Dec. 16, 1930. W. N. VANCE 1,785,506

HINGE

Filed Jan. 20, 1928

Fig. 1

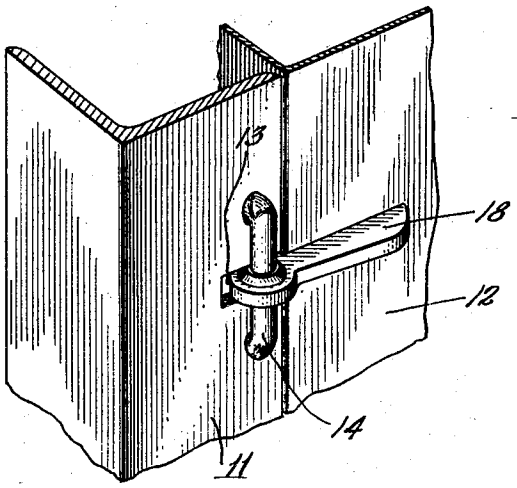


Fig. 3

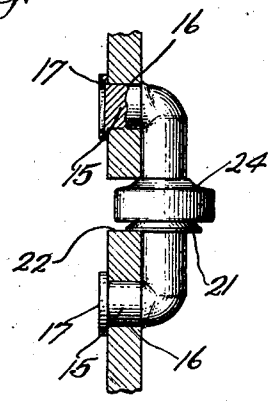


Fig. 4

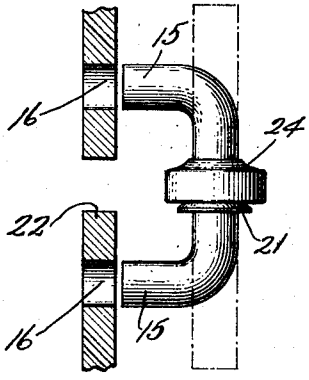


Fig. 5

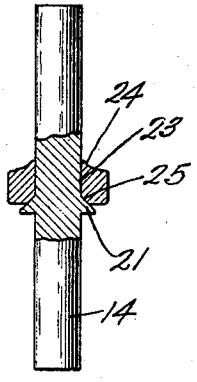
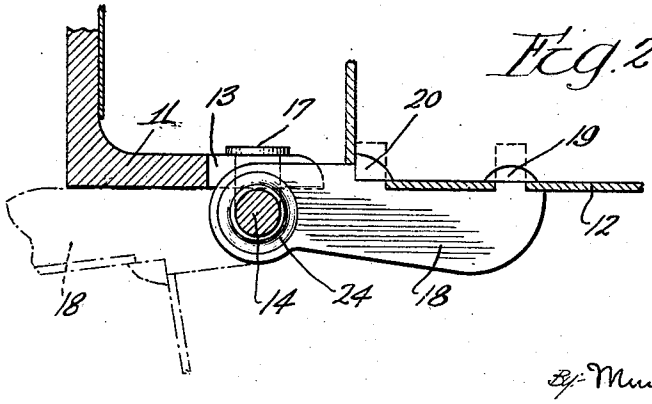


Fig. 2



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Patented Dec. 16, 1930 1,785,506

UNITED STATES PATENT OFFICE

WALTER N. VANCE, OF CHICAGO HEIGHTS, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO LYON METAL PRODUCTS, INCORPORATED, OF AURORA, ILLINOIS, A CORPORATION OF ILLINOIS

HINGE

Application filed January 20, 1928. Serial No. 248,110.

This invention relates to hinges and has more particular reference to hinges made of metal stampings, and particularly adapted for employment in the connecting of metal doors to metal uprights, as in lockers and the like.

My invention has for its principal object the provision of a hinge for lockers and the like permitting of economical manufacture through the employment of a minimum number of parts.

The invention has for a further important object the provision of a hinge which, after assembly, and through continued use, will not result in the presentation of surfaces to the eye from which the paint or finish has been worn or scratched from the opening of the door thus supported in place. My invention has more particular reference to the improvement in a type of hinge wherein a staple is provided across the slot formed in the door frame or upright in such manner and fashion that the swinging member of the hinge enters into and is supported by the material of the upright at the slot.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawing:

Figure 1 is a perspective view of a hinge embodying my present invention showing the same in position in a sheet metal locker, the parts of which are merely shown schematically for the purpose of illustration;

Fig. 2 is a transverse, horizontal sectional view through the same taken just above the door supporting arm;

Fig. 3 is a vertical, transverse section taken alongside of the hinge;

Fig. 4 is a similar view showing the arrangement of the parts before final assembly; and

Fig. 5 is a view showing the hinge in process of construction.

For the purpose of illustrating my invention, I have shown in Fig. 1 of the drawing a portion of the door frame, indicated at 11, and a portion of a door indicated at 12. The door frame in the present instance is of relatively heavy or rigid angle iron construction and is provided with a rectangular slot 13 extending in from its edge at the hinge location. The hinge pintle is in the form of a staple 14, its ends 15 being at right angles to its body and arranged through openings 16 punched in the angle iron frame 11. These ends, after passing through the openings 16, are riveted over at 17 to secure the pintle in place.

The swinging member of the hinge consists of an arm 18 riveted through the door at 19 and 20 and embracing the central portion of the pintle.

The pintle is formed in accordance with my present invention with an offset 21 intermediate its ends, which offset (as indicated in Fig. 3) rests upon the lower slot face 22. The offset or projection 21 is effected by upsetting the rod stock forming the pintle, and its upper face is preferably conical, as shown in Figs. 3 to 5. The arm is punched to provide an opening through it at 23 to rotatably embrace the pintle member. In the punching it is desirable that the upper face of the arm about the opening 23 be of conical form, as at 24, and that a companion inwardly extending formation be provided at 23 upon the lower face.

The hinge is manufactured by first making and assembling the parts as shown in Fig. 5; then bending the ends of the rod stock, as shown in Fig. 4, and then inserting them through the openings 16 in the door frame, the protuberance 21 resting upon or engaging the slot face 22 as already described.

The angle iron upright, as will be manifest, provides a door support through the engagement of the protuberance 21 with the slot face 22 and the engagement of this protuberance with the arm itself. No washer is necessary to support the arm 18 in freely rotatable position above the slot face 22, and it will also be apparent that the contacting parts which rub together in the opening and closing of the door are hidden from view, so that any wear of the finish will be hidden from observation.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention, or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

A hinge construction comprising a U-shaped member having a vertical stem and bent over legs, an integral enlarged conical portion having tapered flaring walls formed on the stem, an arm cooperating with the stem and having an enlargement thereon, said enlargement being provided with a bore, the walls of said bore being tapered, the tapering walls of the bore in the enlargement on the arm engaging and bearing on the walls of the enlarged conical portion of the stem to form a support for the arm, means for fastening the arm to a door, and means for fastening the legs of the U-shaped member to a jamb.

WALTER N. VANCE.