(No Model.) 2 Sheets—Sheet 1.

# J. O. TONKIN.

## COIN FREED FOLDING CHAIR.

No. 500,783. Patented July 4, 1893.

*Fig: 1.*

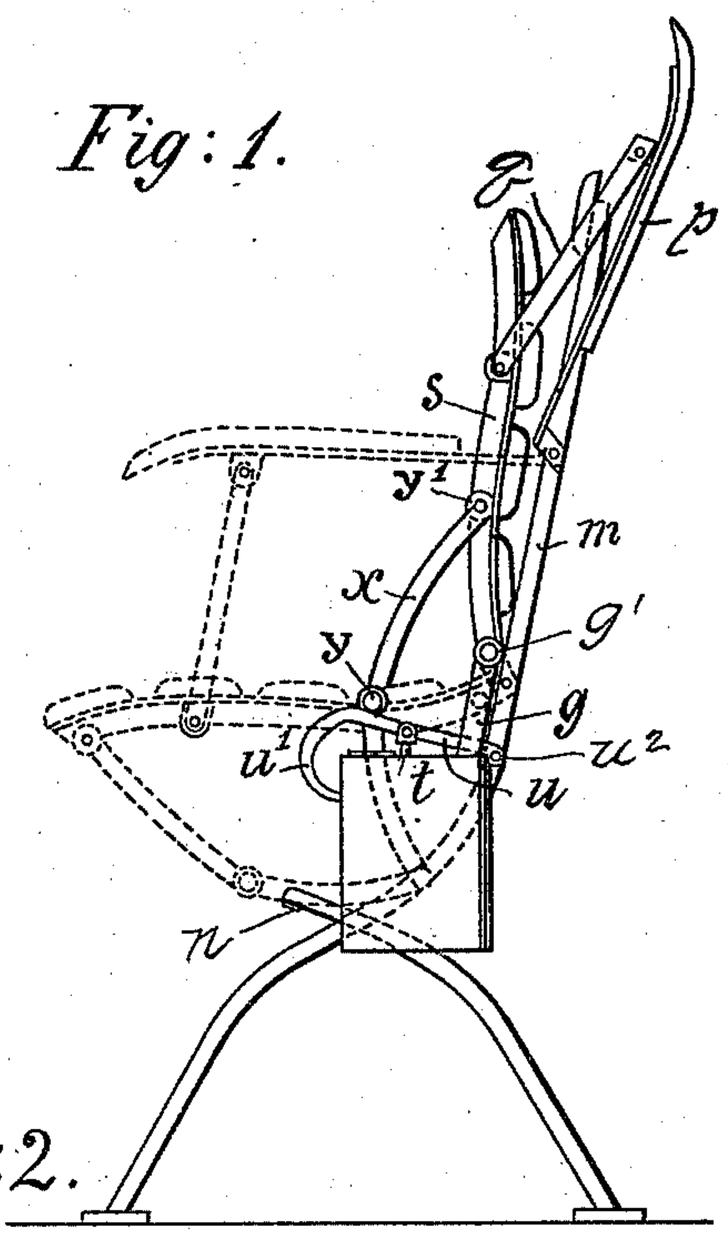



*Fig: 2.*

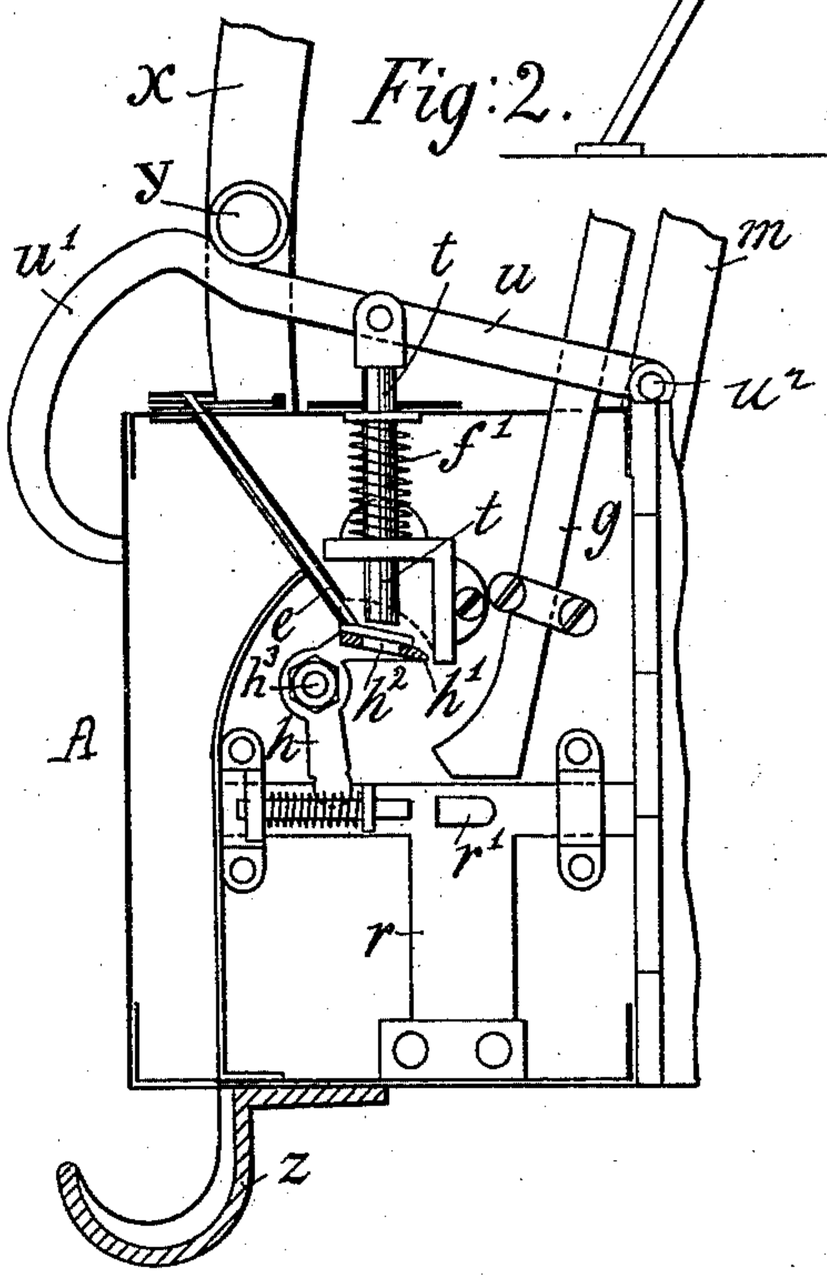
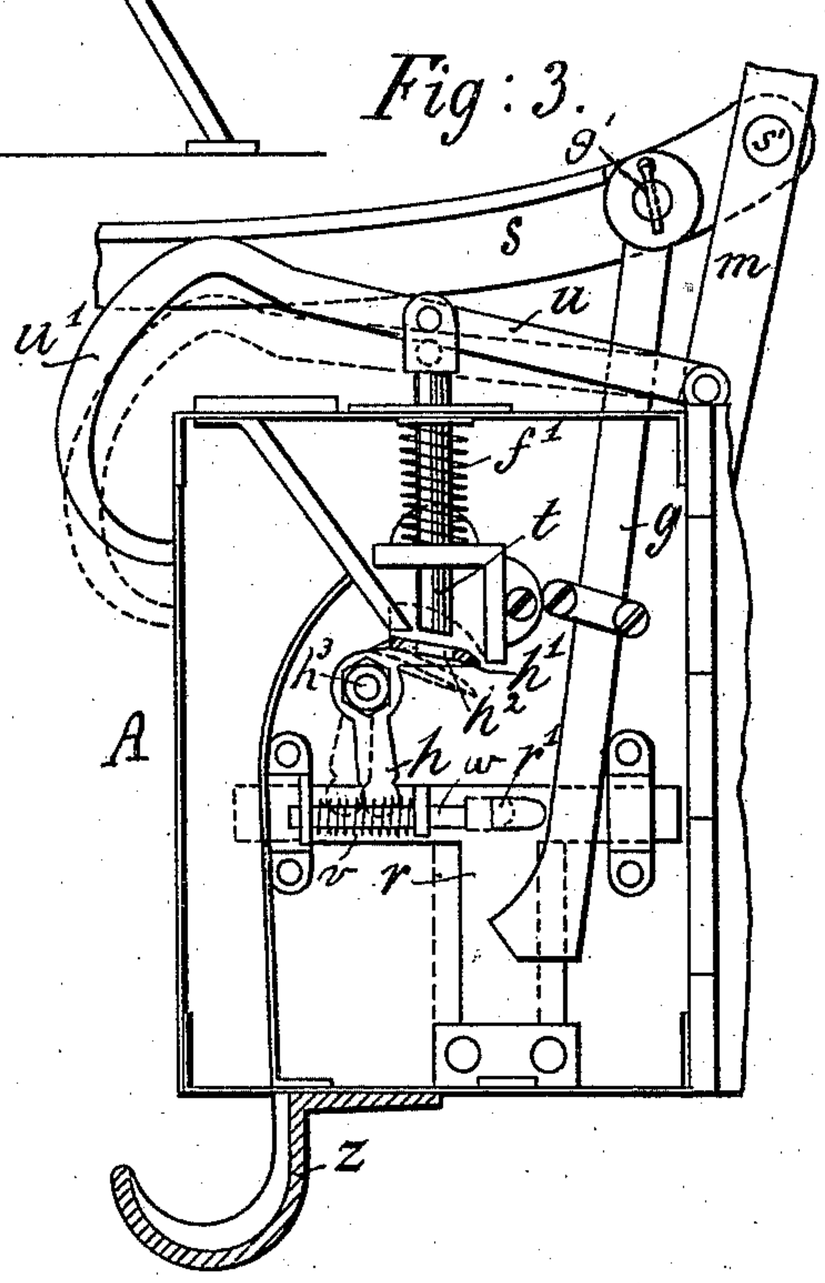



