

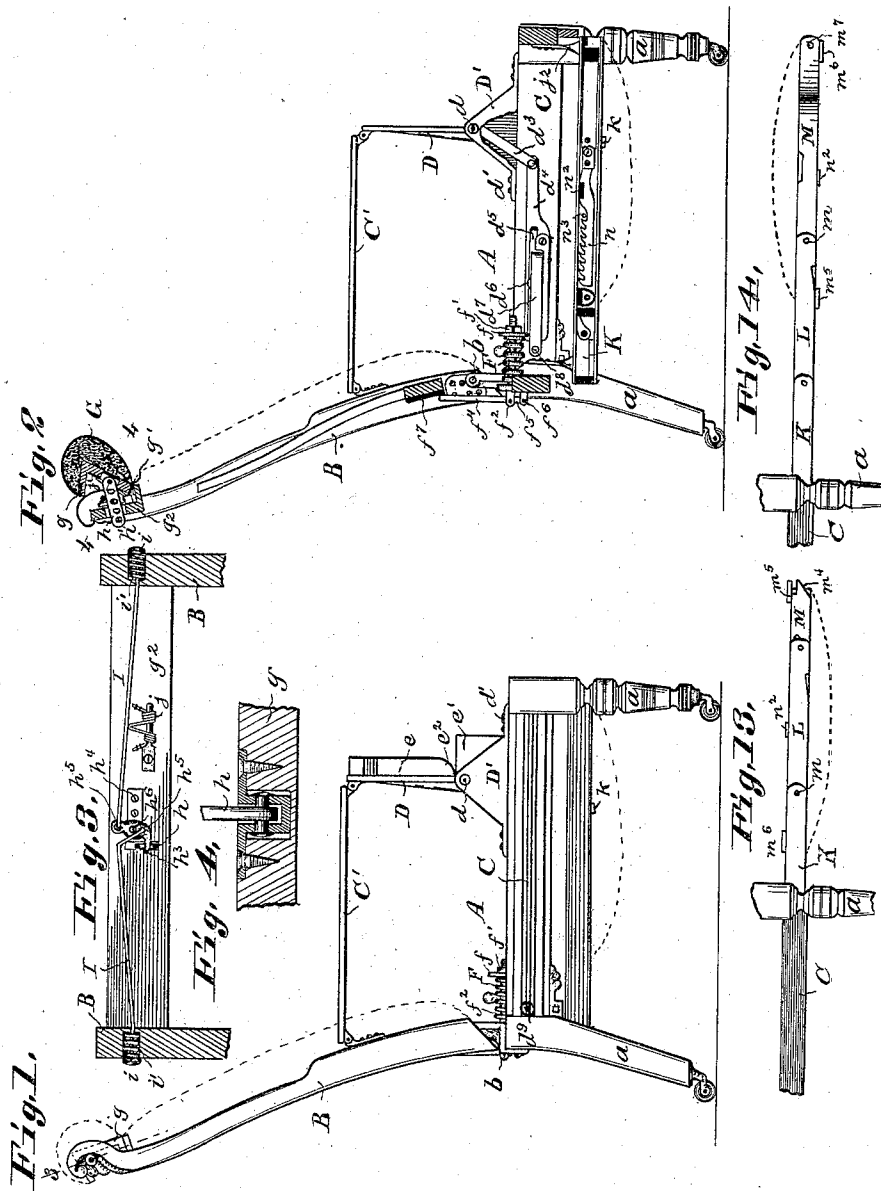
(No Model.)

3 Sheets—Sheet 1.

J. HOGAN.
RECLINING CHAIR.

No. 335,815.

Patented Feb. 9, 1886.



Attest:
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Chas. E. Metz

Inventor:
John Hogan
per Charles Meisner,
Attorney

(No Model.)

