(No Model.)

H. H. GRIDLEY.

HINGE.

No. 513,042. Patented Jan. 16. 1894.

Fig. 1

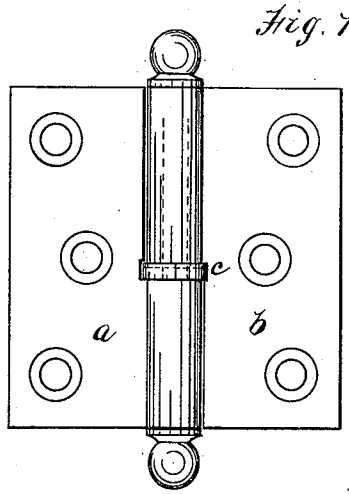


Fig. 2

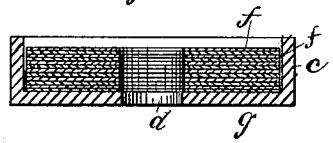


Fig. 3.

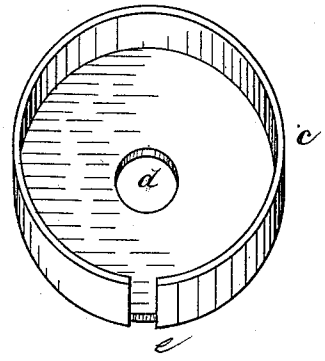
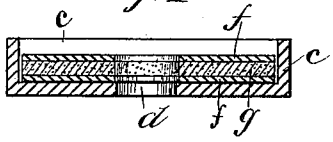


Fig. 4



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HINGE.

SPECIFICATION forming part of Letters Patent No. 513,042, dated January 16, 1894.

Application filed December 19, 1891. Serial No. 415,633. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. GRIDLEY, a citizen of the United States of America, residing in Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Hinges and Adjusting Devices for the Same, of which the following is a specification, reference being had to the accompanying drawings and letters of reference marked thereon.

My invention relates to devices by the employment of which the door may be varied relative to its first position, as ordinarily hung.

My invention also relates to a means for providing a lubricant for the hinge joint and I accomplish the objects of my invention by the construction herein shown.

In the accompanying drawings in which like letters of reference indicate like parts, Figure 1 is a side view of a hinge showing my device applied thereon. Fig. 2 is a side view in section on an enlarged scale showing the cup shaped washer and removable disks or rings therein. Fig. 3 is a perspective view of the cup shaped washer on an enlarged scale, and Fig. 4 is a section showing arrangement of lubricant holding washer.

In detail *a* and *b* indicate the two hinge sections.

c indicates the cup shaped washer. *d* indicates an opening therein for the passage of the hinge spindle.

e indicates an opening in the side of the cup shaped body.

f indicates metallic washers and *g* indicates a washer of felt or similar soft material.

The construction and operation of my device will be readily understood on reference to the drawings.

A cup shaped washer *c* is provided having a central opening for the passage of the hinge spindle, and being made of sufficient size to pass snugly over either one of the rounded joint portions of the hinge. An opening *e* being formed in the side wall of the cup shaped washer to permit it to pass by the edge of the leaf of the hinge next adjacent to the joint, I provide two or more washers or rings *f* which rings or washers are fitted within the cup shaped washer and are provided with openings for the passage of the hinge spindle through them. If now the door be hung when the cup shaped washer is about half filled with the disks or washers *f*, and the door or casing shall sag or be distorted in any way, if no means were provided for varying the relative height or position of the door with reference to the casing, it would be necessary to either reset the hinges or cut off a portion of the door or frame. To avoid this with the employment of my device, it simply requires that the door be lifted disconnecting the hinge joints and if it require raising then other disks are inserted in the cup shaped washer and the door replaced, thus raising the same a distance equal to the thickness of the washer added, and if it be required to lower the door then some of the washers already in the cup shaped washer are removed, thus providing a ready and convenient method of changing the position of the door and avoiding the difficulty heretofore experienced.

Within the cup shaped washer I find it, in some cases, advisable to insert a washer made of felt or other similar material and saturate the same with oil or other suitable lubricant, and in this manner the bearing surface may be permanently maintained in a lubricated condition, thus avoiding the disagreeable squeaking or grinding noise frequently found when the hinge joints become dry. By the employment of the cup shaped exterior washer the hinge will always present the same exterior appearance, and it is immaterial whether the inner washers be of uniform thickness or of the same diameter or not as they are hidden from view by the wall of the cup shaped washer.

Having, therefore, described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a vertically adjustable hinge, the combination of a cup-shaped washer for insertion between the hinge sections and a plurality of disks contained within the cup-shaped washer and readily removable therefrom, said washer and disks being all capable of a rotation independently of each other and of the hinge sections, said disks being sufficiently thin that a considerable number of them can be

concealed within the cup-shaped washer, whereby the relative positions of the hinge sections may be nicely adjusted by means of the number of such disks so inserted, substantially as described.

2. In a hinge, a washer for insertion between the hinge sections, said washer being cup-shaped to hold a liquid lubricant, and having therein a plurality of auxiliary washers, the upper and lower of which are metallic, and the intermediate are fibrous or porous, and adapted to be saturated with the liquid lubricant, said auxiliary washers being concealed by the sides of the cup-shaped washer, substantially as described.

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