

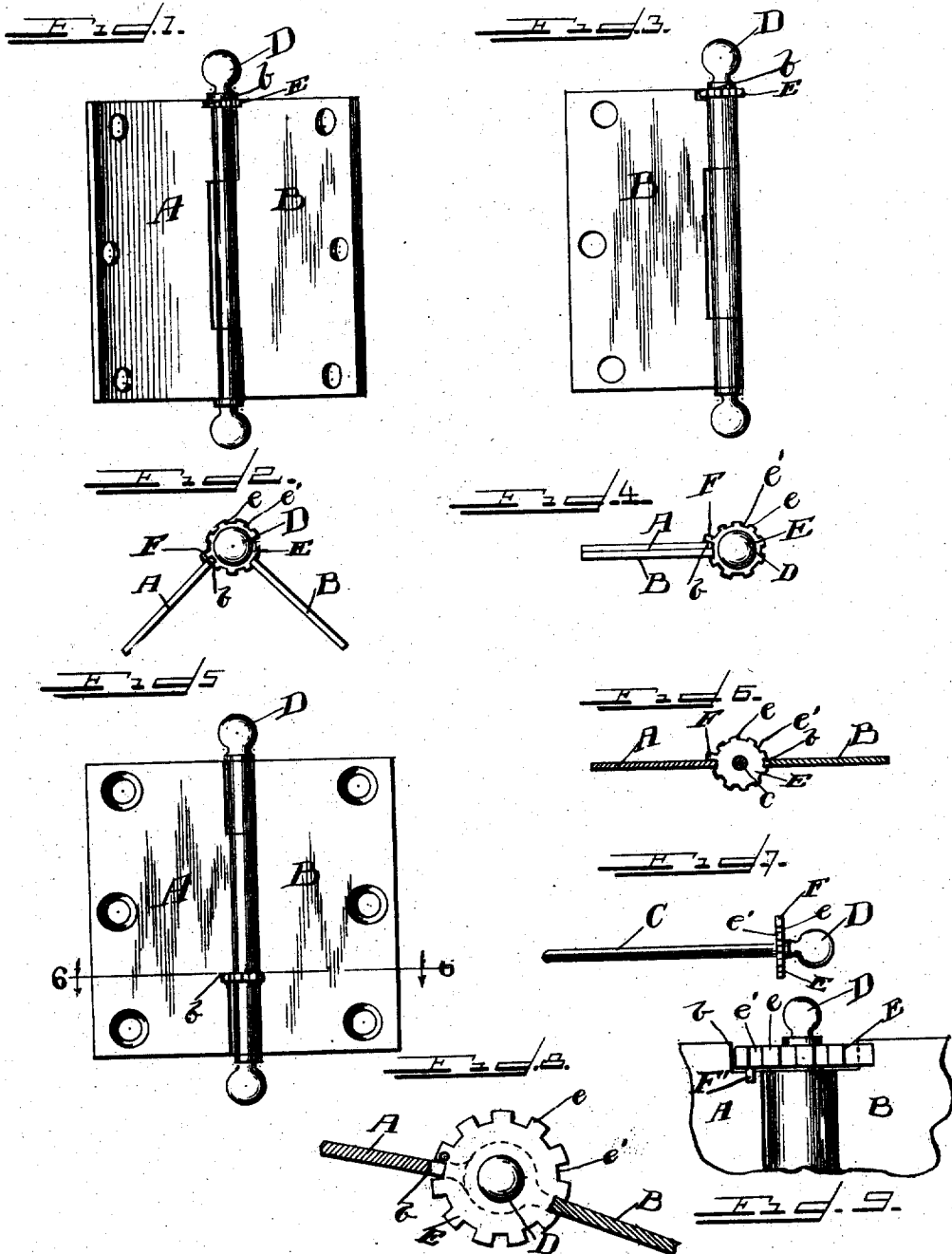
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W. KOESTER.
HINGE.

(Application filed Aug. 5, 1901.)

(No Model.)



WITNESSES

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HINGE.

SPECIFICATION forming part of Letters Patent No. 689,201, dated December 17, 1901.

Application filed August 5, 1901. Serial No. 70,919. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KOESTER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hinges, of which the following is a specification.

My invention relates to that class of hinges in which the leaves are pivoted upon a removable bolt or pintle.

