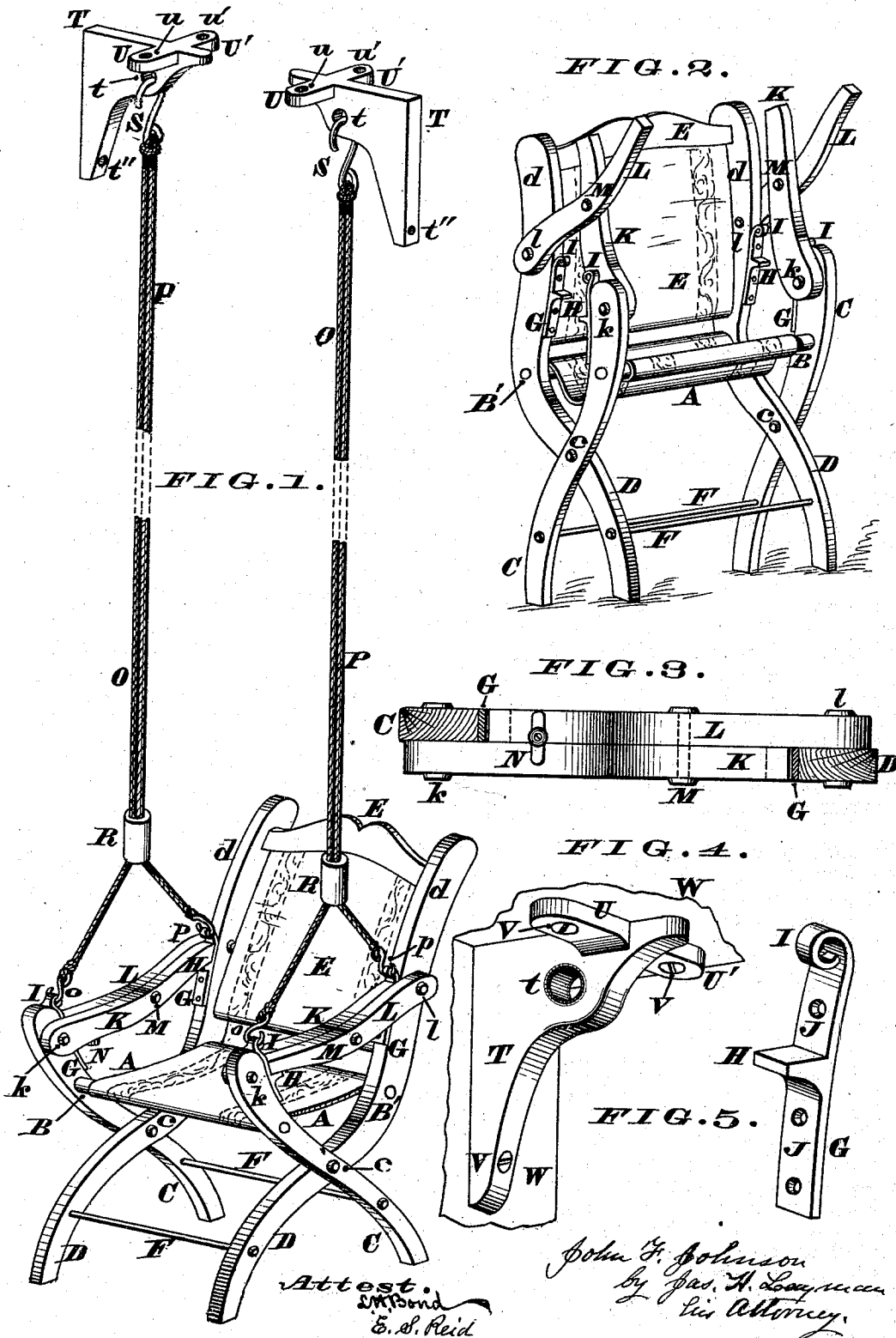


J. F. JOHNSON.

SWING.

No. 182,317.

Patented Sept. 19, 1876.



UNITED STATES PATENT OFFICE.

JOHN F. JOHNSON, OF CINCINNATI, OHIO.

IMPROVEMENT IN SWINGS.

Specification forming part of Letters Patent No. 182,317, dated September 19, 1876; application filed July 14, 1876.

To all whom it may concern :

Be it known that I, JOHN F. JOHNSON, of Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Door-Swings, of which the following is a specification:

This invention relates to that class of swings which are capable of being suspended in an ordinary doorway; and the first part of my improvements consists in a novel construction of metallic brackets which are secured in the upper angles of the door-frames, so as to serve as the centers of oscillation for the swing.

These metallic brackets are each provided with two oppositely-projecting lugs located approximately in the plane of vibration of the swing, and are perforated to receive screws that engage with the door-frame, as hereinafter more fully described.

The second part of my invention comprises a metallic plate, which performs the double office of a rest for the hinged arms of the seat, and a means of attachment for the swing-ropes.

In the annexed drawings, forming part of this specification, Figure 1 is a perspective view of my improved door-swing in condition for use, a portion of the suspension-ropes being omitted. Fig. 2 is a perspective view, showing the seat detached from the swing-ropes and folded up. Fig. 3 is a horizontal section through one of the double arm-rests. Fig. 4 is a perspective view of one of the angle-iron brackets attached to the door-frame, and Fig. 5 is a perspective view of one of the plates that serve to suspend the seat from the swing-ropes. Of the above illustrations Figs. 3, 4, and 5 are drawn on an enlarged scale.

