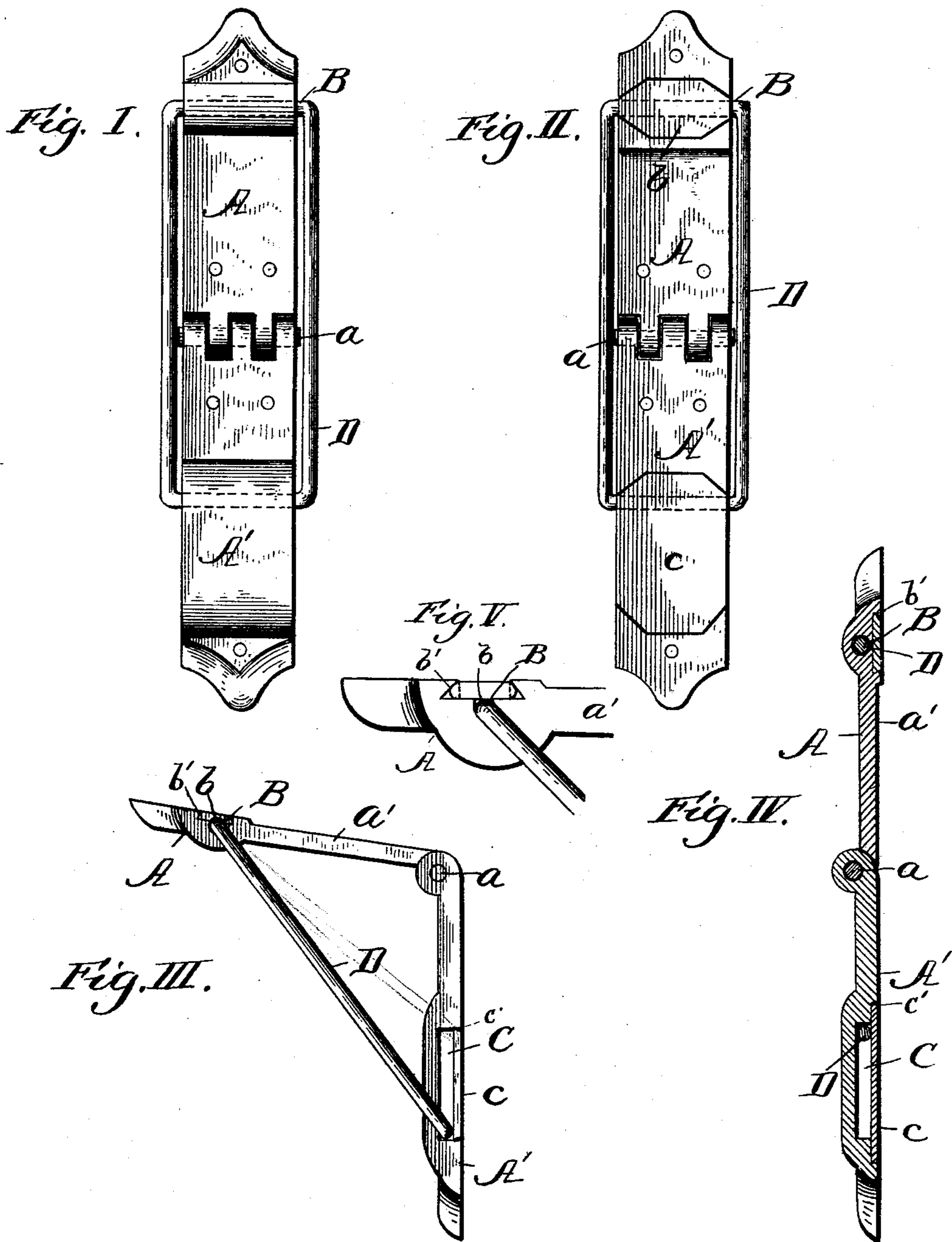


(No Model.)

J. F. HIRST.  
HINGE.

No. 481,492.

Patented Aug. 23, 1892.



Witnesses:

J. B. McGivver.  
William O. Belt.

Inventor:

John F. Hirst.  
By his Attorneys,  
Edwin B. Davis.

# UNITED STATES PATENT OFFICE.

JOHN F. HIRST, OF SABATTUS, MAINE.

## HINGE.

SPECIFICATION forming part of Letters Patent No. 481,492, dated August 23, 1892.