The object of my invention is to provide such a hinge with means whereby the movement of the hinge may be limited at will, so that the hinge may either be set so as not to open at all or may be set so as to open within a limited degree or may be set so that it can be only partially closed. This and such other objects as may hereinafter appear are attained by the devices illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of a hinge fitted with the preferred form of my device. Fig. 2 is a plan view of the same looking from above. Fig. 3 shows the same hinge set in closed position. Fig. 4 is a plan view of the same, showing how the device may be set so as to lock the hinge in closed position. Fig. 5 is a different embodiment of my invention. Fig. 6 is a sectional view on the line 6 6 of Fig. 5 looking in the direction indicated by the arrows. Fig. 7 is a detail of the pintle and locking-disk, and Figs. 8 and 9 are details showing a modified form of the stop F.

Like letters of reference indicate the same parts in the several figures of the drawings.

Referring by letter to the accompanying drawings, A B are the leaves of a butt-hinge, which are pivotally mounted in the usual manner upon a pintle C, which is provided at one end with a knob D.

E is a toothed disk provided with a number of teeth *e* of substantially uniform size, which are formed by notches *e'* in the periphery of the disk.

F is a stop or tooth provided at one point on the disk E and projecting beyond the teeth *e*. This disk is perforated at its center and mounted upon the pintle C.

The leaf A is cut away adjacent to the disk E, so as to form a shoulder *b*, which in the opening and closing of the hinge will clear the teeth *e*, but will abut against the larger

tooth or stop F. The other leaf B is cut away so as to fit within any one of the slots *e'* and be locked between the teeth *e*, forming the walls of such slot.

In the preferred form of my device the disk E is attached to the knob D on the upper end of the pintle C, so that by lifting the knob D the disk may be also lifted and rotated at will and returned to place, so that any desired notch *e'* may engage the leaf B.

If the disk E be set as shown in Fig. 2, the leaves may swing apart from each other within a quarter of a circle. If set as shown in Fig. 4, one leaf will be locked in the first notch *e'* adjacent to the stop F and the other leaf will be locked between the first leaf and the stop F, thereby securely preventing the leaves of the hinge from being opened at all.

Although in my preferred construction I attach the disk E to the pintle C, and preferably at the upper end thereof, the device will be entirely operative if the disk is only loosely mounted upon the pintle, and it is entirely practical to mount the disk upon the pintle at any point in its length so long as the leaves of the hinge are suitably cut away to receive it. For instance, as shown in Figs. 5 and 6, the disk C is mounted at a lower point upon the pintle, the leaves of the hinge being cut away to receive the disk, substantially as in the construction shown in Fig. 1. In order, however, to change the adjustment between the disk and the leaves of the hinge in the modified form of my invention, (shown in Fig. 5,) it is necessary to withdraw the pintle from the hinge sufficiently far to allow of disengagement between the leaves of the hinge and the disk E. The disk is then turned to any desired point and the parts are reassembled as before.

Instead of providing the enlarged tooth or shoulder F as a stop the disk E may be provided with any other suitable form of stop—as, for instance, that shown in Figs. 8 and 9, which consists in a pin projecting downwardly from the under surface of the disk within the path of the leaf A as it is swung upon the pintle; but these and other modifications do not constitute a departure from the spirit of my invention.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. The combination with a loose-pin hinge, of means mounted upon the hinge-pin for normally and positively engaging one leaf of the hinge, and a stop upon said hinge engaging means interposed in the path of the other leaf of said hinge, substantially as described.
2. The combination with a hinge, of adjustable means mounted upon the hinge-pin for normally and positively engaging one leaf of the hinge and also affording an adjustable stop for limiting the movement of the other leaf of said hinge, substantially as described.
3. The combination with a loose-pin hinge, of an adjustable toothed disk mounted upon the hinge-pin and normally in engagement with one leaf of the hinge, and a stop upon said disk for limiting the movement of the other leaf of said hinge, substantially as described.

4. The combination with a loose-pin hinge, of an adjustable toothed disk mounted upon and attached to the pin of said hinge, and normally in engagement with one leaf of said hinge, and a stop upon said disk arranged to limit the movement of the other leaf of said hinge, substantially as described.

5. In a hinge, the combination with a pintle, of an adjustable notched disk, a leaf mounted upon said pintle, and normally engaging a notch upon said disk, a second hinge-leaf mounted upon said pintle and arranged to rotate freely around the notched portions of said disk, and a stop upon said disk for limiting the movement of said second leaf, substantially as described.

WILLIAM KOESTER.

Witnesses:

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