The swing-seat A, which may be composed of canvas, leather, carpeting, or any other stout and pliable material, has its front and rear edges attached, respectively, to rounds B and B', of which rounds the one, B, is secured to the outer pair of legs C C, while the other round, B', is connected to the inner pair of legs D D. These legs are crossed in the manner shown, and are united at their intersections by pivots *c c*. The inner pair of legs are prolonged upwardly, as at *d d*, which extensions have secured to them the back E of any suitable material. F and F are stretchers,

which unite the lower portions of legs C C and D D. The inner or opposing faces of these four legs have secured to them, at any suitable distance above the pivots *c c*, plates G, made either of cast or wrought metal, each plate being furnished with an inwardly-projecting flange or rest, H, and terminating at top with an eye, hook, or staple, I. Pins, screws, or other supports may take the place of the rests H, and apertures in the legs C C and D D may be employed instead of the rings I for attachment of the swing-ropes. J are holes for the reception of screws, wherewith said plates G are secured to the seat-frame C C and D D. Pivoted or hinged near the upper end of legs C C, at *k k*, are swinging arms K K, whose rear ends rest upon the flanges H H, secured to rear legs D D. Pivoted to the extensions *d d* at *l l* are other arms, L L, whose front ends rest upon flanges H H of legs C C. The arms K and L are united near their midlengths by pivot M. These strips K L are made comparatively thin, to economize material, and also to lessen the weight of the swing; but, by placing two strips alongside one another, and with their upper surfaces flush, a broad and comfortable support is afforded for the occupant's arms.

A button, hook, spring or other retaining device, N, may be employed for locking the arms L and K together. This device can be applied to the under side of the arm, so as to be concealed, and not be liable to catch the clothes of the occupant.

O P represent doubled ropes or light chains, whose lower ends are provided, respectively, with hooks *o o* and *p p*, which engage with the eyes or rings I of plates G, as seen in Fig. 1. Sliding upon these ropes are runners R R, capable of being shifted so as to be conveniently grasped by the swinger. The bight of the doubled rope O P is engaged around a hook, S, inserted in the aperture *t* of an angle-bracket T. Each bracket is provided with two laterally-projecting lugs or ears, U U', which are situated approximately in the plane of vibration of the ropes O P, as seen in Fig. 1. These lugs are perforated at *u u'* to receive screws V, wherewith said bracket is secured in the angle of door-frame W, as represented in Fig. 4. That portion of the bracket which

rests against the side of the door-frame is perforated at *t''* to receive a similar screw. Instead of projecting at right angles from the bracket, the lugs *U U'* may branch or diverge therefrom at any angle. Furthermore, said bracket may be wrought into any ornamental shape.

To fit up my swing it is only necessary to secure the two brackets *T T* in the upper angles of the door-frame *W*, after which the hooks *S S*, with their attached ropes *O P*, are engaged with said brackets. The folding seat is then opened, its arms *K L* are brought to their proper bearings upon the rests *H*, and the hooks *o o* and *p p* are inserted in the rings or apertures *I* of the seat-frame. The runners *R R* being now adjusted to any convenient height, the swing-seat *A* is at once ready for use, the button *N* effectually preventing any upward movement of the arms *K L*, which movement would cause the frame *B B' C C D D* to collapse, and thereby render the seat unfit for occupancy.

Evidently the oscillations of the swing would soon work the brackets loose from the door-frame unless some special precautions were adopted to prevent it. This defect is guarded against by providing said brackets with the lugs *U* and *U'*, which, projecting laterally and in the plane of vibration, brace the brackets so thoroughly as to render them perfectly safe under all circumstances.

To remove the swing in order that the door may be closed, the hooks *o o* and *p p* are first disengaged from the rings *I*, and the button *N* is then swung around to permit the free ends of the arms *K L* being turned up, which act causes the frame *C C D D d d* to collapse or be drawn together, as seen in Fig. 2. When in this folded condition the seat and its accessories can all be stowed away until the swing

is to be used again. This compact folding of the seat will render my swing especially convenient for families who remove to the country during the summer season, as said closed seat, together with its ropes, brackets, &c., can all be packed in the bottom of an ordinary trunk and transported to any distance.

The arms *K L* need not extend beyond their respective pivots *M M*. In this case each pair of arms may be secured together with a spring-bolt or equivalent device; but the arrangement shown in the drawings is the preferred method of constructing the arms, because they brace the seat-frame so securely.

Evidently the seat will be perfectly secure even in case the legs *C* and *D* are not carried below the pivots *c*, and I reserve the right to modify the invention in this manner. Such an arrangement would allow the stretchers *F* to be omitted.

The brackets *T T* may be made of any material.

I do not here claim the above-described folding chair which is used for the seat of the swing; but I reserve the right to embody this device in a future application for patent.

I claim as my invention—

1. In a doorway-swing, the angle-bracket *T t t''*, having lugs *U u U' u'* projecting laterally, and in the plane of vibration, substantially as herein described, and for the purpose set forth.

2. The perforated plate *G J*, provided with an arm-rest, *H*, and a suspension-ring, *I*, as and for the purpose stated.

In testimony of which invention I hereunto set my hand.

JOHN F. JOHNSON.

Witnesses:

JAMES H. LAYMAN,
A. P. HAGEMEYER.