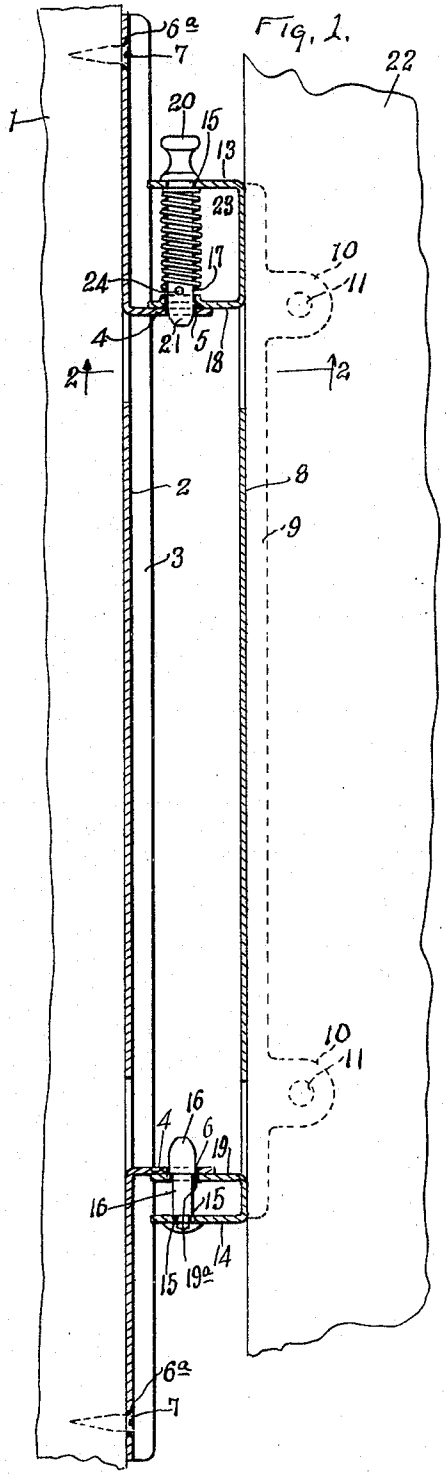
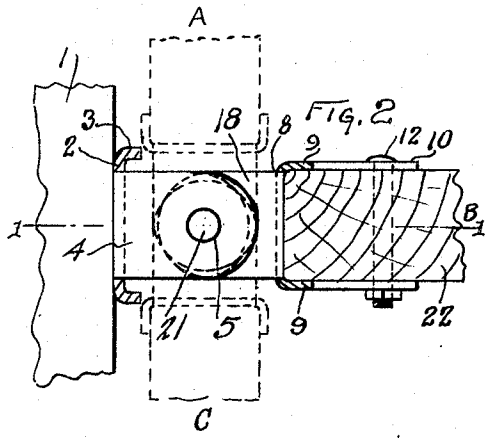
Dec. 8, 1925. 1,564,668

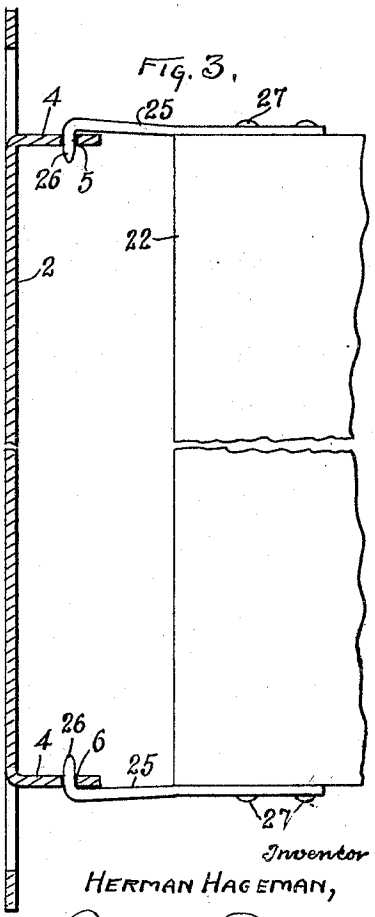
H. HAGEMAN

DETACHABLE HINGE FOR IRONING BOARDS

Filed May 2, 1924







Inventor

HERMAN HAGEMAN,

By Coulmin & Coulmin,

Attorneys

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UNITED STATES PATENT OFFICE.

