April 28, 1925. 1,535,668

T. A. JOSTEDT

HINGE

Filed April 4, 1924

Fig. 1.

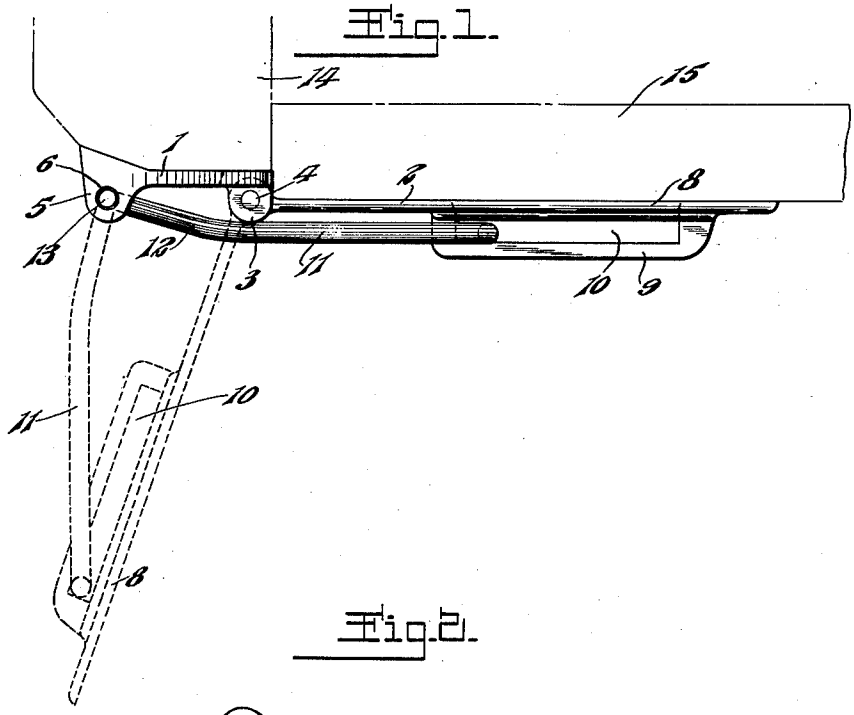



Fig. 2.

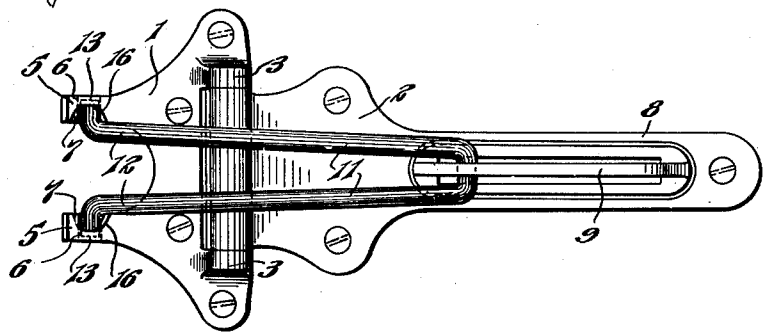
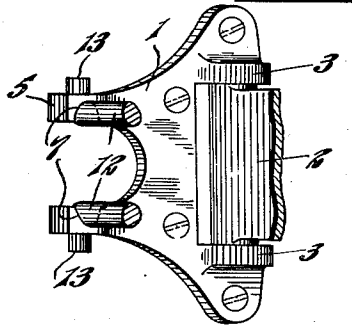



Fig. 3.




Inventor:
THEODORE A. JOSTEDT.
By John W. Bruninga
Attorney.

Patented Apr. 28, 1925. 1,535,668

# UNITED STATES PATENT OFFICE.

THEODORE A. JOSTEDT, OF ST. LOUIS, MISSOURI, ASSIGNOR TO HARRY L. HUSSMANN REFRIGERATOR & SUPPLY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

## HINGE.

Application filed April 4, 1924. Serial No. 704,139.

*To all whom it may concern:*

Be it known that I, THEODORE A. JOSTEDT, a citizen of the United States, and residing at St. Louis, State of Missouri, have invented the new and useful Improvement in Hinges, of which the following is a specification.

This invention relates to hinges, and more particularly to door hinges such as may be used for instance on refrigerator doors and the like.

One of the objects of this invention is to provide a hinge which, while performing all the functions of an ordinary hinge, will also act as a stop to limit the movement of the door so as to position the same when open.

Another object is to provide such a hinge which will be capable of limiting the movement of the door in both directions.

Further objects will appear from the detail description taken in connection with the accompanying drawing, in which:

Figure 1 represents a top view of a hinge embodying this invention and showing its application to a refrigerator door;

Figure 2 is a front view of the hinge; and

Figure 3 is a fragmentary view in perspective showing more clearly the connection of the stop to the hinge butt.

