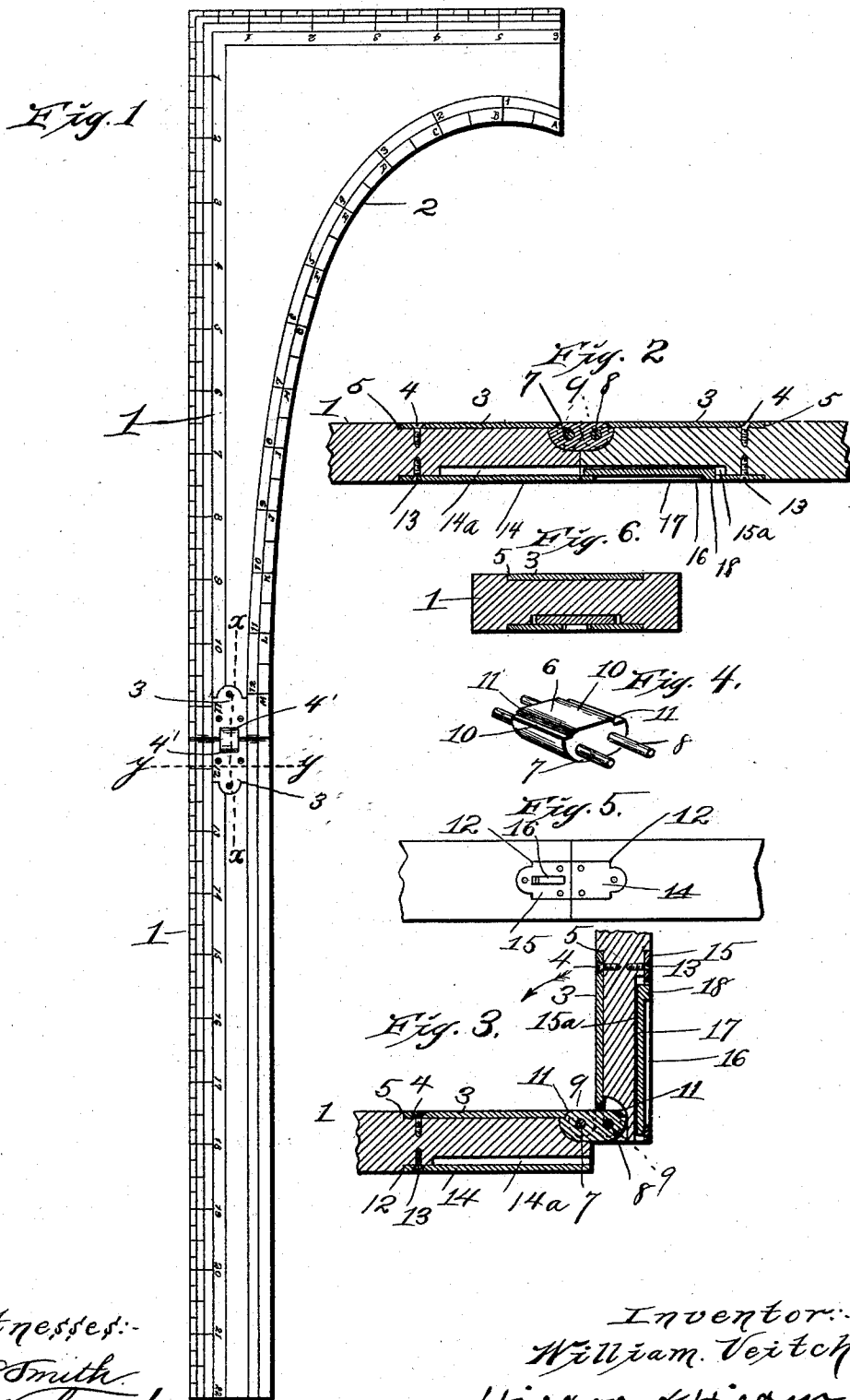


(No Model.)

W. VEITCH.
HINGE.

No. 509,979.

Patented Dec. 5, 1893.



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UNITED STATES PATENT OFFICE.

WILLIAM VEITCH, OF KANSAS CITY, MISSOURI.

HINGE.

SPECIFICATION forming part of Letters Patent No. 509,979, dated December 5, 1893.

Application filed June 22, 1893. Serial No. 478,445. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM VEITCH, a citizen of Ireland, residing at Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Hinges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improvement in hinges and the primary object of my invention is to produce a hinge which will lie flush or even with the face of the objects to which it is attached.

A further object of my invention is to provide a hinge by which both sides will be caused to fold an equal distance, that is, when completely folded the face of the hinge block will be at right-angles to the surface or face of the rule or other object to which the hinge is attached, when one part of the rule or other hinged object is folded back upon its companion part. Furthermore, to produce a hinge wherein one side can not drop (when opened) to a lower horizontal plane than the corresponding hinge section.

A further object of my invention is to provide a hinge of this character which is simple, strong, durable and inexpensive of construction, and also to provide a locking device by which the rule or objects to which the hinge may be applied shall be locked in an extended or open position.

To the above purposes, my invention consists in certain peculiar and novel features of construction and arrangement, as will be hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1, represents a face view of a combined straight edge and curve used to obtain various measurements by tailors, and showing a hinge of my improved construction applied thereto. Fig. 2, is a longitudinal sectional view taken on the line $x-x$ of Fig. 1. Fig. 3, is a similar sectional view but showing the hinge-plates and the end of the rule carried thereby at right angles to each other. Fig. 4, is a detail perspective view of the hinge-block. Fig. 5, is a face view of the opposite side of the combined square and curve

to show more clearly the construction of the locking mechanism. Fig. 6, is a sectional view taken on the line $y-y$ of Fig. 1.