J. HOGAN.

3 Sheets—Sheet 2.

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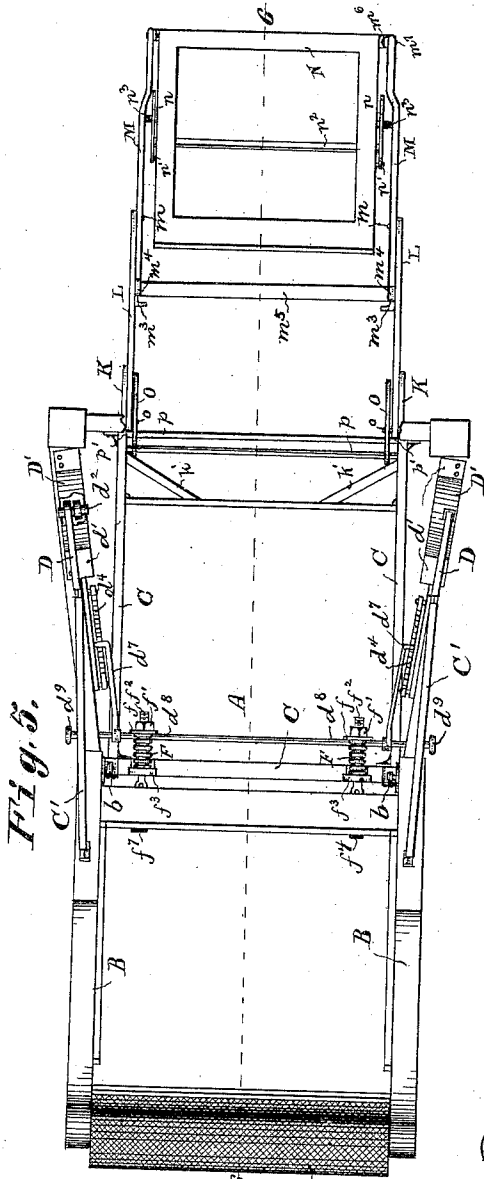


Fig. 5.

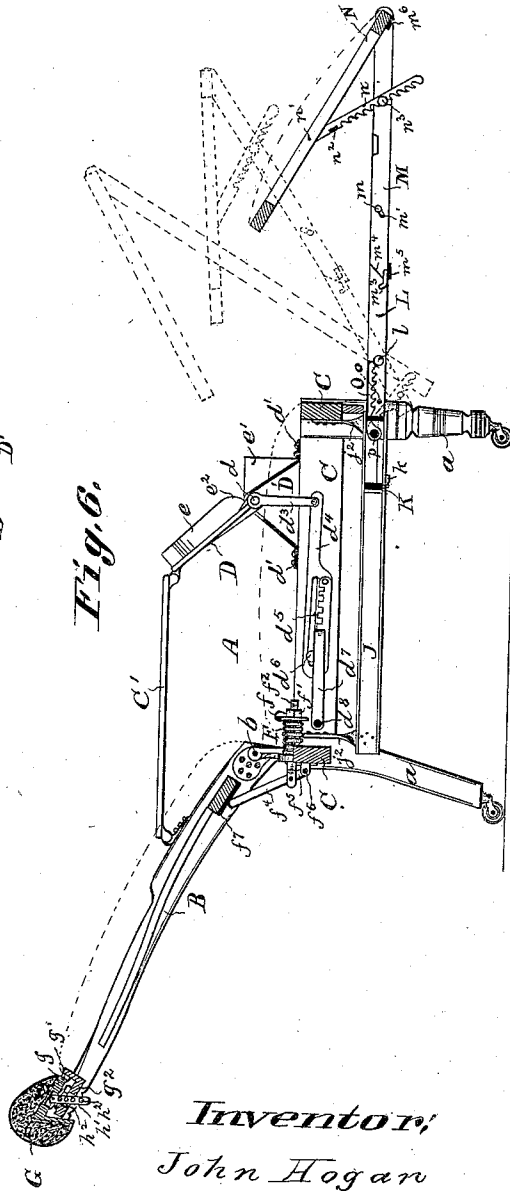


Fig. 6.

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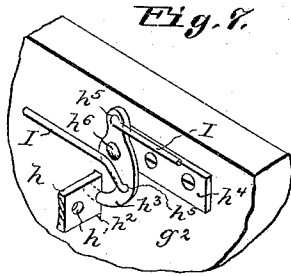


Fig. 8.

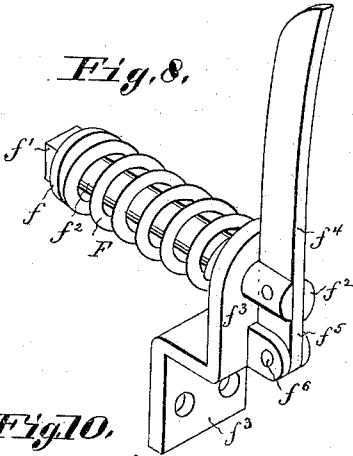


Fig. 9.

