Oct. 18, 1927. 1,645,977

A. E. TITUS

DOOR HINGE

Filed Oct. 20, 1925

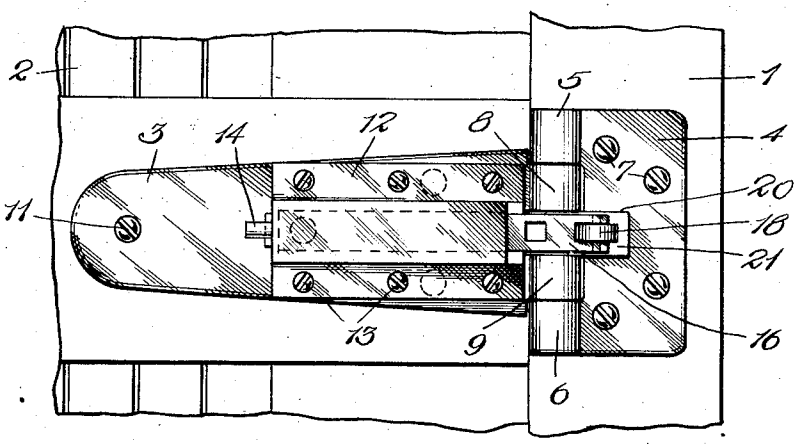


Fig. 1.

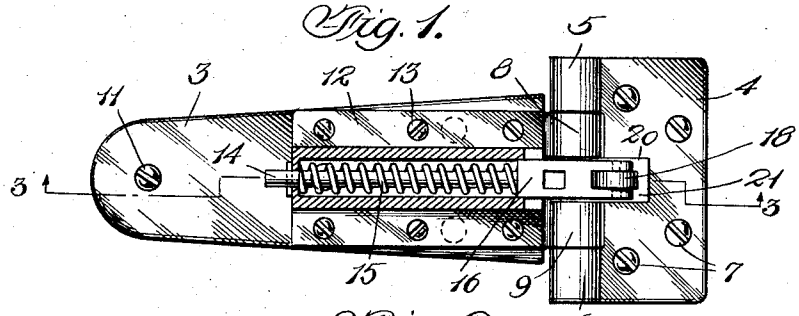


Fig. 2.

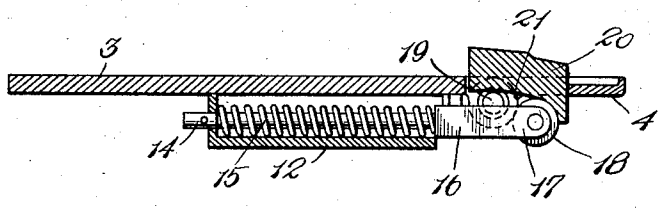


Fig. 3.

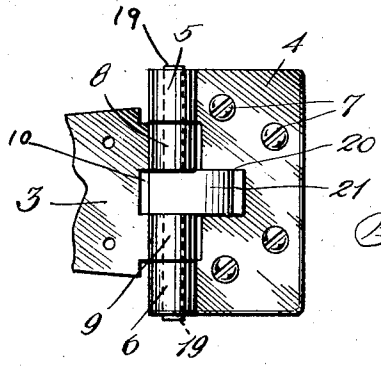


Fig. 4.

Inventor

Alfred E. Titus

By Edwin S. Clarkson

Attorney

Patented Oct. 18, 1927. 1,645,977

UNITED STATES PATENT OFFICE.

ALFRED E. TITUS, OF TRENTON, NEW JERSEY.

DOOR HINGE.

Application filed October 20, 1925. Serial No. 63,731.

The primary object of my invention is to provide a spring hinge for refrigerators, of such construction as will permit of its being manufactured at extremely low cost and at the same time being a very efficient hinge; with this and other objects in view, my invention consists of the parts and combination of parts as will be hereinafter more fully set forth.

In the drawings:

Figure 1 is a front elevation of portions of a door, and a refrigerator body, with my improved hinge in position.

Figure 2 is a front elevation of my improved hinge, parts being in section.

Figure 3 is a sectional view on the line 3—3, Figure 2.

Figure 4 is a front elevation of the two hinge leaves detached.

Reference numeral (1) designates a refrigerator body and (2) the door of the same, of suitable construction.

My improved hinge comprises two leaves, (3) and (4). The leaf (4) is provided at its top and bottom with pintle receiving members (5) and (6) and with suitable openings to receive the screws. The leaf (3) is provided with pintle receiving members (8) and (9) which are spaced apart, leaving a space (10) between them which will be hereinafter referred to, this leaf (3) being provided with suitable openings for the screws (11). A suitable housing (12) is mounted on the leaf (3) and secured thereto by means of screws (13) but it will be understood that this housing will be cast integrally with the hinge leaf (3). The housing is opened at one end and has a perforation at the other end through which the end of a plunger (14) may slide, said plunger being mounted in the housing. A coil spring (15) is secured around the plunger (14) within the housing, one end of the spring being seated on the end wall of the housing, while the other end of the spring is seated on the head (16) of the plunger. This head (16) has a forked end (17) in which is loosely journaled a roller (18). A head (16), when the leaves are assembled, projects through and moves in the space (10) between the pintle receiving members (8) and (9) of the hinge leaf (3). It will be understood that there is a pintle pin (19) mounted in the pintle receiving members (5) and (8) and also a pintle pin mounted in the pintle members (6) and (9) and that these pintle pins do not extend across the space (10), thereby leaving the space (10) in the hinge joint free for the reciprocation of the head (16) in said space.

The leaf (4) is provided with a cam member (20), having the cam surface (21) of suitable contour on which cam surface the roller (18) of the head and plunger is adapted to ride.

As the door (2) is opened, the roller (18) moves downwardly on the cam surface (21) toward the juncture of the door and refrigerator body, thereby pushing the plunger (14) rearwardly in the housing and placing the spring (15) under compression, the construction being such that the door is free to be opened to its fullest extent. As soon as the door is released, the spring (15) exerts its influence to close the door, the roller (18) riding up on the cam surface (21) to the position shown in Figure 3 and holding the door tightly in its closed position.

I am aware that changes may be made in the details of construction within the spirit of my invention and the scope of the appended claim.

What I claim is:

A door hinge comprising two leaves, the first having pintle receiving members at the top and bottom edges thereof, the second of said leaves having pintle receiving members spaced from each other and adapted to abut the pintle members of the other hinge leaf, a housing on the second of said leaves, a cam on one, the first mentioned leaf projecting from the first of said leaves between the pintle receiving members of the second of said leaves, a spring impelled bar mounted in said housing and projecting transversely of the hinge joint between the pintle members of second named leaf and engaging the cam on the first named leaf.

In testimony whereof I affix my signature.

ALFRED E. TITUS.