

C. S. CILLEY.

CHAIR LOCK.

APPLICATION FILED JULY 1, 1914.

1,155,043.

Patented Sept. 28, 1915.

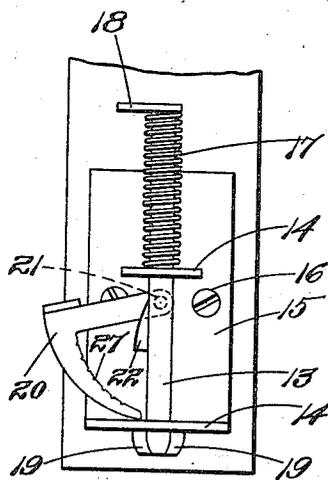
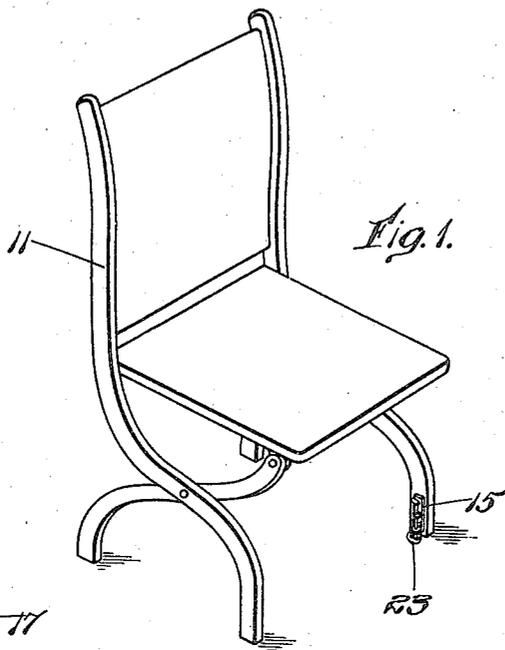


Fig. 2.

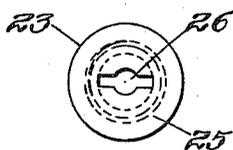


Fig. 3.

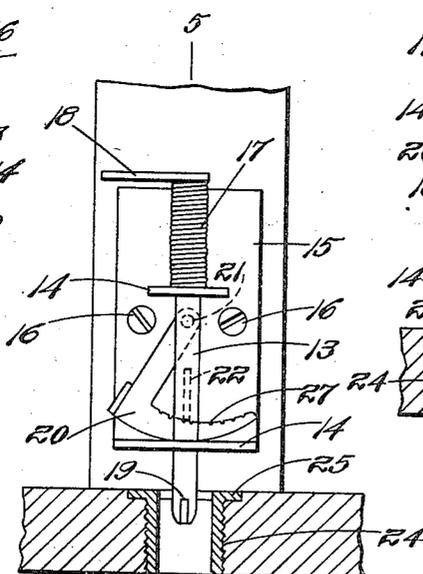


Fig. 4.

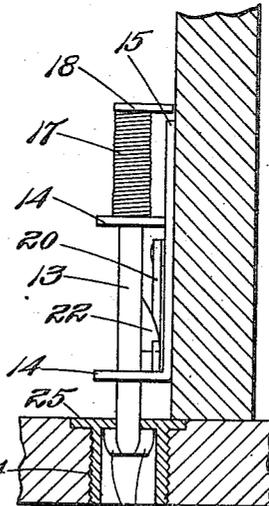


Fig. 5.

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UNITED STATES PATENT OFFICE.

CASSIUS S. CILLEY, OF SALEM, MASSACHUSETTS.

CHAIR-LOCK.

1,155,043.

Specification of Letters Patent.

Patented Sept. 28, 1915.

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To all whom it may concern:

Be it known that I, CASSIUS S. CILLEY, a citizen of the United States, residing at Salem, county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Chair-Locks, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has for its object the production of a new and improved furniture locking device which may be employed to secure chairs or other furniture firmly to the floor.

