

Feb. 25, 1936.

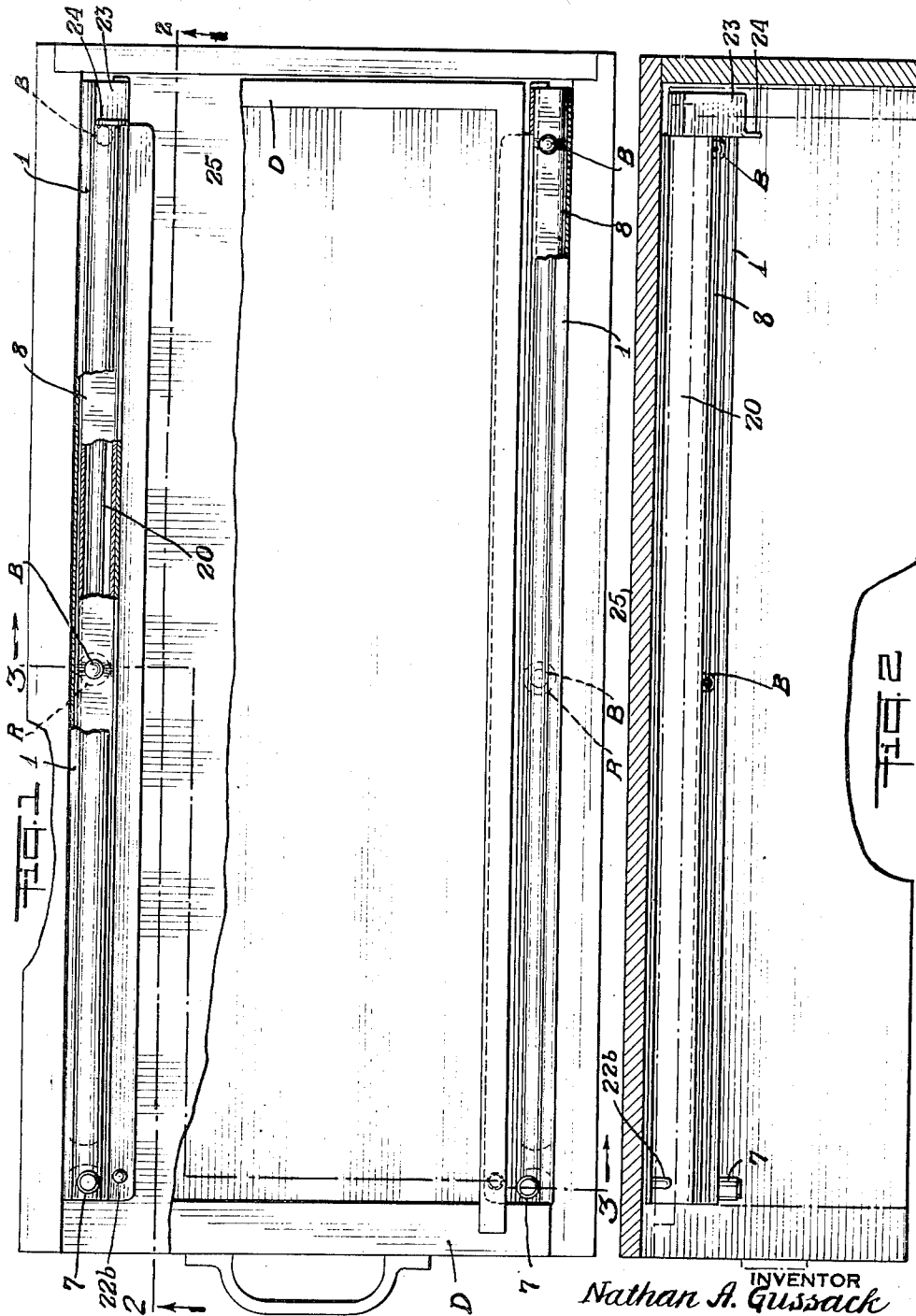
N. A. GUSSACK

2,032,054

SLIDE DRAWER CONSTRUCTION

Filed Aug. 21, 1934

5 Sheets-Sheet 1



INVENTOR
Nathan A. Gussack
BY *Mock & Blum*
ATTORNEYS

Feb. 25, 1936.

