May 12, 1959 R. F. ANDERSON 2,885,724

CABINET HINGE

Filed June 7, 1954

Fig. 1.

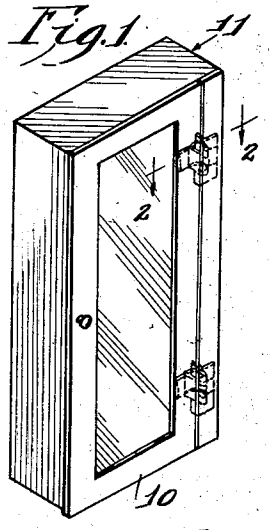


Fig. 2.

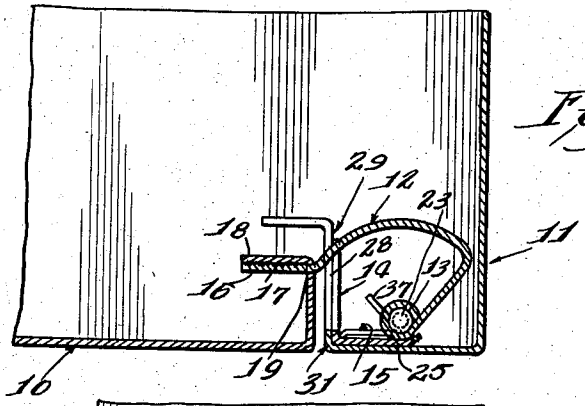


Fig. 4.

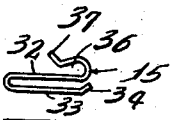


Fig. 5.



Fig. 3.

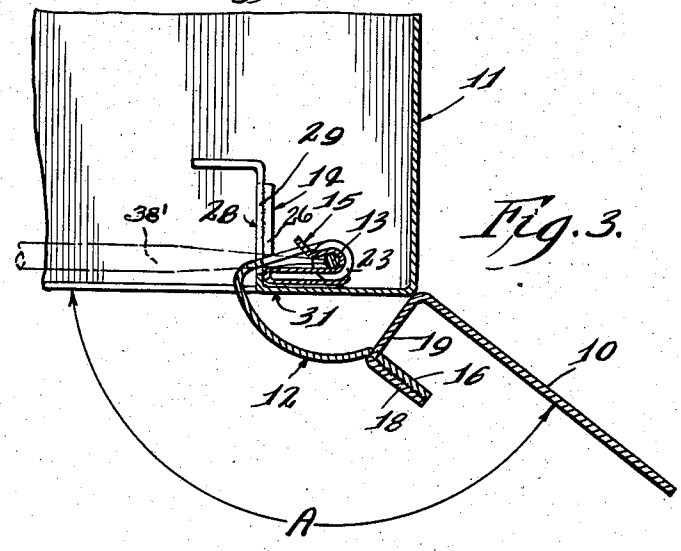


Fig. 6.

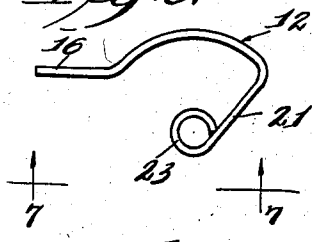


Fig. 8.

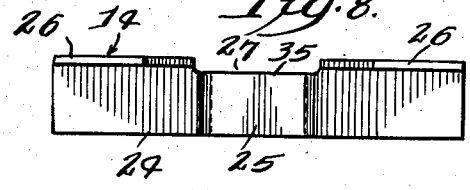


Fig. 7.

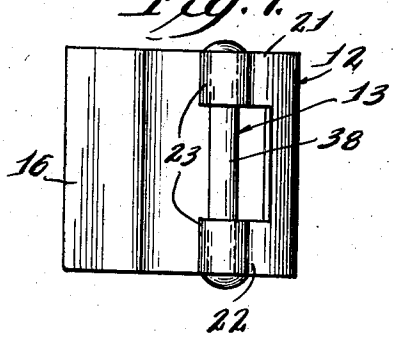
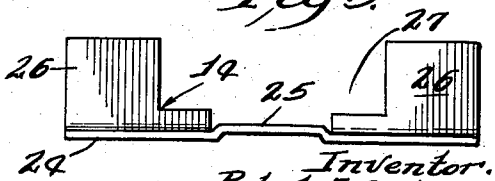


Fig. 9.



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United States Patent Office 2,885,724
Patented May 12, 1959

2,885,724

CABINET HINGE

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Application June 7, 1954, Serial No. 435,025

4 Claims. (Cl. 16—172)

The present invention relates generally to a hinge construction and more particularly to a novel hinge assembly primarily adapted for pivotally mounting a metal door or closure on a sheet metal cabinet and the like.