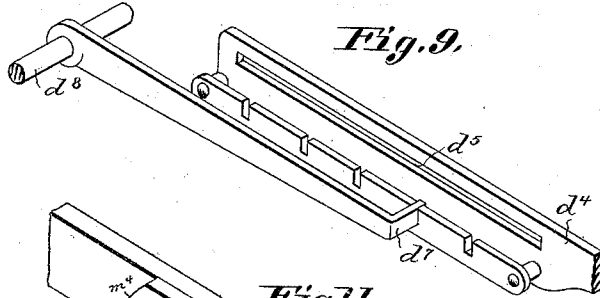


Fig. 10.

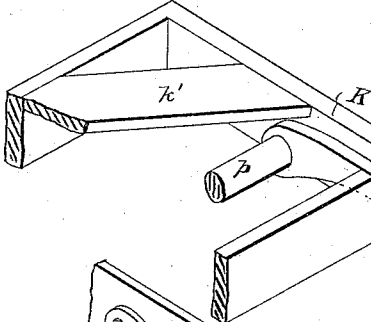


Fig. 11.

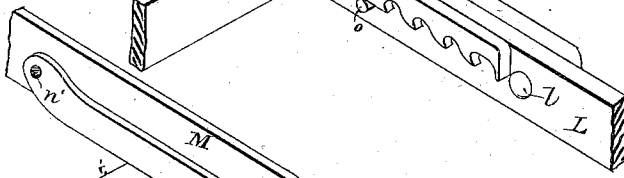
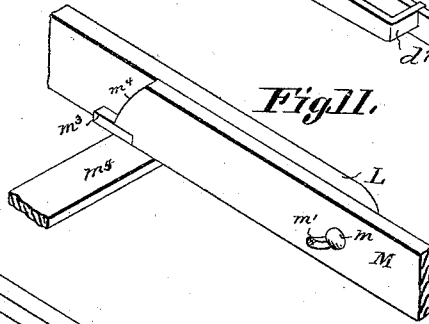


Fig. 12.

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UNITED STATES PATENT OFFICE.

JOHN HOGAN, OF ST. LOUIS, MISSOURI.

RECLINING-CHAIR.

SPECIFICATION forming part of Letters Patent No. 335,815, dated February 9, 1886.

Application filed September 19, 1885. Serial No. 177,027. (No model.)

To all whom it may concern:

Be it known that I, JOHN HOGAN, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Reclining-Chairs, of which the following is a specification.

My improvements specially refer to reclining-chairs, generally used for comfort, and my object is to make a strong, durable, and ornamental chair, which may be operated with either or both hands by the occupant, while being occupied by him, so as to assume various positions usually required to sit or lie easy.

The improvements mainly consist in the righting-spring for the chair-back, in the construction and arrangement of the devices for adjusting and locking the back and arms, and, finally, in the construction of detail parts, all of which will hereinafter fully appear.

Of the drawings, Figure 1 is a side view of my improved chair. Fig. 2 is a section. Fig. 3 is a detail view of the device for operating the head-rest, which I will use in connection with my chair. Fig. 4 is a section on line 4 4 of Fig. 2, showing how the adjusting-bar of the head-rest is hinged in the frame of same. Fig. 5 is a top plan of the chair extended. Fig. 6 is a section on line 6 6 of Fig. 5. Fig. 7 is a detail perspective view of the lock device for the head-rest. Fig. 8 is a detail perspective view of the righting-spring for the chair-back. Fig. 9 is a detail perspective view of the adjusting device for the chair-back. Fig. 10 is a detail perspective view of the sliding frame, leg-rest frame, and adjusting-ratchet of the leg-rest which I will use in connection with my chair. Fig. 11 is a detail perspective view of the locking device for extension leg-rest frame. Fig. 12 is a detail perspective view of the leg-rest frame and adjusting device for leg-rest. Fig. 13 is a detail side view of the sliding frame and leg-rest frame with the leg-rest folded as it appears just after being pulled out from under the chair-seat. Fig. 14 is a like view of the sliding frame and leg-rest frame with the leg-rest unfolded.

