J. P. SANDELL.

COMBINED DIVAN AND BED.

APPLICATION FILED NOV. 29, 1915.

1,228,604.

Patented June 5, 1917.

3 SHEETS—SHEET 1.

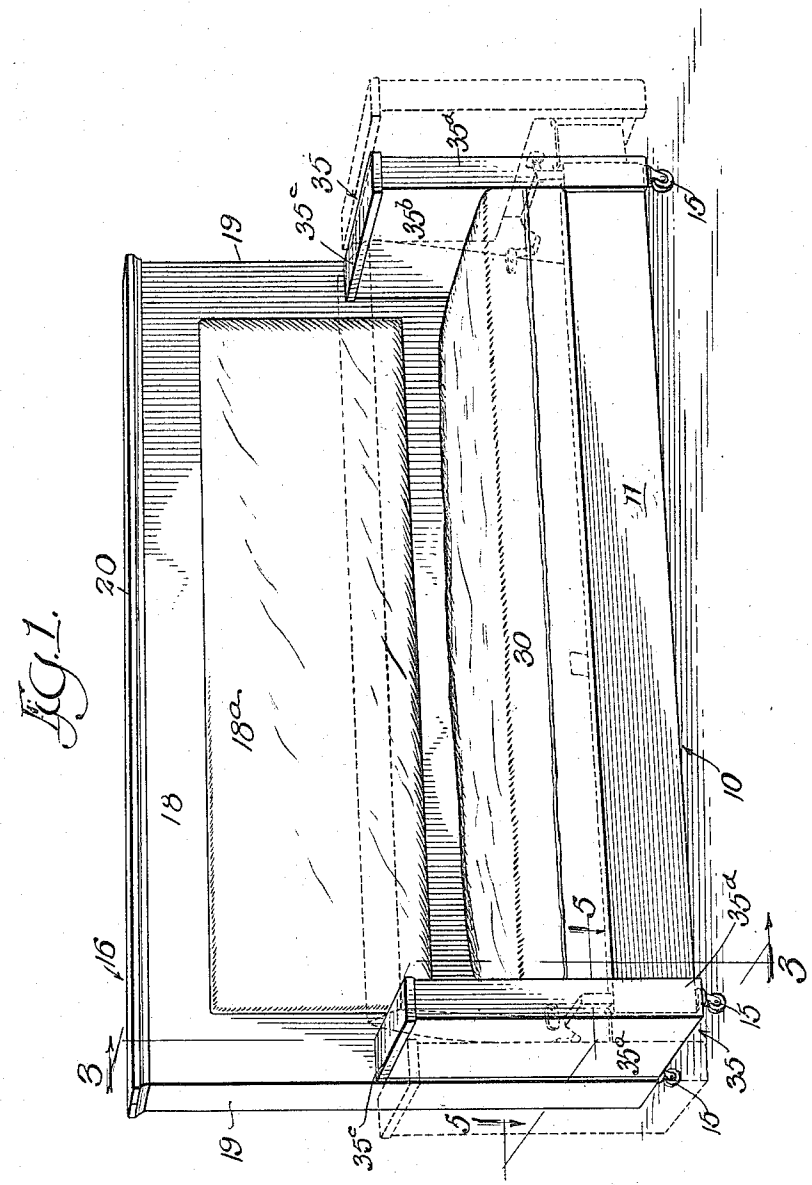


Fig. 1.