HERMAN HAGEMAN, OF DAYTON, OHIO.

DETACHABLE HINGE FOR IRONING BOARDS.

Application filed May 2, 1924. Serial No. 710,645.

To all whom it may concern:

Be it known that I, HERMAN HAGEMAN, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Detachable Hinges for Ironing Boards, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to a supporting mechanism for boards and the like.

It is the object of my invention to provide a readily-applied supporting mechanism for ironing boards, running board retainers and the like so arranged that the board may be placed in horizontal position or vertical position.

It is an additional object of my invention to provide a readily detachable mechanism so that the board may be completely removed and stored if desired.

It is an additional object of my invention to provide a mechanism which may be made out of sheet metal without the necessity of welding, soldering or riveting, so that the parts can be made out of single pieces and may be stamped in order to secure quantity production. It is one of the essentials of my invention to provide an article which can be manufactured thus very cheaply out of sheet metal of ordinary grades so that no machine work will be necessary and no elaborate or complicated fitting of parts and adjustment of parts will be required.

It is also an essential that an apparatus of the character I have in mind be of such kind that it can be readily adjusted and applied to walls, running-boards and the like by those of little or no mechanical skill. It is still further important that the apparatus be of a kind that can be quickly disassembled and nested so that the metal parts may be shipped economically and boards attached by the purchaser or by the retail store from local lumber supplies so as to economize in freight shipments.

Referring to the drawings:

Figure 1 is a section on the line 1—1 of Figure 2.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a view similar to Figure 1 of a modified form of my attachment.

Referring to the drawings in detail:

1 is a wall or running-board of an automobile or other supporting surface. 2 is a flat supporting plate which may be provided with the upstanding ribs 3 if desired. These ribs may be of varying heights and of unequal height if desired. The flat plate 2 has the ears 4 punched from it and struck up at right angles to its surface. These ears are pierced with the holes 5 and 6. It will be noted this gives a support consisting of a one-piece structure reinforced with the ribs so that only two operations are necessary aside from drilling the holes 6^a through which are placed the bolts or screws 7 for attaching the supporting plate to its supporting surface 1.

The swinging plate 8 has ribs 9 formed thereon on either side and extending ears 10 with apertures 11 for receiving the bolts 12. The outer ends of the swinging plate 8 are turned up at right angles as at 13 and 14 and pierced with the holes 15 for receiving the respective hinge pins 16 and 17. Internal ears 18 and 19 are punched from this plate and struck up at right angles to the surface of the plate and parallel to the outside ears on the swinging plate. The ears on the stationary supporting plate and the inner ears on the swinging plate engage with one another and overlap so that the holes 19^a in the inner swinging plate ears coincide with the holes 5 and 6 on the supporting plate ears. Through these holes project the pivot pins 16 and 17. The pin 16 is a stationary pin while the pin 17 is a movable pin which can be grasped by the head 20 so that its nose 21 will be withdrawn from the aperture 5 of the ear 4 to permit the swinging plate and the board which it supports designated 22 to be moved away from the support. A helical spring 23 surrounding the pin 17 and embraced between the inside of the outer ear 13 and a cross pin 24 resists the outward movement of the pin 17 and tends to maintain it in locking position when the pin and spring are undisturbed.

It will be noted that this construction permits of the board carried by the swinging plate to be located in any position as for instance in the vertical position A, the horizontal position B or the downward position C.

Turning to Figure 3 I provide a similar supporting plate 2 with ears 4 having the apertures 5 and 6. The supporting plate is attached to a supporting surface in any desired fashion. The board 22 has attached on one side thereof a spring finger 25 having a

right-angled head 26 for insertion in the aperture 5 of the ear 4. The rear of this plate is attached by the bolts or screws 27 to the board 22.