Similar letters refer to similar parts throughout the several views.

A is the chair. *a* are its four legs. B is the back, turning on hinges or brackets *b*, se-

cured to the rear of the chair-seat frame. C C are the arms, hinged to the chair-back frame, as usual, and to the standards D D in front. These standards D D, I improve by hinging or pivoting them in boxes D' D' at a point, *d*, above the top of the seat-frame. These boxes D' D' are preferably made of metal, of the shape shown in Figs. 1 and 2, having flanges *d'* below for securing to the chair-frame. The pivots or hinges *d* of the standards form hubs *d''*. (See Fig. 5.) From the lower side of each hub arms *d''* extend downward and at an angle to the standard, and connect to the adjusting and locking device inside of the seat-frame. The object of the boxes D' is to allow the arms *d''* to move freely and to protect them from contact with the upholstery, nails, &c. The upholstery when placed in position hides the boxes on the inside and back, the outside and front of the boxes being incased in wood. The front of the standards D are also incased in wood, and with the casing of their respective boxes form standards in two sections *e* and *e'*.

The object of making the standards in two sections is to bring the fulcrums *d* above the top line of the seat-frame, and by so doing gain strength at the fulcrums, which are braced on both sides and both ends by the box, as well as gaining strength in the standards themselves, as they are made shorter and the strain brought on them through the tension of the righting-springs when locked, is less, on account of the shorter leverage of the standards, than when pivoted to the sides of the chair-frame, as usual. The casing *e* of the standards is beveled off below, as shown at *e'*, Fig. 1, to prevent accidents to fingers when in operation, which would be likely to take place frequently in case the same were made square, so as to fit flush with the casing *e'* when the back is up, and open or gaping when tilted back. The arms *d''*, extending downward from their hub *d''*, are pivoted to the forward end of horizontal sliding ratchet-bars *d'*, one on each side of the inner face of the chair-frame. These sliding ratchet-bars are provided with a horizontal-running slot, *d''*, in which a pin, *d''*, on the chair-frame engages to guide the bars in their movements. The ratchets on the bars *d'* stand up so that a pawl, *d'*, in line with each bar and secured to a cross-rod, *d''*, near each end, turning in the rear of the sides of

the seat-frame, (see Fig. 5,) when dropped, will engage the ratchets from above through their weight. The horizontal sliding ratchet-bars, pawls, and rod, and part of the arms d^3 , are all below the cushion or upholstery and in the inside of the seat-frame. The ends of the cross-rod d^3 pass through the side frame of the seat, and are provided with a hand-knob, d^4 , by which the rod is turned and the pawls raised and disengaged. Either or both knobs may be taken hold of to disengage the pawls, they being within easy reach, one on each side of the chair.

F are coil-springs serving as righting-springs for the back, and are placed on the back of the seat-frame, one on each side, and act through compression. To give tension to these springs, a plate or washer, f , acts and presses against the spring by means of a nut, f^1 , turning on a bolt, f^2 , which latter passes through both and through the spring which is coiled around it, thence through a bracket, f^3 , bolted and secured to the back of the seat-frame, the bolt finally being pivoted to a lever, f^4 , which has a short arm, f^5 , pivoted or journaled at f^6 to the bracket below the point where the bolt passes through. Against this bracket f^3 the opposite end of the coil-spring acts. The other arm, f^4 , of the lever is longer and extends upward, being slightly curved outward and rounded off at the top, and acts with its inner edge against the back of the chair, and through the tension of the spring raises the back forward after it has been reclined. A metal plate, f^7 , placed where the arm f^4 acts, serves to allow same to move easily, without noise, and to prevent wear otherwise resulting should the same act on the wood direct, as is the case in many chairs now in use. With my reclining-chair I prefer to use the head-rest shown in Figs. 1, 2, 3, 4, 5, 6, and 7, which is constructed and operated as follows.

G is the head-rest, made of a wooden frame, g , around the top and front of which the cushion or upholstery is fastened. The head-rest is hinged or pivoted with the bottom edge of the frame g at g' , to the lower edge of the top rail, g^2 , of the chair-back. (See Fig. 2.)