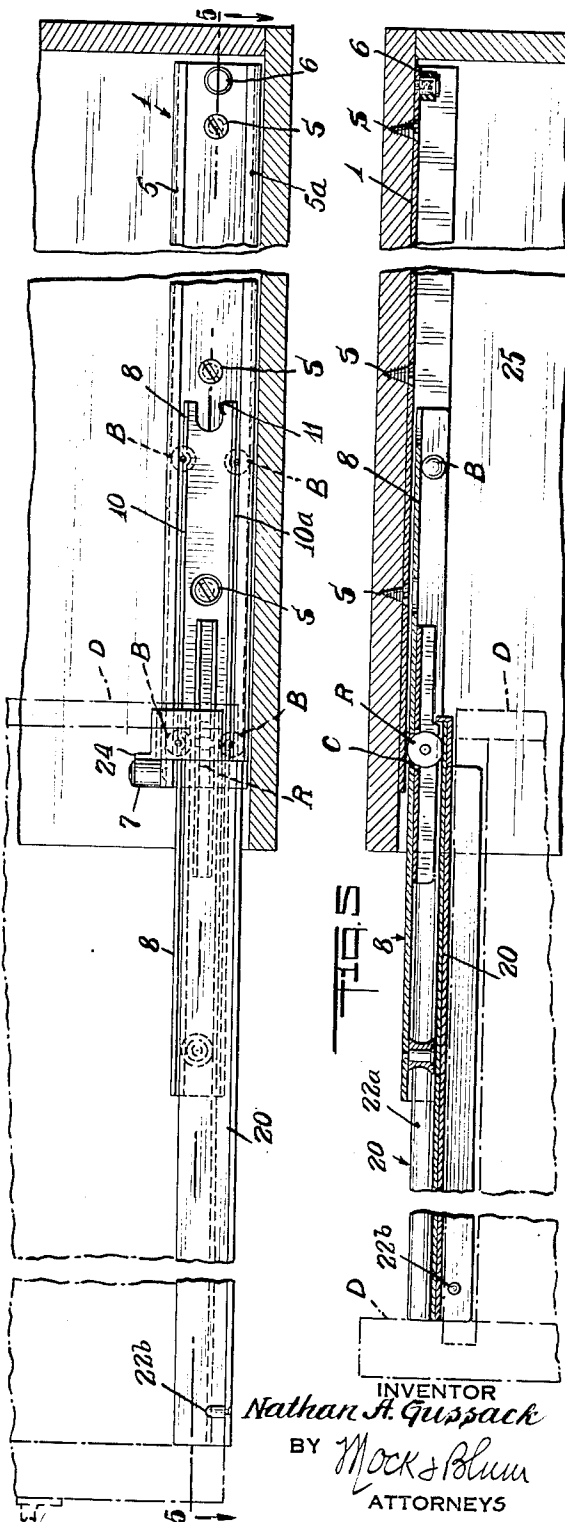
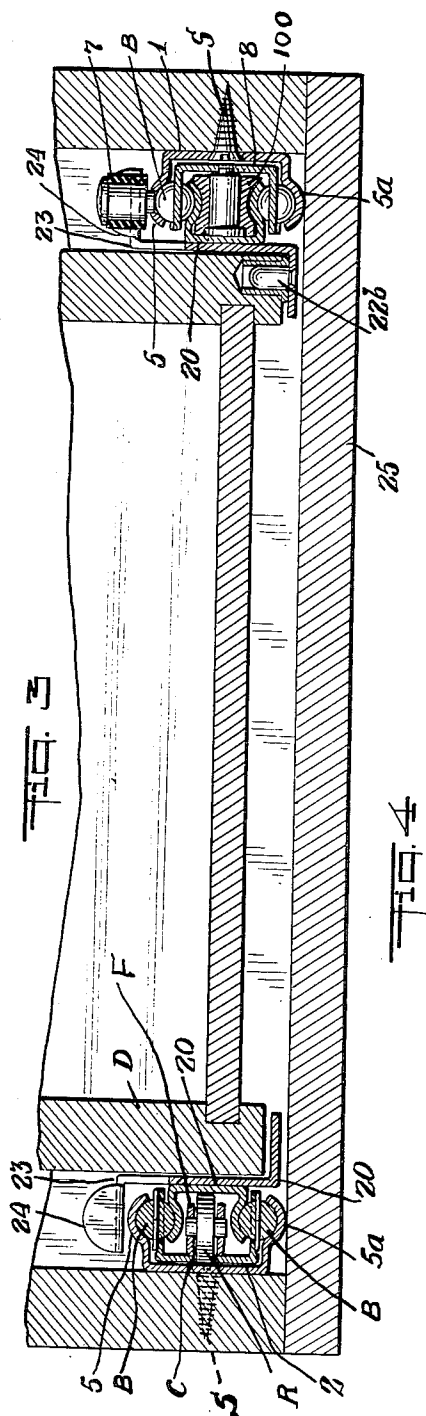
N. A. GUSSACK