Referring to the drawings, 1 designates a tailor's square of the usual construction, and 2 designates a curve formed integrally therewith which is adapted to conform to every curve of the human figure. This square is formed in two sections, which are connected together by a hinge of peculiar construction. The hinge-plates 3—3, of any suitable or preferred form, are secured by screws or rivets 4 in recesses 5 formed in the face of the sections of the square, and arranged so that their upper side shall lie flush with the upper sides of said sections. The inner ends of said plates are formed square, and are formed with the oppositely disposed recesses 4', 4'. The hinge-block 6 is of peculiar construction, and is provided with the parallel hinge-pins 7 and 8, these pins extending transversely of the sections or parts hinged together. These hinge-pins project at each side for a suitable distance beyond the sides of the hinge block, and are embraced by the cylindrically turned ends 9—9 of the hinge plates at each side of the hinge-block, and are arranged so that the cylindrical portions 9 of each plate shall be in contact with the similar portion of the other plate. The hinge block is formed in its upper edge and at each end with a transverse groove 10, and the inner ends of the recessed portions of the hinged plates are adapted to rest in said grooves so that the upper sides thereof shall lie flush with the upper side of the hinge-block. The ends of hinge block are curved to extend concentrically with the axis of the adjacent hinge-pin, and the recesses in the ends of the sections are curved correspondingly, as shown clearly in Figs. 2 and 3. The shoulders 11—11 of the hinge block formed by grooving the ends thereof at 10 are also preferably arranged concentric to the axis of said hinge-pins as shown most clearly in Fig. 3.

It will be seen from the above description, that when the sections carried by the hinge plates 3—3 are extended or opened, the inner ends of said section below the hinge block will abut or bear against each other, and the curved and recessed portion thereof will then fit snugly against the correspond-

ingly curved portions of the hinge block, and the inner ends of the recessed portions of said plates 3 will rest in the recesses 10 of said hinge block, and thus prevent the sections and hinge-plates from sagging at their pivotal points, as is the case with hinges of the usual construction after the abutting ends of the rule or other objects to which they are attached become slightly worn from contact.

When the hinge is being folded or closed the peculiar form of the hinge block causes both sides to be folded equally, or in other words after one side has been folded upwardly to the position shown in Fig. 3 and without changing the position of the hinge-block relative to the other section, it will be impossible to continue the closing movement of said arm without moving the hinge-block also. This movement will be produced because the end of the recessed portion of the plate 3 comes in contact with the upper side or surface of the hinge block and prevents any further movement of that plate toward a folded position. After one section has been folded to the position shown in Fig. 3 the other portion may also be folded upwardly to lie perfectly flat against the first folded portion, and so that the face or upper side of the hinge block shall lie at right angles to the disposition of said hinge plates, or the section already folded to the position shown in Fig. 3 may be continued in the direction of the arrow so that it shall lie perfectly flat against the horizontal portion, and this movement will cause as above stated, the hinge block to assume a position at right angles to the disposition of said hinge plates.

From the above description, it will be seen that I have produced a hinge which will prevent any sagging of the sections carried thereby, and which insures by the peculiar formation of the hinge block and its connections the equal folding of the hinge plates, and the objects or sections carried thereby. It is to be understood that I may form this hinge plate of any suitable width so that one or more of the hinge blocks may be used, the plates in this instance being formed with a series of recesses 4 corresponding in number to the hinge blocks used.

In order to prevent the accidental collapsing or folding of the square, rule or other objects carried by said hinge, I form the similar recesses 12—12 in the adjacent ends of the sections of the square or rule, and at the opposite side from that occupied by the hinge plates, and secured by screws or rivets 13 in

these recesses are plates 14 and 15. Longitudinally extending recesses 14^a and 15^a communicate with the recesses 12 at the under sides of the plates 14 and 15, and formed longitudinally in the plate 15 is a slot 16. A slide latch 17 occupies the recess 15^a and has a knob or projection 18 adapted to travel and be guided in the slot 16. Now when the sections of the square or rule are opened, pressure is brought to bear against the knob 18 to force the slide latch 17 outwardly, so that it shall enter and occupy the recess 14^a thus locking the sections of the square or rule in their extended or unfolded position. By forming the slide latch 17 in the opposite direction to disengage the slide latch from the recess 14^a of the section, the square or rule may again be folded. It is to be understood that this hinge and locking latch may be used wherever it is applicable, for table leaves, &c.

From the above description it will be seen that I have produced a hinge which when opened shall present no projections above the surface of the square, rule or table leaves to which it may be attached, and also a spring latch to lock them in their extended positions.

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

1. A hinge, comprising a hinge-block having grooves formed in its upper end surfaces, and having its lower end surfaces rounded, and pins carried by said block, and arranged so that the curved ends of the block shall be concentric to the axis of said pins, in combination with plates recessed to embrace the opposite sides and rest in the grooves of said hinge-block, and having the portions of said plates at each side of said block bent to encircle the projecting ends of said pins, substantially as set forth.

2. The combination with a hinge, and sections carried by said hinge, provided with recesses in their adjacent edges, of plates secured in said recesses, one of them slotted, a slide-latch occupying one of said recesses beneath the slotted plate, and having a lug projecting through said slot, said slide-latch being adapted to enter the recess of the other section beneath its plate, to lock the sections in their opened or unfolded position, substantially as set forth.

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

WILLIAM VEITCH.

Witnesses:

MAUD FITZPATRICK,
M. P. SMITH.