The device embodying my invention is particularly adapted for use in public halls and auditoriums where sometimes chairs are needed and at other times it is necessary to have the floor clear and smooth.

My device consists essentially in locking mechanism affixed to the chair and a floor plug inserted in the floor flush with the surface thereof so that the room is not injured for dancing or other such uses when the chairs are not in use. The hooked member or locking member of the locking mechanism may be readily inserted in the floor plug or keeper plate and is so arranged that the chair or other piece of furniture to which it is attached may be drawn tightly to the floor and thereby fixed rigidly in position. The locking mechanism is so constructed and arranged that when the locking member is released from the keeper it is automatically lifted above the floor surface and maintained in this position and the chair may be moved about freely without marring the floor.

My device makes it possible to comply with the law requiring that chairs in public halls be fastened down and to do so without a large expense for labor for it is so constructed that the chairs may be quickly and easily locked in place without the use of screws and may be as easily released.

In the drawings, Figure 1 is a view in perspective showing a chair locked to the floor by a device embodying my invention. Fig. 2 is a detail showing the lower end of a leg of the chair provided with my improved locking mechanism. Fig. 3 is a plan view of the floor plug. Fig. 4 is a view par-

tially in section showing a chair leg locked to the floor by my improved device. Fig. 5 is a section on line 5-5 of Fig. 4.

Having reference to the drawings, there is shown at 11, a folding chair of a type commonly employed in halls and auditoriums. The leg of the chair is provided as shown at 12 with my improved locking mechanism which is shown locked to a floor plug or keeper 23 which is inserted in the floor.

The locking member consists of a rod or pin 13 which is loosely mounted in guides 14 carried by a plate 15 which may be of any suitable form, but which is preferably flat for the type of chair shown in Fig. 1. It may be readily secured to the chair leg by screws 16 or in some other suitable manner. The pin 13 is yieldingly mounted on a spring 17 which is interposed between the upper guide 14 and a handle 18 which is preferably secured to the upper end of the pin in order that it may be readily rotated thereby. The lower end of the pin is provided with wings 19 which extend transversely to the axis of the pin and are preferably of the form and shape shown forming what is in effect a double hook on the pin. The plate 15 is provided with a swinging cam or wedge 20 which is pivoted at 21 as shown, the cam surface of said member being adapted to engage a projection 22 rigidly fixed to the side of the pin 13 for reasons hereinafter to be set forth.

At 23 is shown a keeper or floor plug which consists of a tubular member having a screw threaded exterior 24 and a head 25. The head 25 is provided with a slot 26 for the reception of the wing or key 19. The head 25 at the sides of the slot 26 extends over the tubular interior of the floor plug or socket member and forms a flange portion beneath which the hollow or recess in the plug makes a pocket for the reception of the winged end of the hook member. The slot 26 provides an opening to the pocket through which the said winged end may be inserted. By partial rotation of the hook member the wings will project into the recess beneath the flange portion thereby enabling the chair to be held firmly on the floor. It will be seen that the keeper 23 may be readily inserted in the floor or other fixed

surface to which it is desired to attach the chair or other piece of furniture by merely boring a hole in the fixed object and screwing the keeper into it. The floor plug has
 5 no projections of any sort which protrude from its upper surface to mar the room in any way. This is important for my device is particularly adapted to be installed in the floor and does not in any way hinder the
 10 use of the room for various purposes such as dancing or the like.