2,032,054

SLIDE DRAWER CONSTRUCTION

Filed Aug. 21, 1934

5 Sheets-Sheet 2



INVENTOR
Nathan A. Gussack
BY *Mock & Blum*
ATTORNEYS

Feb. 25, 1936.

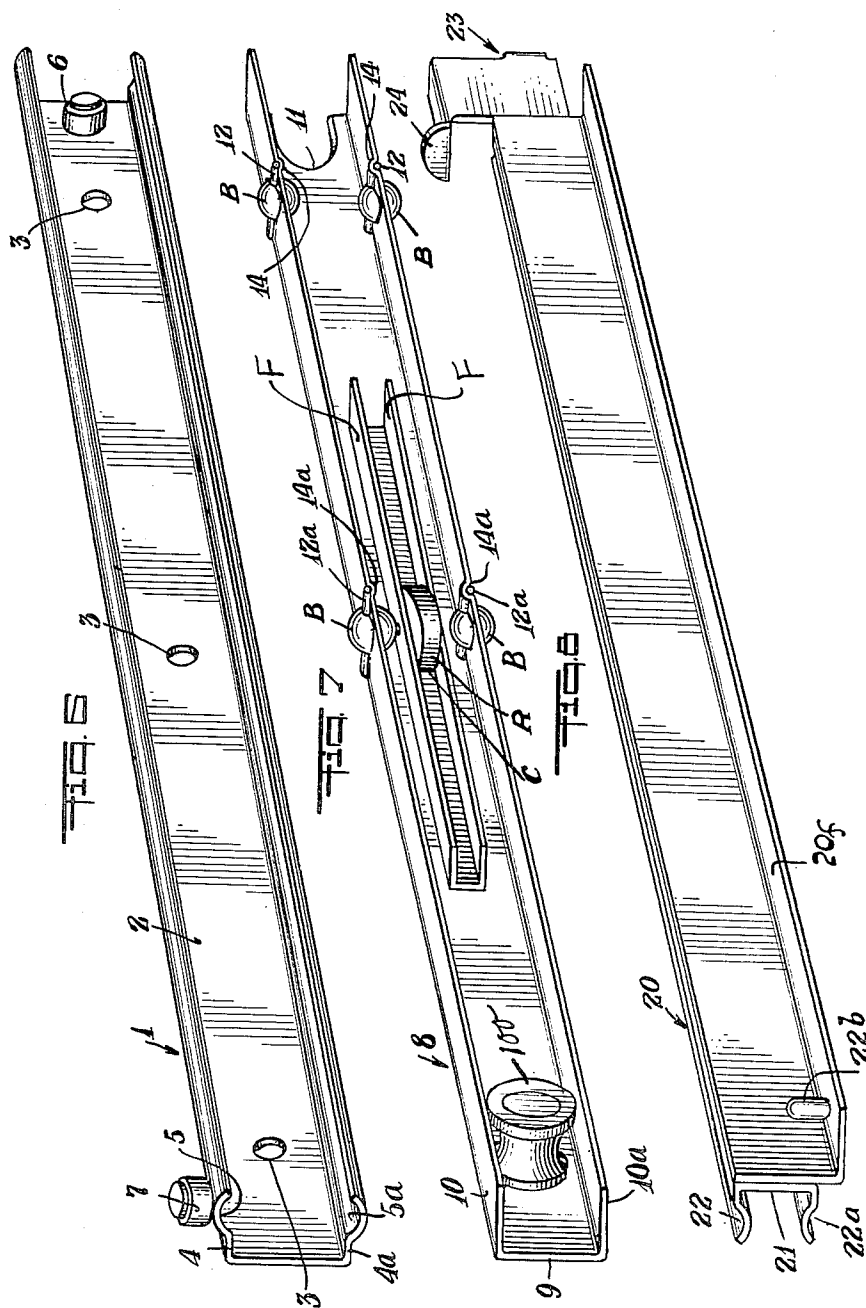
N. A. GUSSACK

2,032,054

SLIDE DRAWER CONSTRUCTION

Filed Aug. 21, 1934

5 Sheets-Sheet 3



INVENTOR
Nathan A. Gussack
BY *Mock & Blum*
ATTORNEYS

Feb. 25, 1936.