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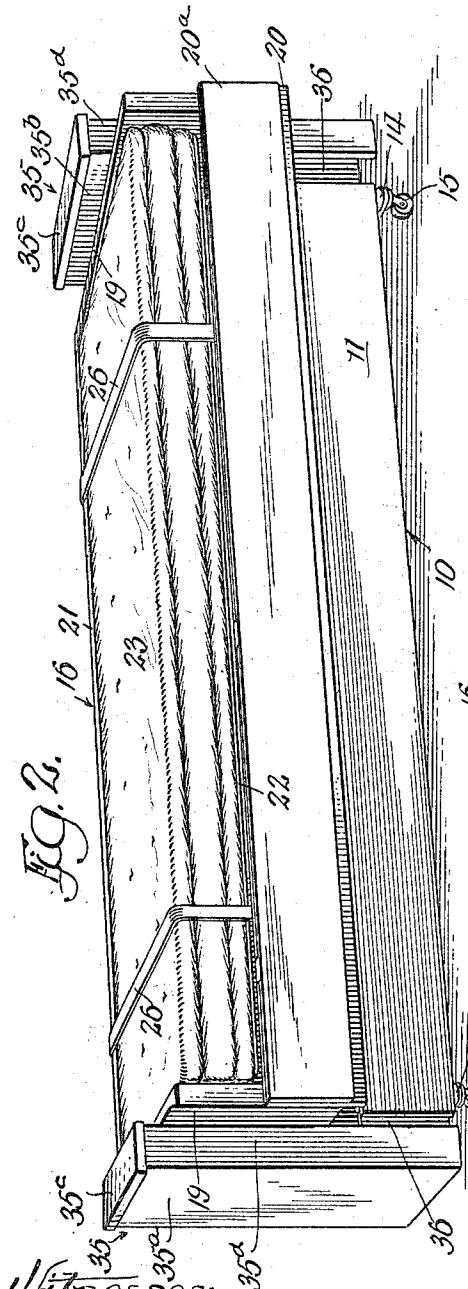


FIG. 2.

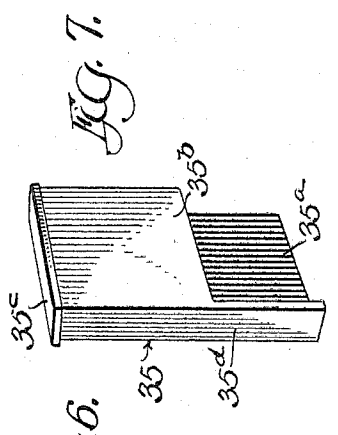


FIG. 7.

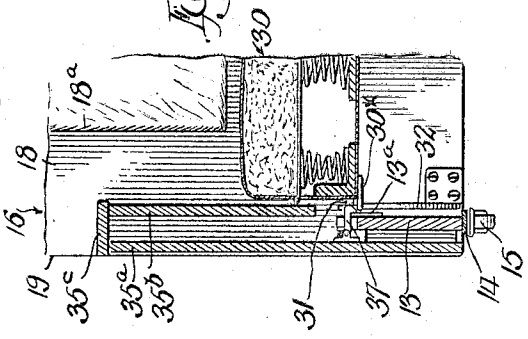


FIG. 6.

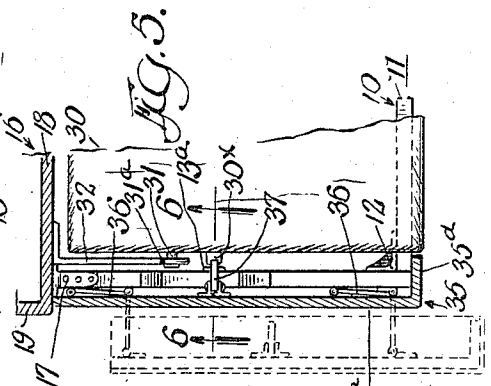


FIG. 5.

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3 SHEETS—SHEET 3.