An important object of the present invention is the provision of a novel snap-on hinge adapted to be mounted in a metal cabinet in such manner that the body of the cabinet and the door or closure therefor may be completely finished as separate units, after which the hinge wing on the door or closure may be snapped into position to complete assembly of the door or closure in the body of the cabinet.

The present invention further comprehends a novel snap-on hinge which greatly facilitates assembly or disassembly of the door or closure and whereby the hinged connection may be disengaged by simply inserting the end of a screw driver or other instrument into the cabinet hinge wing and spreading the adjacent end of the spring clip to permit removal of the door hinge wing and its pintle or hinge pin together with the door or closure.

Another object of the present invention is to provide a novel hinge assembly concealed when the door is closed, and comprising a hinge wing affixed to the cabinet, a hinge wing affixed to the door or closure, and a novel spring clip for connecting the wings in assembled relation but permitting ready removal of the door or closure when required or desired.

By reason of the present novel hinge construction whereby the door or closure may be easily and readily removed from its hinged position in the body of the cabinet, any refinishing of the assembled door or closure which may be required and which frequently occurs in the metal industry may be most effectively accomplished.

Another and important object of the present invention is the provision of a novel snap-on hinge in the form of a spring clip adapted to pivotally connect a door wing carried by the door or closure and a cabinet wing carried by the body of the cabinet, and permitting disconnection of these wings should the door or closure require removal for any reason.

Further objects are to provide a construction of maximum simplicity, efficiency, economy and ease of assembly and operation, and such further objects, advantages and capabilities as will later more fully appear and are inherently possessed thereby.

In the drawing:

Figure 1 is a view in perspective of one form of cabinet to which the novel hinge has been applied.

Fig. 2 is a fragmentary, enlarged view in horizontal cross section taken in a plane represented by the line 2—2 of Fig. 1 and viewed in the direction of the arrows.

Fig. 3 is a view similar to Fig. 2, except that the section is through the spring clip and the door or closure is shown in fully open position.

Fig. 4 is a view in end elevation of the novel spring clip.

Fig. 5 is a view in side elevation of the spring clip.

Fig. 6 is a view in end elevation of the door wing.

Fig. 7 is a view in side or front elevation of the door wing with the headed pin assembled therein, the view being taken in the direction of the arrows on the line 7—7.

Fig. 8 is a plan view of the cabinet wing.

Fig. 9 is a view in side elevation of the cabinet wing.

Referring more particularly to the disclosure in the drawing and to the novel embodiment of a snap-on hinge therein selected to illustrate the present invention, there is disclosed a novel snap-on metal hinge assembly for hingedly or pivotally mounting a metal door or closure 10 upon a metal cabinet body 11 comprising a door wing 12 affixed to the door or closure and provided with a headed pin 13, a cabinet wing 14 and a spring clip 15.

The door wing 12 is provided at one end with a flange 16 which is preferably spot welded at 17 or otherwise rigidly affixed to an inturned flange or lip 18 on the door or closure 10. This flange 16 is shown in Figs. 2 and 3 as projecting through a slot in the edge 19 of the door or closure 10, and so contoured as to provide a complementary abutting surface with the inturned flange or lip 18, and when spot welded or affixed thereto provides a rigid assembly. The door wing 12 is provided at its other end with spaced legs or bifurcations 21 and 22 each bent or rolled back at 23 to conformably receive and anchor in its opening an end of the headed pivot pin or pintle 13, and is curved or contoured intermediate its flanged end 16 and these spaced bifurcations or legs 21, 22.

The cabinet wing 14 is provided with a base 24 having an elevated central portion 25, and spaced inwardly projecting flanges 26 extending at substantially a right angle to the base 24, the wing 14 having an intermediate cut-out or notch 27 aligned with a cut-out or notch 28 in an inturned flange 29 of the cabinet body 11, permitting rotation of the door wing 12 into the aligned cut-outs when the door or closure 10 is partially or fully opened (Fig. 3). By this construction and arrangement, the door or closure may be opened through an arc A of substantially 150°. The cabinet wing 14 is secured to the body 11 of the cabinet in the manner shown in Figs. 2 and 3, in which the base 24 and the spaced flanges 26 seat within and conform to the interior walls at the corner 31 of the cabinet body 11 with the flanges 26 preferably spot welded or otherwise affixed to the inturned flange 29 of the cabinet body.