*Fig: 3.*




Witnesses:
E. B. Bolton
E. K. Sturtevant

Inventor:
John Osborn Tonkin
By Richards & R
his Attorneys.

(No Model.) 2 Sheets—Sheet 2.

# J. O. TONKIN.

## COIN FREED FOLDING CHAIR.

No. 500,783. Patented July 4, 1893.

*Fig: 4*

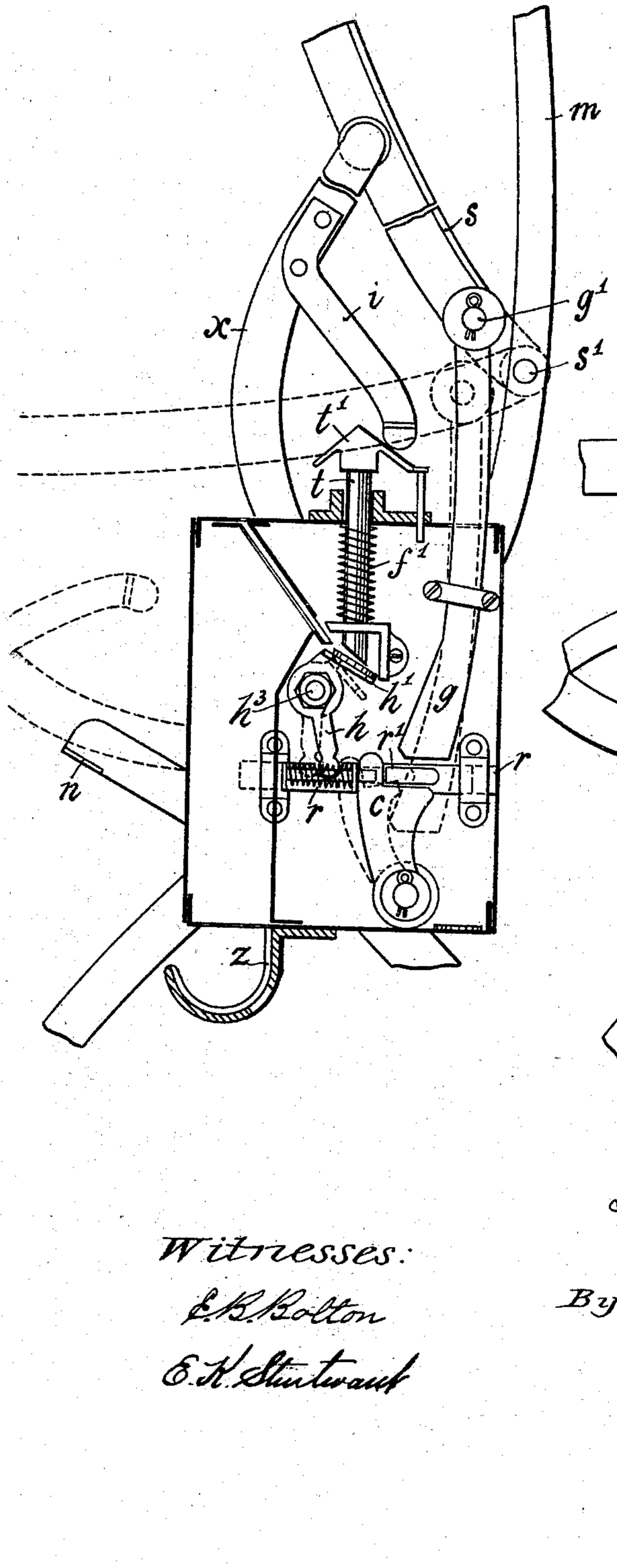
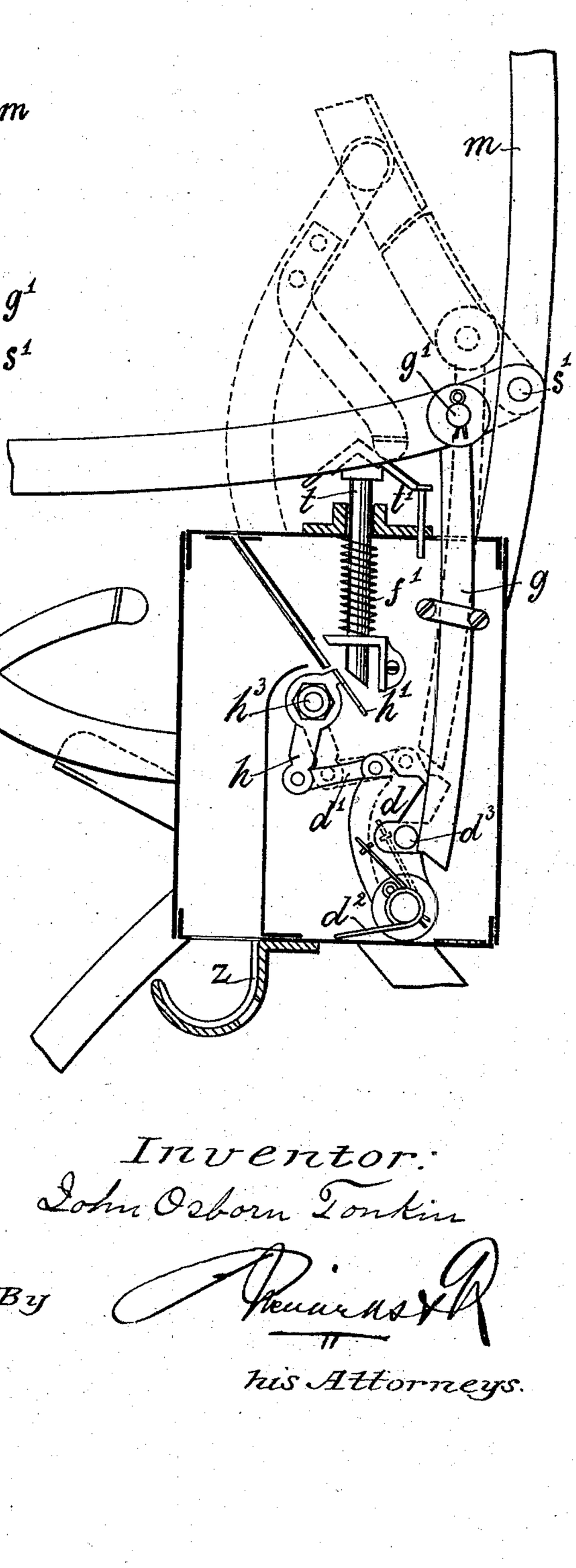