Application filed December 10, 1891. Serial No. 414,626. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. HIRST, a citizen of the United States, residing at Sabattus, in the county of Androscoggin and State of Maine, have invented certain new and useful Improvements in Hinges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in hinges especially adapted for use on trunks and other places where bracket-hinges are employed to sustain a part in position and relieve the pivot-pin from strain.

The object of the invention is to provide an improved hinge of a simple and durable construction and to provide means which relieve the pivot of the hinge from strain when it is closed.

With these ends in view my invention consists of two leaves pivoted together in the usual manner and an oblong bail pivoted in a socket near the end of one leaf and having the other end adapted to slide in a transverse slot in the other leaf, so that the bail is adapted to form the hypotenuse of a triangle when the hinges are bent; but it will lie in alignment with the edges of the leaves when the hinges are open to take the strain off the pivot in this position.

My invention consists, further, of certain details of construction and arrangements of parts, as will more fully appear hereinafter.

I have illustrated my invention in the accompanying drawings, in which—

Figure I is a front elevation of the hinge as it appears when opened. Fig. II is a rear elevation. Fig. III is a side view of the hinge closed. Fig. IV is a longitudinal section, and Fig. V is an enlarged detail view showing the manner in which the removable plates are arranged on the leaves of the hinge.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A A' designate the leaves of my improved hinge, which are pivotally secured together by a transverse pintle or pin *a* in the usual manner. The upper leaf A is cut away and narrowed at *a* to fit

snugly and tightly over the band-iron around a trunk-cover.

At or near the upper end of the leaf A is a transverse socket B, which extends entirely across the leaf, and a removable plate *b* is adapted to be fitted or sprung in place on the rear face of leaf over the socket to inclose the same and prevent the bail from becoming displaced and out of order.

In the lower portion of the leaf A' is a slot C, extending across the leaf, which is enlarged on its front face to provide for the slot. A removable plate *c* is fitted or sprung in place on the rear face of this leaf over said slot in a manner similar to the plate *b*. The hinge is fastened to a trunk or other place in the usual manner by screws or other suitable means, and the plates *b c* on the rear face of the leaves will be clamped tightly against the trunk. It is therefore unnecessary to provide any means for securing the plates *b c* in their proper place; but I prefer to dovetail the inner edges of the seats *b' c'* so that these plates will fit tightly in place. These plates are preferably made tapering at the edges, as shown in the drawings, so that when fitted in place they will not be liable to move edgewise and get out of order. When the plates are arranged in place they are secured by swaging the edge thereof by a blow on a punch which is placed on the plate, and it will only be found necessary to swage the plates once at each end, as they will remain in position with a very little purchase.

The bail D is oblong in shape, and its ends are arranged in the socket B and slot C of the leaves, respectively. The length of the bail is such that when the hinge is open it will align with the edges of the leaves and relieve the pintle from strain by supporting the lower leaf from the socket in the upper leaf. The slot C allows the bail to play freely back and forth as the hinge is open and closed, which provides for the ready adjustment. This is a very important construction of the hinge, as the strain on the pivot or pintle without the bail eventually ruins the hinge; but by using the bail the strain is removed from those parts entirely and supported wholly by the bail. Besides, the plates pro-

vide an easy and ready means for removing the bail, when it is so desired, while they keep the same in position when the hinge is fastened in place.

5 I am aware that changes in the form and proportion of parts and details of construction can be made without departing from the spirit or sacrificing the advantages of my invention, and I therefore reserve the right to  
10 make such changes as fall within the scope of my invention.

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

15 1. A hinge, substantially as shown and described, comprising the hinged leaves, each provided on its rear face with the seats *b' c'*, one leaf having a transverse socket and the other leaf a longitudinal slot, the bail having  
20 its ends fitted in the socket and slot of the re-

spective leaves, and the removable plates fitted in the seats of the two leaves over the ends of the bail, as and for the purpose described.

2. The hinge herein shown and described, 25 comprising the leaf *A*, having the socket *b* and the seats *b'* in rear of said socket, another leaf *A'*, provided with the longitudinal slot and the seats *c'* in its rear side, the bail *D*, fitted at its ends in the socket and slot of 30 the respective leaves, and the removable plates fitted tightly in the seats of said leaves and arranged flush with the rear faces thereof, as and for the purpose described.

In testimony whereof I affix my signature in 35 presence of two witnesses.

JOHN F. HIRST.

Witnesses:

HUGH MATHSON,  
B. L. MAXWELL.