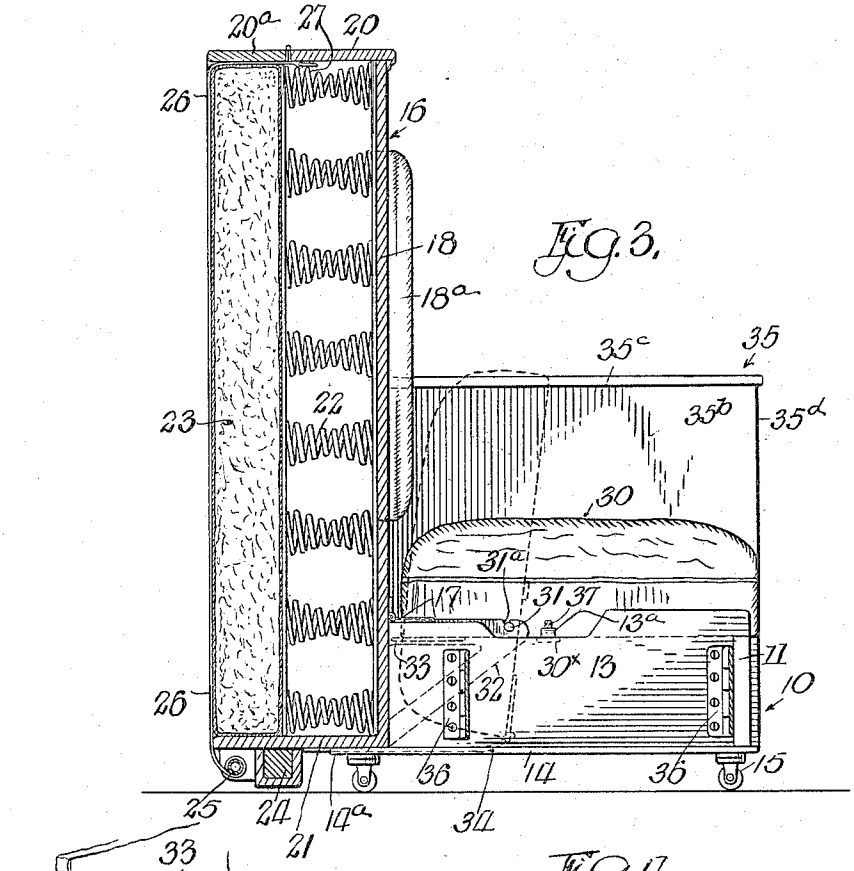


FIG. 3.

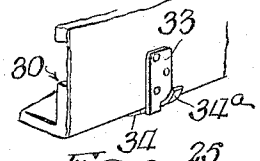


FIG. 8.

FIG. 4.

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UNITED STATES PATENT OFFICE.

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COMBINED DIVAN AND BED.

1,228,604. Specification of Letters Patent. Patented June 5, 1917.

Application filed November 29, 1915. Serial No. 63,941.

To all whom it may concern:

Be it known that I, JOHN P. SANDELL, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Combined Divans and Beds; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an improved combined divan and bed and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

The object of the invention is to provide a structure of the kind described, which is of simple and economical construction and which is easily operated to change from one form to the other, and which at the same time presents the more desirable and necessary advantages both as to appearances and as to comfort of either form it is made to assume.

The various objects and advantages of my improved structure will appear as I proceed with my specification.

In the drawings:—

Figure 1 is a perspective view illustrating my improved combined divan and bed when in the form of a divan.

Fig. 2 is a perspective view illustrating the same when in the form of a bed.

Fig. 3 is a vertical section through my improved combined divan and bed in a plane indicated by the line 3—3 of Fig. 1.

Fig. 4 is a similar view showing the changed relation of the various parts when it is used as a bed.

Fig. 5 is a detail horizontal sectional view, the plane of the section being indicated by the line 5—5 of Fig. 1.

Fig. 6 is a detail vertical section in a plane indicated by the line 6—6 of Fig. 5.

Fig. 7 is a perspective view of one of the movable arm rest members forming a part of my improved combined divan and bed.

Fig. 8 is a detail perspective view illustrating an automatic catch which will be more specifically referred to later.

Referring in detail to that embodiment of my invention illustrated in the accompanying drawings:— 10 indicates as a whole my combined divan and bed. It comprises a longitudinally extending heel board or front member 11 to each end of which there is attached by suitable corner plates 12 (see Fig. 5) rearwardly extending parallel end members 13. To the bottom edges of each end frame member 13 is attached a metallic strap or rail 14 which projects beyond the inner rear end of said frame members as indicated at 14^a, for a purpose which will presently appear. To each strap 14 is fixed in a suitable manner, a pair of caster wheels 15.