*Fig: 5.*




Witnesses:
E. K. Bolton
E. K. Sturtevant

Inventor:
John Osborn Tonkin
By Pierce & P
his Attorneys.

# UNITED STATES PATENT OFFICE.

JOHN OSBORN TONKIN, OF WESTEND, NEAR BERLIN, GERMANY.

## COIN-FREED FOLDING CHAIR.

SPECIFICATION forming part of Letters Patent No. 500,783, dated July 4, 1893.

Application filed January 18, 1893. Serial No. 458,817. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN OSBORN TONKIN, engineer, a subject of the Emperor of Germany, residing at Westend, near Berlin, in the Empire of Germany have invented a certain new and useful Automatic Coin-Freed Folding Chair, of which the following is a specification.

The present invention relates to a device attached to chairs, theater and other seats, in which, on certain coins being dropped into a slot, a locking bolt is displaced and allows of the chair being opened out into the position required for use. When the seat is folded back and locked, it is arranged to have a certain amount of free or preliminary movement (as, for instance, is apparent when attempts are made to open the chair without inserting a coin) this preliminary movement being utilized for displacing the locking bolt through the intermediary of the coin inserted. While the seat is being opened out, the coin falls down into the coin receptacle, and, after use, the seat folds and locks itself automatically by means of springs, it being necessary to insert another coin in order to re-open it.

Referring to the drawings which form a part of this specification, Figure 1 is a side view of a chair provided with the new device, the seat being in a locked folded position; the position for use is as shown by dotted lines. Fig. 2 is a view of the slot and locking mechanism when the seat is in a locked folded position and Fig. 3 shows the arrangement of said mechanism when the seat is opened out. Figs. 4 and 5 are part views (similar to Figs. 2 and 3) of modifications of the device, the one showing the parts when the seat is in a folded position and the other when same is opened out.

The folding chair or seat (Fig. 1) consists of the seat *s* pivoted on to the chair frame so as to turn on same, being forced upward (when not in use) into a folded locked position and as near as possible to the chair back *m* by springs or other suitable arrangements which are not shown in the drawings. On moving the seat, the lever arms *x* connected at *y'* to the seat and located in the under part of the chair frame and, subject to upward spring pressure, are made to slide with anti-friction rollers *y* in guide rails fitted underneath the seat; when the seat is opened out as shown by dotted lines, said arms *x* form a support for the same on coming in contact with the projections or rests *n* of the under frame (Fig. 1). In this position the parts *p q* on the chair back and seat are also opened out thus forming the arms of the chair. One of the lever arms or side levers *x* is arranged to displace a locking bolt inside the box A of the locking device and which box, firmly fastened on to the frame, serves at the same time as a coin receptacle. The rod *g* pivoted at *g'* on to the seat *s* near the fulcrum *s'* thereby descends into the box A its course however being barred by the bolt previously mentioned if the requisite coin is not inserted, the mechanism thus remaining locked. The inner mechanism of the box A is as shown in Figs. 2 and 3.