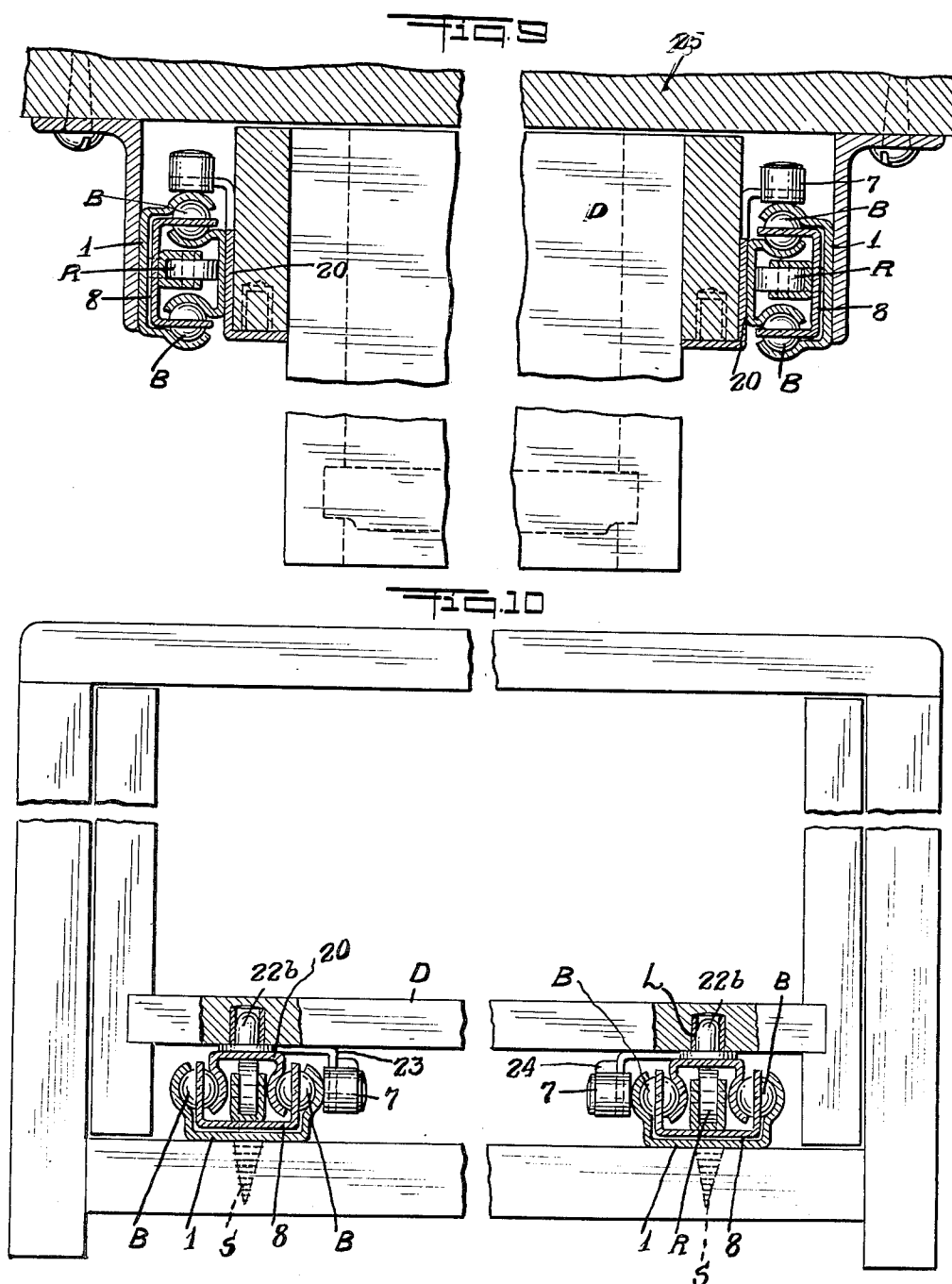
N. A. GUSSACK

2,032,054

SLIDE DRAWER CONSTRUCTION

Filed Aug. 21, 1934

5 Sheets-Sheet 4



INVENTOR
Nathan A. Gussack
BY *Mock & Blum*
ATTORNEYS

Feb. 25, 1936.