In the middle of the frame g is hinged a bar, h , (see Fig. 4,) having pin-holes h^1 . This bar passes through a slot, h^2 , in the top rail, g^2 , and a pin or pawl, h^3 , turning in a plate, h^4 , secured to one side of the slot h^2 , engages these holes from the side, as shown in Figs. 3 and 7. This pawl has eyelets h^5 , one above and one below the point h^5 , upon which the pawl turns.

I I are rods, one engaging the upper eyelet and the other the lower, and one passing to one side and the other to the other side of the back-frame, and are provided with a push-button, i , at the end.

i' are coil-springs around the ends of the rods I I, and are incased in the frame of the back. One end of these springs acts against the wood of the casing, and the other against the push-button, which latter gives tension to the spring by moving in and out on the threads

on the end of the rods. By pushing either or both buttons, draws the pawl out of engagement with the bar h , to allow the head-rest to be thrown forward, the springs i' throwing the pawl in engagement and return the push-button to original position after same have been released.

To bring the head-rest forward when released, as just described, a coil-spring, j , is placed on the same top rail, g^2 , of the back, and acting, by uncoiling its ends, against the lower board of the wooden frame of the head-rest.

A plate, j' , will be used on the head-rest frame for the spring ends to slide and act on, similar to the plate before described for the righting-spring F.

The leg or foot rest which I will use with my reclining-chair is shown in Figs. 1, 2, 5, 6, 10, 11, 12, 13, and 14, and is constructed and operated as follows:

J J are guides in the shape of channel-bars, and form grooves under the seat-frame, running parallel with and opposite each other from the front to the back of the chair-seat, and are supported by brackets j^2 , at each end, fastened to the inside of the seat-frame. Within the guides or grooves moves a sliding frame, K. A stop-lug, k , limits the movement of the sliding frame forward. This lug k is fastened to the forward end of each guide J. The sliding frame K has brackets $k' k'$, at the back for strengthening same, (see Fig. 5,) the front of said sliding frame being open for admitting a leg-rest or foot-rest frame, which is pivoted at l in the extreme forward ends of same. This leg-rest frame is constructed of two sections, L M, thus forming an extension foot-rest frame. The first section, L, has hinged or pivoted between its arms at m the section M. The section M folds in and out of the section L by turning on the pivots m , and has a slot, m' , in each of its arms, which slots run diagonally up and down. (See Fig. 11.) Within these slots the pivots m of the section L engage. The object of the diagonal slots is to cause the frame M to be drawn forward for engagement and disengagement with the frame L, and to lock and unlock the locking device. The locking device consists of a lug, m^3 , formed on the lower edge of the arms of the frame L. (See Fig. 11.) The ends or extremities of the arms of the frame M are beveled off at m^4 , which bevels come in contact with the lugs as this end of the frame moves up from below, the bevel causing the frame M to move forward until the said bevel clears the lug m^3 , when the frame M, on account of its weight and the diagonal slot m' , slides backward over the lug, preventing it from tilting back or down, and a brace, m^5 , at the ends of the frame M, projecting at both ends and abutting against the under edges of the arms of the frame L, prevents the section M from tilting farther up than the lug. The frame M has a brace, m^6 , running across its front from one arm to the other, which brace is pivoted between the two

arms, as shown at m' in Fig. 12, so as to allow it to revolve. To this brace the leg-rest N is secured. (See Figs. 5 and 6.)

n are ratchet-bars pivoted or hinged with one end at n' to the leg-rest, one on each side. A flat bar, n^2 , connects the ratchet-bars, so that they move alike and together. These ratchet-bars engage a pin or stud, n^3 , on each arm of the section M, to support the leg-rest in any desired position, as shown in Fig. 6. By taking hold of either or both ratchet-bars they are lifted and disengaged for lowering the leg-rest.

In order to throw the leg-rest frame L M, with the leg-rest N, up in different stations, as shown in Fig. 6, the said leg-rest frame turns on the pivot l in the arms of the sliding frame K, as before described.

O O are ratchet-bars secured near the opposite ends of a cross-bar, p , which turns or hinges at p' in the two arms of the sliding frame. These ratchet-bars O O move alike and together and engage pins $o o$ near the rear ends of the section L of the leg-rest frame. As the leg-rest frame L M is brought up, the rear or opposite end, with the studs or pins l , move down, and the ratchet-bars O O, by their weight, drop down with them, and the ratchets engaging the pins or studs, as shown in Fig. 6. By raising either ratchet-bar (both being in easy reach) both are raised and disengaged, when desired, to lower the foot-rest frame.

