A. M. HOES.

DOOR LATCH.

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964,255.

Patented July 12, 1910.

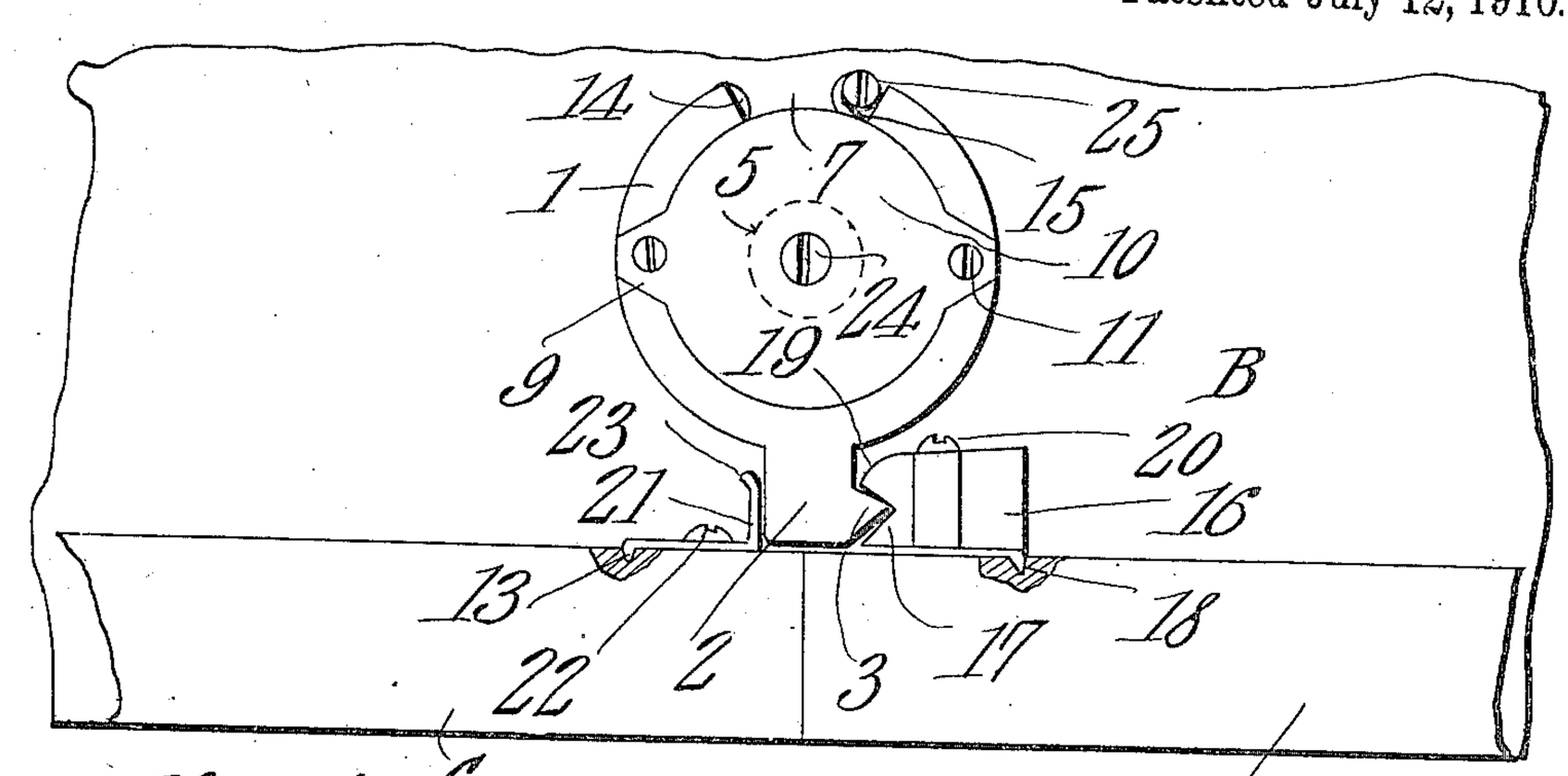

Fig. 1.

