hinge of the door **11**. Since the cabinet in addition to the rail **12**, **13** visible in FIG. 1, includes further at least one second rail of exactly the same design and extending parallel thereto, no additional hinges are needed for pivotably supporting the door **11**.

In order that the door **11** is horizontal when opened, it comprises two support feet **15**, one of which only being visible in FIG. 1. Each support foot is designed as screwed spindle and engages a suitable threaded hole in a reinforcing batten of the door **11**. By turning, each foot **15** is adjustable in its effective vertical dimension. A nut **15*a*** threadedly engaging the screwed spindle permits of securing the foot **15** in its set position.

Supported on rail **12**, **13** by means of two rollers **17** there is a vertical drawer which principally comprises a vertical frame with two vertical pieces **18**, a lower piece **19** and an upper piece **20**. All frame members **18**, **19** and **20** are of channeled section. According to FIGS. 1 and 2, rollers **17** are arranged between the sides of the lower frame piece **19** and rotatably supported each by an axle **21**. The sides of frame piece **19** laterally engage over the rail **12**, **13**, thus preventing the rollers **17** from sliding off said rail. The upper frame piece **20** is guided by vertical rollers (not visible in FIG. 1) with vertical axles between the sides of a channel sectioned rail **22** that is fixed to the underside of the top of housing **10**.

The vertical pieces **18** of the drawer have fastened on either side of the frame **18**, **19**, **20** two horizontal carrying bars **23**, **24** and **25**, **26** respectively, which are provided with projecting supporting or holding pegs **27** that are used to take objects **28**, such as reamers.

The modus operandi of the described cabinet is as follows: For opening the housing **10**, the door **11** is pivoted outwards about the joint pin **14** and brought downwards into the horizontal position until the two sections **12** and **13** of each rail **12**, **13** extend rectilinearly to each other. Then the door **11** forms a bracket on which the drawer **18**—**27** can be drawn out from the housing **10**, whereby the rollers **17** first run on the rail section **12** and then partly also on the rail section **13** of door **11**. Because of the described design of the joint between the two sections **12** and **13**, especially due to side ways overlap of the profiled pieces **12*a*** and **13*a*** the front roller **17** need not roll over a gap in the running surface of the rail sections **12** and **13**, but finds a continuous running surface in the longitudinal direction of the rails **12**, **13**, so that the rollers sustain no blows such as is the case with railway coaches running over joints. By a stop the movement of the drawer is limited in such a way that the upper frame piece cannot entirely slide off the upper guide rail **22**. When the drawer has been drawn out in the described manner, the objects **28** can be removed or be hung up. With all drawers pushed into the housing **10**, the door **11**, with the rail sections **13** attached thereto, can be pivoted upwards, thus closing the opening of the cabinet **10**. It is understood that commonly known locking members (not shown) are provided to secure the door in its closed position.

The described casing has the advantage that the drawers may be readily moved by means of rollers **17** and with heavy loads of, say, 1,000 kg., and be drawn out to such an extent as to be easily accessible from either side for removing or putting in objects **28**. Another merit is seen in the special design of the joint between the two rail sections **12** and **13** and in the absence of additional hinges for the door **11**. Also of advantage is the curved top side of the profiled pieces **12*a***, **12*b*** and **13*a***, **13*b*** forming the track for the rollers **17**, as well as the space between the juxtaposed profiled pieces **12*a***, **12*b*** and **13*a***, **13*b***. Both provisions substantially prevent dust being deposited on the profiled pieces and thus invariably assure easy running of the rollers **17**.

The cabinet according to the invention need not be provided with vertical drawers in every case, but could just as well also have at least one other normal-type drawer supported on two lower rails by means of rollers, of which rails one section is mounted in the cabinet and the other section fixed on the pivotable door. The drawer support on two rails may also be simply a pallet for placing goods thereon.

In a modification (not shown) the door could consist of two wings, one of which pivots downwards as a bracket and the other upwards, whereby the latter could likewise be provided inside with a section of an upper guide rail, of which another section is rigidly arranged in the cabinet housing. In this case also both sections of the upper rail are connected to each other through a joint pin which at the same time serves as a hinge of the upper door wing.

What I claim is:

A cabinet comprising a housing having an opening at one side, a door for closing said opening, a drawer comprising a vertical frame, a rail for said drawer, a pair of rollers on said drawer travelling on said rail, said rail

comprising two sections, one of said sections being firmly mounted at the bottom of said housing, the other section being fixed on said door, each of said sections comprising a pair of rectangular cross sectioned bars extending in parallel relationship, the bars of one section being aligned with the bars of the other section when said door is opened to horizontal position extending from said housing, and one bar of each of said sections overlapping the corresponding bar of the other section, a pin passing through said overlapping bars and forming a hinge for said sections and also for said door, and a guide rail fixed at the top of and within said housing guiding said drawer.

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