Having thus fully described the construction of my improved reclining-chair, the operation of the same, and of the head-rest and leg or foot-rest, is as follows: Supposing the chair to be standing, as shown in Figs. 1 and 2, the back being up and forward, head-rest closed, and the foot or leg rest folded and pushed in under the seat, as the person now sits in the chair he takes hold of the leg-rest, pulls same forward and out from under the seat, as shown in Fig. 13. The leg-rest is now turned with the cushion or upholstery down by taking hold of the foot-rest at q and lifting same up and taking it forward, raises and turns the section M of the leg-rest frame on the pivot m of the section L, (see Fig. 14,) the sections M and L locking with each other, as before described. The upholstery of the leg-rest is now up. To bring up the leg-rest frame L M with the leg-rest to any desired height, as shown by dotted lines in Fig. 6, the operator takes hold of any part of the leg-rest frame, raises it with the leg-rest, and the ratchet-bars O drop and engage the studs or pins o , as before described and shown by dotted lines in Fig. 6. To adjust the leg-rest, the same is raised or turned on the pivot m' to assume various positions, (see Fig. 6,) the ratchet-bars n dropping and engaging the pins or studs n^3 , as before described. Turning the knob or knobs d^9 at the sides of the chair-seat, (see Figs. 1 and 5,) raises the pawls d' out of engagement with the ratchet-bars d^4 , leaving the back free to be reclined into any position. The ratchet-

bars d^4 and the arms d^3 , at the same time the chair-back is reclined, are drawn forward. (See Fig. 6.) On releasing the knobs d^9 the pawls d' drop and engage the ratchets of the ratchet-bars d^4 , and lock the back and arms. The righting-springs F are now compressed, ready to throw the back forward again as the knobs d^9 are turned, releasing the pawls from the ratchet-bars d^4 . Pressing in either or both buttons i disengages the pawl h^3 from the bar h , and the head-rest is free to be thrown up and forward by the spring j , and by releasing the buttons i the springs i throw the pawl into engagement with the bar h and hold the head-rest in the desired position. By pressing the head against the head-rest the same is returned back to closed position after the pawl is again disengaged. By taking hold of the leg-rest frame with one hand and raising the ratchet-bars O with the other, disengaging the same from the pin o , the leg-rest frame is lowered to the position shown in Fig. 14, and by taking hold of the leg-rest and the ratchet-bar n , raising the latter, the former is also lowered, as shown in Fig. 14, and, finally, the foot-rest or leg-rest is turned over into the position shown in Fig. 13 by lifting at the forward end of the leg-rest frame M in Fig. 14 and turning same over within the section L, when same is ready to be pushed back in under the seat.

What I claim is—

1. In a reclining-chair, the combination, with a chair-back, B, arms C', and brackets D, pivoted or journaled in boxes D', of the boxes D', top of the chair-seat frame having brace sides and flanges d' , arms d^3 , extending at an angle to the brackets D, down from the hubs d^2 , sliding ratchets d^4 , provided with the slot d^5 , pin d^6 , gravitating pawl d' on the rod d^8 , and knobs d^9 , substantially as herein shown and described, and for the purpose set forth.

2. The combination, with a chair-back and rear of a chair-seat frame, of a righting-spring, constructed substantially of the coil-spring F, washer f , nut f' , bolt f^2 , bracket f^3 , and long and short armed lever $f^4 f^5$, and operating as shown and described, and for the purpose set forth.

3. In a reclining-chair, the combination, with the brackets D, of the stationary triangular boxes D', secured to the top of the seat-frame, which serve as journals for the brackets, for the purpose of raising said fulcrums high above the seat, whereby a short bracket is required for a high arm, substantially as and for the purpose set forth.

4. In a reclining-chair, the combination, with the bracket D, having wood casing e , beveled off at e^2 , of a box, D', having wood casing e^3 , substantially as and for the purpose set forth.

JOHN HOGAN.

Witnesses:

BENJ. A. SUPPAN,
CHAS. F. MEISNER.