The other side of the board may be provided with a similar spring finger 25 or a rigid finger, as may be desired.

It will be understood that I do not desire to confine myself to the details of this construction but wish to comprehend within my claims such modifications as may be found necessary to adapt the invention to varied uses.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In combination, a one-piece supporting plate having struck-up ears punched from said plate, a one-piece swinging plate having a series of struck-up ears to co-operate with the ears on said supporting plate and to form supports for pivot pins, pivot pins, the free ends of which project through the supporting plate ears.

2. In combination, a one-piece supporting plate having struck-up ears punched from said plate remote from the ends thereof, a one-piece swinging plate having a series of struck-up ears adapted to cooperate with the ears on said supporting plate, and to form supports for pivot pins, pivot pins, the free ends of which project through the supporting plate ears, the swinging plate ears being arranged to be spaced from one another to form broad bearings for the pivot pins.

3. In combination, a one-piece supporting plate having struck-up ears punched from said plate remote from the ends thereof, a one-piece swinging plate having a series of struck-up ears to form supports for pivot pins each of said supporting plate ears being adapted to cooperate with each series of swinging plate ears, pivot pins, the free ends of which project into the supporting plate ears, the swinging plate ears being arranged to be spaced from one another to form broad bearings for the pivot pins and yielding means surrounding one end of a part of the pivot pins, one end of which means engages against one of said ears and the other end of which engages with the pin it surrounds whereby said pin may be withdrawn when the yielding means is compressed or may be maintained in position by the yielding means.

4. In combination, a one-piece supporting plate having struck-up ears punched from said plate, a one-piece swinging plate having a series of struck-up ears to form supports for pivot pins, each of said supporting plate ears cooperating with each series of said swinging plate ears, pivot pins, the free ends of which project into the supporting plate ears, the swinging plate ears being arranged to be spaced from one another to form broad bearings for the pivot pins and yielding means surrounding one end of a part of the pivot pins, one end of which means engages against one of said swinging plate ears and the other end of which engages with the pin it surrounds whereby said pin may be withdrawn when the yielding means is compressed or may be maintained in position by the yielding means and means on said movable pin for limiting its movement in one direction.

5. In combination, a one piece swinging plate, a one piece supporting plate, ears struck up from the surfaces of each of said plates at right angles thereto, said ears overlapping each other and having coinciding apertures therein for receiving pivot pins, pivot pins and outside ears turned up on said swinging plate parallel to the first-mentioned ears but spaced therefrom with coinciding apertures adapted to support the outer ends of said pivot pins.

6. In combination, a one piece swinging plate, a one piece supporting plate, a series of ears struck up from the surfaces of each of said plates at right angles thereto, said ears overlapping each other and having coinciding apertures therein for receiving pivot pins, pivot pins and outside ears turned up on said swinging plate parallel to the first-mentioned ears but spaced therefrom with coinciding apertures adapted to support the outer ends of said pivot pins, and means to yieldingly maintain one of said pins in engaging position and means to move said pin against said yielding means to permit of its detachment from one supporting plate ear whereby the other pin may be detached from the other supporting plate ear.

7. In combination, a swinging plate, a supporting plate, ears struck up from the surfaces of each of said plates at right angles thereto, said ears overlapping each other and having coinciding apertures therein for receiving pivot pins, pivot pins, outside ears turned up on said swinging plate parallel to the first-mentioned ears but spaced therefrom with coinciding apertures adapted to support the outer ends of said pivot pins, and means to yieldingly maintain one of said pins in engaging position and means to move said pin against said yielding means to permit of its detachment from the supporting plate ear whereby the other pin may be detached from the other supporting plate ear, and ribs on said supporting plate and swinging plate turned up on the edges of said plates to strengthen them.

In testimony whereof, I affix my signature.

HERMAN HAGEMAN.