The spring clip 15 is preferably formed of sheet spring metal and so contoured that the separate door wing 12 and cabinet wing 14 may be quickly and positively joined by a snap-on hinge connection. To anchor this spring clip onto the cabinet wing 12, the clip is provided with spaced resilient arms or projections 32 and 33 so spaced apart and of such length as to tensionally receive therebetween the edge 35 and the elevated or raised central portion 25 of the cabinet wing 14, and with the free end 34 of the arm or projection 33 being bent inwardly to engage over the opposite edge of the raised portion 25 and anchor the spring clip 15 to the cabinet wing 14. The other end of the spring clip provides a recess at 36 to conformably receive in the recess between this end and the arm or projection 32 the intermediate, exposed portion of the pivot pin or pintle 13, with the free end of the clip provided with an outwardly bent lip 37.

By reason of this novel snap-on hinge construction and its novel manner of assembly, the body 11 of the metal cabinet can be completely processed through the finishing department separately from the door or closure 10, and at a subsequent assembly line the door or closure

can be inserted and its hinge wing **12** snapped into position to complete the assembly. With the spring clip **15** forming the hinge or connecting element being mounted upon the elevated or raised central portion **25** of the base **24** of the cabinet wing **14**, and with the flange **16** of the door wing **12** spot welded or rigidly affixed to the flange **18** on the door or closure, in the assembly of the door or closure **10** each pivot pin or pintle **13** may be readily aligned with its spring clip **15** and with the intermediate, exposed portion of each pin or pintle **13** at **38** being guided into the recess **36** by the outwardly bent lip **37** of the spring clip when a lateral force is applied to the pin or pintle **13**.

To disengage the hinge elements, all that is required is the insertion of a screw driver or the like **38'** (shown in dotted outline in Fig. 3) into the cabinet wing **14** and manipulating the screw driver to spread the outwardly bent lip **37** of the spring clip **15** sufficiently to permit the pin or pintle **13** to be lifted out of or disengaged from the recess **36** in the clip, whereupon the door or closure **10** of the cabinet may be disengaged for refinishing, repair or replacement. The hinge wings **12** and **14** may be formed of any relatively thin or sheet metal suitable for the purpose.

Having thus disclosed the invention, I claim:

1. A snap-on hinge assembly for pivotally mounting a door in the body of a cabinet, comprising a hinge wing secured at one end to the door and its other end provided with spaced bifurcations each rolled back along its edge to receive an end of a pin, a hinge pin having its opposite ends received and retained in said rolled back portions with the intermediate portion of said hinge pin providing a pivotal connection, a hinge wing secured to the body of the cabinet and provided with a base and inwardly projecting flanges spaced apart to receive therebetween and permit swinging movement of the intermediate portion of the door hinge wing, and a spring clip anchored to the base of the hinge wing on the body of the cabinet and provided with a part having a recess for receiving and tensionally retaining the intermediate portion of the hinge pin and providing a pivotal mounting for the hinge pin and its hinge wing in the cabinet.

2. A snap-on cabinet hinge for pivotally mounting a door in the body of a cabinet, comprising a metal hinge wing secured to the interior of the body of the cabinet and provided with a base having a raised portion and inwardly projecting spaced flanges, a metal hinge wing secured at one end to the interior of the door and at its other end provided with a pintle, and a spring clip having on one end thereof spaced resilient arms gripping therebetween said raised portion of the base and thereby anchored onto the hinge wing for the cabinet body and its other end adapted to receive and pivotally mount the pintle carried by the hinge wing for the door whereby to connect said hinge wings and permit pivotal movement of the door with the hinge wing of the door received between the spaced flanges when the door is opened.

3. A snap-on hinge assembly for pivotally mounting a door in the body of a cabinet, comprising a hinge wing secured at one end to the door and its other end provided with spaced rolled back portions, a hinge pin having its ends anchored in said rolled back portions, a hinge wing secured to the body of the cabinet, and a separate spring clip having spaced resilient arms anchored to the hinge wing on the body of the cabinet and provided with a part having a recess for receiving and tensionally retaining the portion of the hinge pin between said rolled back portions and providing a pivotal mounting for the hinge pin and its hinge wing in the cabinet, said spring clip permitting ready release of the hinge pin from its recessed part for removal of the door.

4. A snap-on hinge assembly for pivotally mounting a door in the body of a cabinet, comprising a hinge wing secured at one end to the door and its other end provided with spaced arms, a hinge pin anchored at its opposite ends in said arms, a hinge wing mounted in the body of the cabinet, and a spring clip having spaced arms gripping therebetween a part on the hinge wing in the body of the cabinet and having a recessed spreadable part for receiving and retaining the portion of the hinge pin between the arms on the hinge wing of the door when the hinge is assembled and a lip on said part of the clip adapted to guide the hinge pin into the recess of the clip to facilitate assembly, release of the hinge pin from said recess being effected upon insertion of a screw driver or similar tool and spreading the recessed part.

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