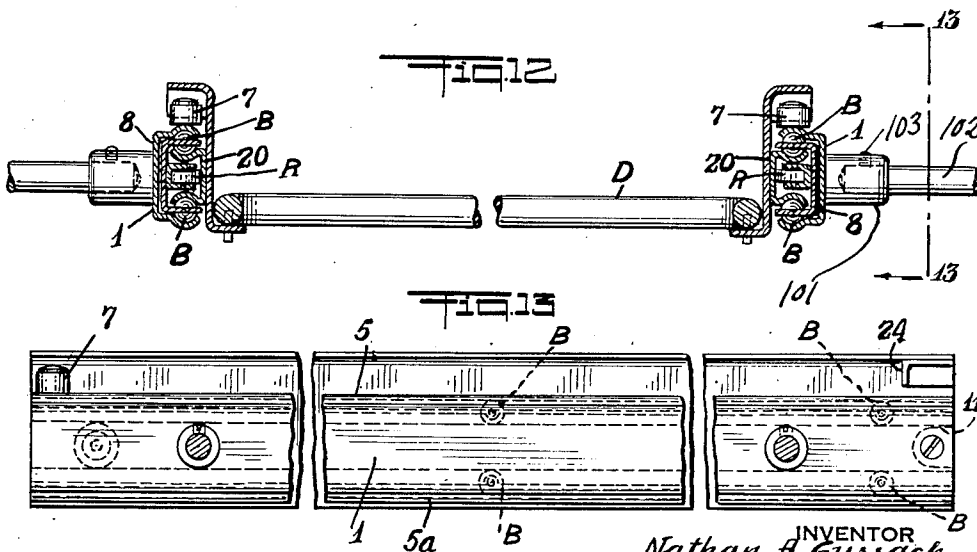
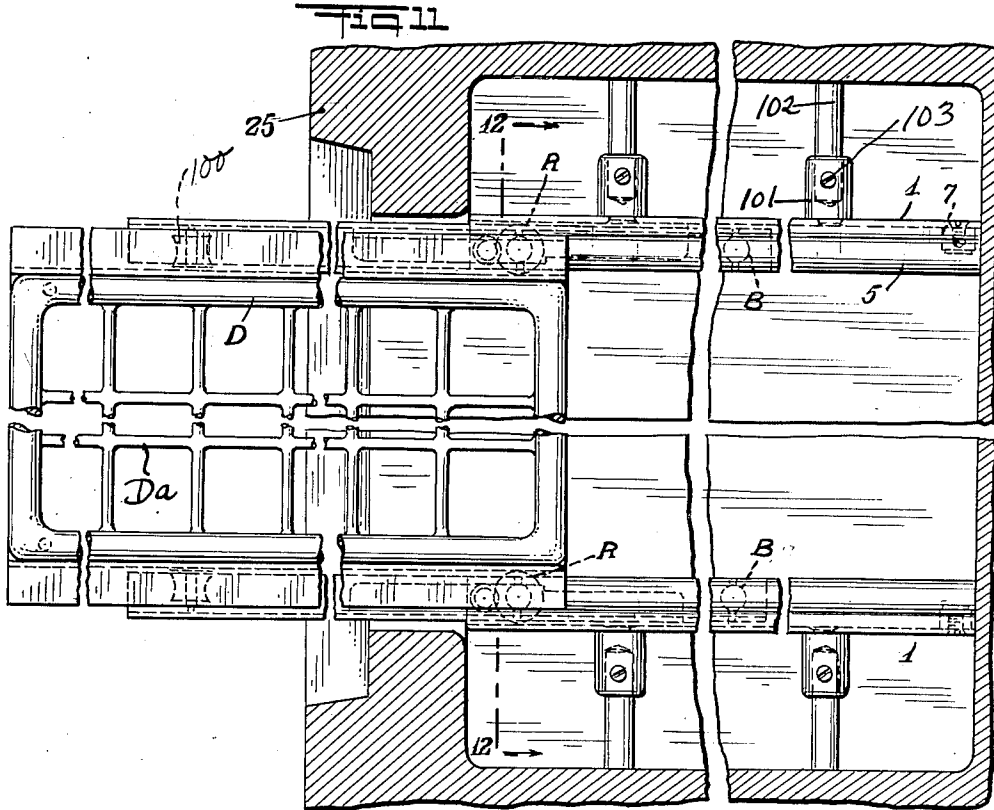
N. A. GUSSACK

2,032,054

SLIDE DRAWER CONSTRUCTION

Filed Aug. 21, 1934

5 Sheets-Sheet 5



INVENTOR
Nathan A. Gussack
BY Mock & Blum
ATTORNEYS

UNITED STATES PATENT OFFICE

2,032,054

SLIDE DRAWER CONSTRUCTION

Nathan A. Gussack, Flushing, N. Y.

Application August 21, 1934, Serial No. 740,763

4 Claims. (Cl. 45-77)

My invention relates to a new and improved slide drawer construction.

One of the objects of my invention is to provide improved slide means for guiding and supporting drawers or shelves in desks, refrigerators, cabinets and other articles of furniture.

Another object of my invention is to provide a simple and strong construction, in which the track members are properly supported so as to prevent sagging, so that the drawer can be subjected to rough usage without injuring the device.

Another object of my invention is to provide an improved device of this type, having anti-friction members such as balls, rolls and the like.

Other objects of my invention will be set forth in the following description and drawings which illustrate a preferred embodiment thereof, it being understood that the above statements of the objects of my invention is intended to generally explain the same without limiting it in any manner.

Fig. 1 is a top plan view of the improved device, certain of the parts being represented as being partially broken away, in order to more fully illustrate the construction.

Figs. 2 and 3 are respectively sectional views on the lines 2-2 and 3-3 of Fig. 1.