When the chair is to be put in place, it is properly positioned and the wing or key 19 is turned to a position parallel with the slot
 15 26 of the floor plug by means of the handle 18. The handle 18 attached to the pin 13 is then pressed downwardly against the spring 17 until the wings are below the cover 25 of the floor plug. The handle is then turned so
 20 that the wings of the pin are at right angles to the slot and the wings thus engage the head and lock the members together. The spring pulls the flanges up against the head. In order to lock the members positively to-
 25 gether the swinging cam 20 is then swung beneath the projection 22 on the pin. This causes the wings of the pin to be pressed against the head 25 thereby drawing the chair down to the floor and securing it rigidly
 30 in position. The swinging cam or wedge 20 may be provided with notches 27 as shown which engage the projection 22 and hold the parts in place. To release the chair, it is simply necessary to swing the
 35 cam or wedge from beneath the projection 22 and then turn the key until the wings are parallel with the slot. The spring will thereupon snap the key up out of the way and the chair may be removed and moved
 40 about without scratching the floor.

It will be seen from the above that by my improved device chairs or other furniture may be readily locked in place in such a
 45 manner that they are positively and rigidly fixed.

What I claim is:

1. A device for securing a piece of furniture to the floor comprising a floor member composed of a plate there being a recess be-
 50 neath an edge of the plate and an opening adjacent said edge, a hook member movably mounted on the piece of furniture and adapted to pass through said opening into said recess and engage the under side of said
 55 edge of the plate, movable means to draw the hook member and floor member forcibly together when in engagement with each other and a spring acting upon the hook to raise it above the floor when the hook member and floor member are disengaged from
 60 each other.

2. A device for securing a piece of furniture to the floor comprising a member secured to the floor there being a recess be-

neath an edge of the plate and an opening 65 adjacent said edge, a hook member slidably and rotatably mounted on the piece of furniture, said member being movable downward through the opening into the recess adjacent the edge of the plate and rotatable to
 70 engage the under side of said edge of the plate and when disengaged therefrom being movable up out of contact with the floor, and a swinging cam adapted to engage said hook member when said hook member and
 75 floor member are in engagement with each other whereby said two members may be drawn into tightened relation with each other.

3. A device for securing a piece of furniture to the floor comprising a socket member inserted in the floor having a recess portion, a head consisting of a pair of inwardly
 80 extending flange portions with a slot therebetween, above said recess portion, a hook member having a winged end, a support on the piece of furniture on which said hook
 85 member is slidably and rotatably mounted, said hook member being movable downward to enable the said winged end to be inserted through the slot into the recess in the said
 90 socket member, and rotatable to cause the said winged end to engage with the head at the sides of the slot after it has entered said recess and when disengaged from said head
 95 being movable out of contact with the floor, a spring to hold said hook member normally in a position out of contact with the floor, and a cam engaging said hook member whereby when the hook member and socket
 100 member are in engagement with each other the said two members may be drawn into tightened relation to each other.

4. A furniture locking device comprising a supporting member adapted to be secured
 105 to furniture, a locking member slidably and rotatably mounted in said supporting member, a wing carried by said locking member, a hollow floor plug adapted to be secured to the floor, said floor plug having a pair of
 110 inwardly extending flanges with a slot therebetween, the mounting of said locking member being such as to permit the said wing to be moved relatively to the piece of furniture into a position to engage the floor plug and
 115 to be rotated to engage the same, and a swinging cam engaging said locking member and operating to draw it away from said floor plug so as to fix said parts in rigid position when locked.
 120

5. A furniture locking device comprising a supporting member adapted to be secured to a chair leg, a locking member slidably and rotatably mounted in said supporting
 125 member, a wing carried by said locking member, a hollow floor plug adapted to be secured to the floor and to lie flush with its surface, said floor plug having a pair of in-

wardly extending flanges with a slot there-
between for the reception of said wing by
which the chair is secured to the floor, a
spring to hold said locking member nor-
mally in a position out of contact with the
5 floor, and a cam engaging said locking mem-
ber and securing it against rotation by which
the chair leg may be positively drawn to

the floor and rigidly held in position
thereon.

In testimony whereof I affix my signature,
in presence of two witnesses.

10

CASSIUS S. CILLEY.

Witnesses:

GEORGE P. DIKE,
ALICE H. MORRISON.