Referring to the accompanying drawing, the hinge illustrated comprises a butt 1 and a strap 2 joined at the knuckle 3 by a hinge-pin 4. These parts may be of any ordinary well known construction such as is well understood in the art.

The butt 1 is provided with a pair of up-standing ears 5 spaced one opposite the other in a vertical direction and provided with vertically alined perforations 6. The ears 5 may be placed at the end of the butt 1 opposite the knuckle 3 so as to be spaced from said knuckle. The ears 5 also are provided with notches 7 for a purpose which will be explained presently. The strap 2 is provided with an extended shank 8 upon which is mounted a rib or rail 9 up-standing from the shank so as to provide a slot 10 between the rail and the shank, the slot extending along the shank. A U-shaped link 11 has its closed end engaged under the rail 9 so as to be slidable in and along the slot 10. At the open end of the U-shaped link the legs 12 thereof are provided with outturned ends 13 adapted for insertion into the perforations 6 so as to provide a pivotal connection between the link 11 and the butt 1. The legs 12 are normally spaced from one another a distance somewhat greater than that between the ears 5 so that in order to engage the ends 13 in the perforations 6 the legs must be sprung together. When thus sprung into the ears 5, the ends of the legs 12 fit into the notches 7 and are pressed into said notches with a yielding pressure due to the resilience of the legs. Thus a yielding pivotal connection is provided between the link 11 and the butt 1. At the same time a variable or sliding connection is provided between the closed end of the link and the strap 2 by means of the rail 9.

The hinge may be applied as illustrated in Figure 1. The butt 1 is fixed to the door frame 14 and the strap 2 to the door 15. When the door is opened the hinge may be swung to the position shown in dotted lines in Figure 1. In moving to this position from the closed position the link 11 slides in the slot 10 until the end of the link comes into engagement with the end of the slot, after which no further movement of the door is possible. The link 11 thus provides a stop adapted to limit the swing of the door in that direction. When the hinge is in this position, the ends of the legs 12 are pressed into the notches 7 as illustrated in Figure 3. As the door is swung from the position shown in dotted lines in Figure 1 in a direction to close the same, the link or stop 11 will pivot in the ears 5 until the legs 12 come into engagement with the inner shoulders 16 of the notches 7. These shoulders will then restrain further movement of the door in the closing direction. The shoulders 16 are, however, inclined so as to provide in effect cam surfaces which when the closing pressure on the door is increased, will cause the legs 12 to be sprung together so as to rise on the cams 16 to the position indicated in Figure 2, and allow further movement of the door to closed position.

It will be seen, therefore, that in accordance with this invention a hinge is provided which when the door is opened will keep the same open, limiting its movement in two directions, so that it will be prevented either from opening too far so as to strike an adjacent wall for instance, or from closing prematurely. The butt of the door is confined between two definitely established

limiting positions, one as shown in dotted lines in Figure 1 in which the stop 11 has moved to the end of the slot 10, and the other as indicated in Figure 3 where the legs 12 will come into engagement with the shoulders 16. The sprung or yielding pivotal mounting of the stop 11 in the ears 5 provides that the door may be closed from this latter position by simply increasing the closing effort so as to overcome the resilience of the stop 11.

It is obvious that various changes may be made in details of construction without departing from the spirit of this invention; it is, therefore, to be understood that this invention is not to be limited to the specific details shown and described.

Having thus described the invention, what is claimed is:

1. A door hinge, comprising, a butt, a strap connected thereto by a hinge pin, and a stop yieldingly pivoted to said butt and connecting said butt and said strap adapted to limit the movement of the door in two directions.

2. A door hinge, comprising, a butt, a strap connected thereto by a hinge pin, and a stop having a yielding pivoted connection with one of said members and connected to the other member, adapted to yieldingly limit the closing movement of the door.

3. A door hinge, comprising, a butt, a strap connected thereto by a hinge pin, and a stop having a yielding pivoted connection with one of said members and connected to the other member, adapted to limit the opening movement and to yieldingly limit the closing movement of the door.

4. A door hinge, comprising, a butt, a strap connected thereto by a hinge pin, and a stop having a sprung pivotal connection with one of said members and connected to the other member, adapted to limit the closing movement of the door.

5. A door hinge, comprising, a butt, a strap connected thereto by a hinge pin, and a stop having a sprung pivotal connection with one of said members and a sliding connection with the other member, adapted to limit the closing movement of the door.

6. A door hinge, comprising, a butt, a strap connected thereto by a hinge pin, a stop having a sprung pivotal connection with one of said members and a sliding connection with the other member, and a cam cooperating with said pivotal connection to yieldingly limit the closing movement of the door.

7. A door hinge, comprising, a butt, a strap connected thereto by a hinge pin, and a stop having a sprung pivotal connection with one of said members and a sliding connection with the other member, said butt having a notch adapted to receive said stop in sprung engagement to limit the closing movement of the door.

In testimony whereof I affix my signature this 18th day of March, 1924.

THEODORE A. JOSTEDT.