Fig. 4 is a detail elevation showing the drawer guide in its outer position.

Fig. 5 is a sectional view on the line 5-5 of Fig. 4.

Fig. 6 is a perspective view of the fixed track member.

Fig. 7 is a perspective view of the extension slide.

Fig. 8 is a perspective view of the drawer track member.

Fig. 9 is a sectional view showing a modification of the invention as applied to a drawer which is located underneath a bench or the like.

Fig. 10 is a transverse sectional view, partially in elevation, showing another embodiment of the invention.

Fig. 11 is a plan view showing the improvements applied to a refrigerator.

Fig. 12 is a sectional view on the line 12-12 of Fig. 11.

Fig. 13 is a sectional view on the line 13-13 of Fig. 12.

Referring to Fig. 6, the device includes a fixed track member 1, it being understood that the device has one of such fixed track members, and

one or more movable track members, at each side of the drawer or the like.

For convenience it is to be assumed that the drawer slides in a horizontal plane.

The fixed track member 1 is provided with a vertical web 2, which is provided with holes 3, through which screws S or other fastening members can be inserted in order to secure the fixed track members 2, to the fixed walls of the desk or the like.

The heads of the fastening members are countersunk in the holes 3. The fixed track member is provided with upper and bottom walls 4 and 4a, and said walls are provided with grooved portions 5 and 5a.

At its rear end, the fixed track member 1 is provided with a horizontal stop-pin 6 and the top wall 4 is provided at its front end with a vertical stop pin 7. The stop pins 6 and 7 may be secured by drive-fits, or in any other suitable manner.

The extension slide 8 has a substantially U-shaped cross section, so that it has a vertical wall 9, a top wall 10 and a bottom wall 10a. At its rear end, the vertical wall 9 is provided with a recess 11, whose wall is adapted to abut the stop pin 6, when the drawer is in its inner position. The inner movable track member 8 is provided with one or more anti-friction balls B. These balls are provided with pin-shafts 12 and 12a, which pass through the centers of said balls. Said pin shafts 12 and 12a are located in recessed portions 14 of the top wall 10, and recessed portions 14a of the bottom wall 10a.

I have shown two such balls B, but I could use only one ball, or more than two of such balls.

The balls B roll in the grooves 5 and 5a.

Each member 8 has horizontal flanges F, in which a rubber wheel or roller R is turnably mounted, by means of a suitable pin-shaft, as shown at the left-hand side of Fig. 3.

The vertical wall 9 is provided with a cut-out C, through which said rubber wheel or roller projects, so that it makes rolling contact with the vertical wall 2 of the fixed track member 1.

Each drawer track member 20 is provided with a U-shaped flange 21 which is welded or otherwise suitably secured thereto. The top and bottom walls of said U-shaped flange 21 are provided with grooves 22 and 22a. The balls B roll in said grooves 22 and 22a. The drawer track member 20 is also provided with vertical pins 22b which enter suitable holes or recesses which are provided at the front part of the bottom surface of the drawer or shelf.

The member 20 is also provided with a stop flange 23, having a shoulder 24 which abuts with the front stop pin 7, of the fixed track member, when the drawer is pulled out.

When the drawer D is pulled out, the extension slide members 8 and drawer track members 20 are simultaneously withdrawn from the housing, but the outer drawer track member 20 moves in advance of the extension slide 8. This is caused by the wheel R, which contacts with the vertical webs of fixed track members 1 and drawer track 20. Said wheel R is turned by drawer track member 20 when this is pulled out, and the rolling contact between wheel R and web 2 of fixed track member 1 causes extension slide member 8 to move outwardly, and to lag behind drawer track member 20.

Referring to Fig. 3, it will be noted that the portions 5a of the fixed track members rest directly upon the bottom of the casing 25, in which the drawer D is mounted.