The slot tube *e* is provided with a hole through which coins not of the proper size fall and drop down into the receiver *z* out of which they can then be taken by the person who inserted them. When a coin of the right size is inserted in the slot, it slides down on to the ring formed end surface of the short arm of the crank lever *h h'* turning on a pivot $h^3$. In this position the coin is directly in the course of a vertically sliding piston rod *t* which is held in its normal upper position by a spring *f'* and which, on being pressed down when there is no coin on the ring end *h'* of the lever *h h'*, simply passes through the aperture $h^2$ while, when a coin is inserted, the coin itself transmits the necessary movement to the crank lever *h, h'*. The arm *h* of said crank lever engages with the locking bolt *r* which is caused to slide to the right by the action of the spring *v* mounted on the guiding pin *w*, so that the bolt projection or lug *r'* arrives under the end of the rod *g*. The requisite power is applied to the crank lever *h h'* for drawing back the locking bolt *r* (assuming that a coin is under the piston rod *t*) by the intermediary of the lever *u* pivoted to the frame at $n^2$ and loosely connected with the upper end of the piston rod *t*, since this is pressed down by a roller *y* mounted on the lever *x* as the seat is being opened out. The relation of the movements and position of the pivots is such, that the downward movement of the rod *g* is slow enough to allow of the bolt *r* getting in the proper position. As

soon as the roller $y$ has passed over the hook formed end $u'$ of the lever $u$ during the pulling down of the seat, the piston rod $t$ springs back into its normal upper position, and the coin meanwhile falls down into the box. The locking bolt $r$ cannot slide back into the locking position until the rod $g$ is drawn over the lug $r'$ which takes place during the upward folding movement of the seat. The position the parts of the device take up when the seat is opened out is shown in Fig. 3, the movement of the lever $u$, piston rod $t$, crank lever $h$ $h'$ and locking bolt $r$ being shown by dotted lines.

The leaf like continuation hanging downward from the bolt $r$ serves for relieving the strain on said bolt in case attempts should be made to open the chair without inserting the necessary coin, since it slides over a counter surface in such way that the rod $g$ is held by the lug $r'$, the opening out of the seat being thereby made impossible. In this case the piston rod $t$ would pass freely through the circular aperture $h^2$ of the crank lever $h$ $h'$ without displacing the locking bolt.

Figs. 4 and 5 show modifications of the new device. The piston rod $t$ has a sort of roof formed cap $t'$ on which a finger $i$, mounted on the arm $x$ and corresponding to the projection $y$, has a direct action in passing over its apex, the bow-formed lever $u$ being thereby rendered unnecessary. As is evident, the pressing downward of the piston rod $t$ and the tilting of the crank lever $h$, $h'$ by the coin, only takes place in the moment when the finger passes over the apex of the cap surface of said rod $t$ and at the commencement of opening out the seat $s$. In Fig. 4 the locking bolt is not provided with a support, a lever piece $c$ being arranged with a shoulder for this purpose. In Fig. 5 a similar lever $d$ coupled to the crank lever $h$ $h'$ by a link $d'$ is made to act as a locking bolt. A spring $d^2$ fastened to the pivot of the locking lever presses the lever in the normal locking position. The front face of this lever $d$ bars the downward movement of the rod $g$ substantially as aforedescribed.

It may be mentioned that the movement of another part of the folding mechanism can be employed for effecting the locking action in place of the lever arm $x$; suitable means need merely be arranged for transmitting a backward movement to the locking bolt which will be slightly quicker than that of the rod $g$.

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

In combination, the folding chair, the locking bar $g$ connected to a moving part thereof, the casing into which the locking bar extends, the locking piece or bolt arranged to engage said bar, the crank lever having a perforated end and connected with the said locking piece and means for operating the said lever when a coin is introduced consisting of the bolt $f'$ arranged independently of the bar $g$ and arranged to be moved by the opening of the folding chair, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN OSBORN TONKIN.

Witnesses:

ARTHUR BAERMANN,

ALFRED MEISTER.