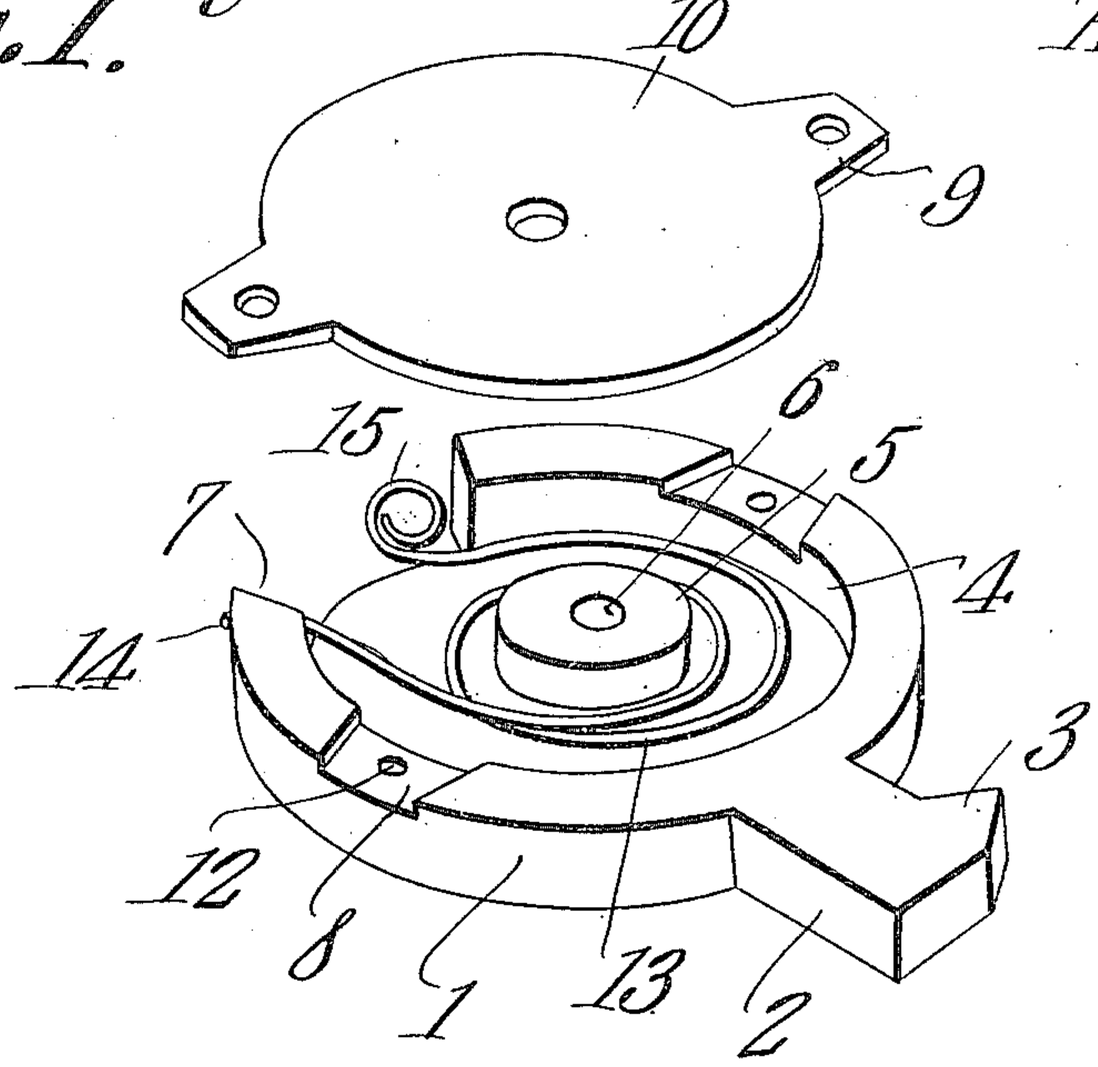

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

ALBERTES M. HOES, OF ST. PAUL, NEBRASKA.

DOOR-LATCH.

964,255. Specification of Letters Patent. Patented July 12, 1910.

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To all whom it may concern:

Be it known that I, ALBERTES M. HOES, a citizen of the United States, residing at St. Paul, in the county of Howard and State of Nebraska, have invented a new and useful Door-Latch, of which the following is a specification.

This invention relates to fasteners for use in connection with the doors of cupboards, book-cases, and other structures where the doors are arranged in pairs, the said fastener being of that type designed to hold one of the doors locked in closed position as long as the other door is closed but which will permit the doors to be readily opened in proper succession.