Hence the screws S, which pass through the holes 3, do not support the weight of the tracks in any manner, as said weight is fully taken up by the bottom 25 of the casing. Said screws S merely hold the fixed track members laterally against the vertical walls of the casing 25, so that little or no strain is imposed upon said screws S. The wheel R is located directly between a pair of superposed anti-friction members B, but this relation is not necessary.

After the drawer track members 20 have been pulled out to the maximum distance, the parts are in the position shown in Fig. 4.

The drawer can then be raised until pins 22b are released from the holes provided in the bottom of said drawer, and the drawer can then be moved away from the casing and the track members.

The same essential arrangement is shown in Fig. 9, save that the drawer track members 20 have lateral flanges at their tops and bottoms.

Fig. 10 shows the track-members located below the drawer D, so that the fixed track-members rest upon the bottom of the casing. This view clearly shows the openings in the bottom of the drawer D, said opening being provided with metal liners L. The parts which have been previously mentioned are shaped somewhat differently, in order to locate them below the bottom of the drawer.

Fig. 11 shows a casing 25 which forms part of a refrigerator. The drawer D may have a mesh bottom Da.

As shown in Figs. 7 and 11, the extension slides 8 may be provided with turnable rollers 100, each having a concave wall, on which the convex surfaces of grooves 22 and 22a can slide while said rollers 100 turn. As shown in Figs. 11 and 12, the shapes of drawer-supporting track members 20 are modified. The fixed track members are provided with sleeves 101, into which pins 102 enter, said pins 102 being fixed to the walls of casing 25. Set-screws 103 hold sleeves 101 to pins 102. These pins and sleeves provide a strong and rigid support, which prevents sagging.

In the modification of Figs. 3 and 10, I have shown the fixed guide or track means abutting the bottom of the casing. This is not absolutely essential, as a slight spacing would be sufficient to prevent substantial sagging. Likewise,

the anti-friction devices may be located either at the top or bottom of member 8, instead of at both top and bottom, as this would be a clear equivalent.

The bottom of the drawer is supported by the bottom flanges 20f of the members 20. Hence, the drawers are prevented from sagging relative to the members 20, although they can be easily removed from said members 20.

The front of the drawer D is substantially at the front of said flange 20, so that the drawer cannot tip relative to said flange 20f.

I have shown preferred embodiments of my invention, but it is clear that numerous changes and omissions could be made without departing from its spirit.

I claim:

1. A slidable drawer device comprising a casing, fixed track means connected to the casing, extension slide means movable relative to and guided by said fixed track means, and drawer track means connected to said drawer, said extension slide means being located between the fixed means and the drawer track means, said fixed track means and said extension slide means having cooperating vertical webs, the extension slide means having roller means in rolling contact with both said webs.

2. In a slide drawer device, an extension slide having a vertical web, and roller means connected to said slide and projecting through said vertical web, said roller means being mounted to turn around a vertical axis.

3. A slidable drawer device comprising a casing, fixed track means connected to said casing and having upper and lower walls provided with grooves, an extension slide member having upper and lower walls which are provided with anti-friction means which move in said grooves, said extension slide means having a roller turnably connected thereto, and a drawer track member having grooves whose walls are located between and contact with said anti-friction means, the drawer being connected to said drawer track member, said fixed track means and said drawer track member having vertical flanges which contact with said roller, so that said roller is turned when the drawer is pulled out of the casing, and the turning of the roller causes the first slide to move outwardly.

4. A slidable drawer device, comprising a casing, fixed track means connected to said casing and having upper and lower walls provided with grooves, an extension slide member having upper and lower walls which are provided with anti-friction means which move in said grooves, said first slide having a roller turnably connected thereto, and a drawer track member having grooves whose walls are located between and contact with said anti-friction means, the drawer being connected to said drawer track member, said fixed track means and said drawer track member having vertical flanges both of which contact with said roller, so that said roller is turned when the drawer is pulled out of the casing, and the turning of the roller actuates the extension slide member, the fixed track means being connected to said casing by pin and sleeve connections.

NATHAN A. GUSSACK.