One of the objects of the invention is to provide a pivotally mounted keeper engaging member which can be readily connected to a supporting structure and which constitutes means for housing a device designed to hold the same normally in a predetermined position.

A further object is to provide a device of this character which is very simple in construction and can be used as either a "right" or "left".

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings, Figure 1 is a bottom plan view of a lock or fastener embodying the present improvements, the adjoining portions of the door being shown in bottom plan and the structure to which the pivot fastener is connected being also shown. Fig. 2 is a perspective view of the pivoted locking member, the top plate being removed therefrom.

Referring to the figures by characters of reference 1 designates a circular metal disk having a tongue 2 extending radially therefrom and provided with a V-shaped nose 3 which extends laterally from its outer end. A circular groove 4 is formed within one face of the disk 1 and is concentric with the center of the disk there being a cylindrical core 5 thus formed in the center of the disk and the said core being provided with a central opening 6. A notch 7 extends into the periphery of the disk at a point diametrically opposed to the tongue 2 and this notch opens into the circular groove 4. Recesses 8 are formed in the grooved face of the disk at diametrically opposed points and are designed to receive ears 9 extending in opposite directions from a cap plate 10. This plate is designed to rest within the groove 4 and upon the core 5 and fastening screws 11 or the like may be extended through the ears and into apertures 12 formed in the bottom faces of the recesses 8.

A spring 13 is coiled loosely about the core 5 and is housed within the groove 4, one end of this spring bearing against one end wall of the notch 7 as shown at 14 while the other end of the spring projects into said notch and is bent to form an eye 15 which is normally located adjacent the other end wall of the notch.

Two kinds of keepers are used in connection with the locking member herein described, one of the keepers being preferably in the form of a block 16 of metal or the like having a V-shaped recess 17 in one end, there being a spur 18 extended from the base of the keeper for engaging the door A while the opposed face of said keeper is preferably beveled or rounded at its recessed end as indicated at 19 for the purpose hereinafter set forth. This keeper 16 is designed to be secured to the door A by means of a screw 20 or the like extending therethrough and into the door the said screw and the spur 18 coöperating to prevent the keeper from rotating about the screw. It is designed to secure the keeper to the inner face of the door A at a point close to its free longitudinal edge and where it can swing under and close to a shelf B or other supporting structure located back of the door. The other door C of the structure has an L-shaped keeper 21 secured to it by means of a screw 22 or the like, there being a spur 23 extending from said keeper and into the door C and coöperating with the screw 22 to prevent the keeper from turning about said screw. The outstanding portion of this keeper is spaced from the recessed end of the keeper 16 a distance slightly greater than the width of the tongue 2 and the free end of the said outstanding portion is preferably inclined or beveled as shown at 23 for the purpose hereinafter set forth. It is of course to be understood that this keeper 21 is also to be arranged to swing under and close to the shelf B.

In using the device herein described the two keepers are fastened to the doors in the manner stated and the fastening member shown in Fig. 2 is then attached to the bottom face of the shelf B by means of a pivot screw 24 extending through the center thereof. The nose 3 on the tongue 2 is placed within the notch 17 of keeper 16 and a screw 25 is then inserted through the eye 15 and into the shelf B, this eye being in its normal position within the notch 7 when thus secured.

With the parts assembled in the manner above described, it will be seen that when the door A is closed, the beveled or rounded face 19 of the keeper 16 will move against the nose 3 and shift the tongue 2 laterally until the recess 7 is brought into the path of the nose. This lateral movement of the tongue will be such as to swing the disk 1 about its pivot 24 and thus place the spring 13 under stress. Obviously, therefore, as soon as recess 17 is brought into position in the path of the nose 3, the spring 13 will operate to return the disk 1 and the tongue 2 to their normal positions and with the nose 3 seated within the recess 17. When it is desired to open the door A it is merely necessary to pull thereon with sufficient pressure to cause the inclined wall of recess 17 to shift the nose 3 laterally out of the recess. Should the door C be closed while the keeper 16 is engaged by the nose 3, the keeper 21 would assume a position at one side of the tongue 2 and thus prevent the said tongue from being shifted laterally. It will be apparent therefore that when the two doors are closed it becomes impossible to open the door A unless the door C is first opened.

It will be noted that the pivoted locking member does not require any housing because the working parts thereof are housed within the member itself. It will also be seen that the said member can be placed with either face against the shelf B and can therefore be used as a "right" or "left".

A device such as herein described is very simple and inexpensive in construction and it can be readily placed in position. By employing the same it becomes unnecessary to utilize hooks or bolts such as have heretofore been used for the purpose of securing one door of a pair. Instead it is merely necessary to swing one door shut and it becomes automatically engaged and held and, by swinging the other door into closed position, the first door is locked. By then securing the two doors together at the outside of the structure it becomes impossible to open either or both of the doors.

Various changes can of course be made in the construction and arrangement of the parts without departing from the spirit or sacrificing any of the advantages of the invention as defined in the appended claims.

What is claimed is:—

1. A latch including a pivoted member, a keeper engaging device extending beyond the edge of said member, elastic means housed within said member for holding the same normally in a predetermined position, and detachable means outside of the said member for engaging said elastic means to hold it partly fixed relative to said pivoted member and to limit the movement of said member.

2. A door fastener including a notched member mounted for partial rotation, means extending therefrom for engaging a keeper, a spring housed within said member and extending into the notch, and means in said notch for securing the extended portion of the spring to a relatively fixed structure and for limiting the movement of said member, said spring constituting means for holding the member normally in a predetermined position.

3. A door fastener including a hollow member mounted for rotation, a radially extending keeper engaging device upon said member, there being a notch within the member, a spring housed within said member, and projecting at its ends into the notch, and means within said notch and engaging one of said projecting ends to fasten it to a relatively fixed supporting structure, said spring constituting means for holding the member normally in a predetermined position.

4. A fastener including a hollow disk, a keeper engaging member extending radially from said disk, a pivot device extending through the center of the disk, there being a notch at the periphery of said disk and opening into the interior thereof, a stop device within the notch and arranged to engage a relatively fixed supporting structure, and a spring housed within the disk and secured at one end to said stop device, said spring constituting means for holding the disk normally in a predetermined position.

5. A fastener consisting of a pivoted hollow disk, a cap detachably secured thereto, and movable therewith, a radially extending keeper device upon the disk, there being a peripheral notch within said disk and opening thereinto, means within said notch for engaging a relatively fixed supporting structure to limit the pivotal movement of the disk, and a spring housed within the disk and secured at one end to said stop device, said spring constituting means for holding the disk normally in a predetermined position.

6. A device of the class described consisting of a disk mounted for rotation, said disk having a recessed face, a closure for said face and movable with the disk, a keeper engaging device extending from the disk, a stop device, said disk having means coöp-

erating with said device for limiting the movement of the disk, and a spring housed within the disk and secured to said stop device, said spring constituting means for holding the disk normally in a predetermined position.

7. A device of the class described including a disk, said disk being mounted for partial rotation, a keeper engaging device extending from and movable with the disk, a detachable stop device outside of said disk, there being means upon the disk and coöperating with the said device for limiting the movement of the disk, and a spring mounted within the disk and secured to said stop device, said spring constituting means for holding the disk normally in a predetermined position.

8. The combination with a supporting structure and doors mounted for swinging movement relative thereto, of a keeper secured to one of said doors and having an angular recess, there being an inclined face upon said keeper and extending toward the recess, a disk pivotally mounted upon the supporting structure and having a tongue extending therefrom, there being a nose upon the tongue and normally seated within the recess in the keeper, a stop device secured to the supporting structure, there being means upon the disk and coöperating with said device for limiting the movement of the disk, a spring housed within the disk and secured to the stop device, said spring constituting means for holding the disk in normal position, and with the nose seated in the recess in the keeper, and an angular keeper secured to the other door and shiftable into the path of the tongue to hold the nose against withdrawal from the recessed keeper when the two doors are closed.

9. A latch including a hollow member, a closure therefor, a keeper engaging device extending from said member, elastic means housed within said member for holding the same normally in a predetermined position, a combined pivot and attaching device insertible through the said member and its closure, and a combined stop and attaching means outside of said member for holding said elastic means, there being means upon the latch member and coöperating with said stop means for limiting the movement of said latch member.

10. A door fastener including a hollow member mounted for rotation, a keeper engaging device thereon, there being stop shoulders upon said member, a spring housed within said member and projecting at its ends between the shoulders, and means between said shoulders and engaging one of said projecting ends to fasten said end to a relatively fixed supporting structure, said spring constituting means for holding the member normally in a predetermined position.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ALBERTES M. HOES.

Witnesses:
W. S. PAUL,
CARRIE COVAY.