16 indicates as a whole a comparatively shallow box-like casing, open at its rear, which is operatively attached to the inner free ends of the divan frame end members 13 by means of hinges 17, 17. Said casing is so made that when arranged in a vertical position, it forms the back for the divan and when swung downwardly about the hinges 17, into a horizontal position, it will form the main frame for the bed. Said casing is thus a combination member and for convenience will be referred to as such in the claims.

The casing 16 comprises a front wall 18 in which is provided a black cushion 18^a, end walls 19 and top and bottom walls 20 and 21 respectively. The casing 16 projects a short distance beyond the end frame members 13 of the divan frame and is adapted to receive a standard size one piece bed spring 22 and mattress 23, respectively, held in place therein, in a manner presently to appear. Said casing is so hinged to the inner top edges of each end frame member 13 by the hinges 17 that when said casing is in its upright position as indicated in Figs. 1 and 3, the bottom wall 21 thereof will engage and rest upon the projecting ends 14^a of the rails 14 before referred to. This construction, as is apparent, removes the weight of said casing from the hinges 17. When the casing 16 is swung about its hinges 17 into a horizontal position, as illustrated in Figs. 2 and 4, the front wall 18 thereof forms the bottom wall of said bed frame.

To provide for an easy manipulation on the part of the operator in making the change from a divan to a bed, I find it convenient to attach to the bottom wall 21 of said casing, a longitudinally extending counter weight compartment 24. 25 indicates a spring shade roller of familiar type which is mounted in suitable bearings formed on the bottom wall 21 of said casing. Said roller is provided with a pair of straps

26, 26, which are adapted to be passed about the mattress 23 and to have their free ends engage with pins 27 secured to the inner face of the top wall 20. When it is desired to remove the mattress for purpose of cleaning or repair, the straps 26 may be readily disengaged from the pins 27, and the mattress and spring then removed from the casing. The top wall 20 is preferably made with a longitudinally hinged section 20ª which may be folded down when the casing is in a horizontal position, so as to present a sitting edge to the mattress.

30 indicates the seat cushion of the usual construction for the divan. Said cushion is of a length approximating the divan frame and is provided at its ends toward its rear edge with pins or trunnions 31 which engage in upwardly or rearwardly opening notches 31ª formed in forwardly extending brackets 32 fixed to the front wall 18 of the casing 16 adjacent the bottom wall 21, said brackets being arranged in a plane adjacent the end members 13 of the divan frame (see Figs. 5 and 6). The front edge of said seat cushion is adapted to normally rest upon the top edge of the heel board 11 when the device is used as a divan. Should it be desirable to remove the cushion 30 for any reason, all the operator has to do is to impart an upward movement to the rear edge of the seat cushion to withdraw the pins 31 from the slots 31ª when it may then be removed entirely.

Projecting from the rear bottom surface of the seat cushion intermediate its ends is a lug 33, which is adapted to engage with a forwardly extending spring latch 34 fixed to the bottom wall 21 of the casing, when the seat cushion 30 as a whole is swung upwardly about its trunnions 31 in the slots 31ª into an upright position as is illustrated in dotted lines in Figs. 1 and 3. This construction holds the seat cushion in a proper position relative to the casing 16 when said casing is being swung into a horizontal position, as when making the change from a divan to a bed and also when it is desired to sweep or otherwise clean beneath the device when used as a divan. When it is desired to lower the seat cushion again to its normal position, the operator depresses the spring latch 34 with the foot, a short extension 34ª being provided for that purpose. (See Fig. 8.)

35, 35 indicate arm rest or rail members, which when the device is used as a divan, provides the finished arms of the divan and which when the device is used as a bed, are adapted to be moved outwardly in a vertical plane to form the head and foot rails respectively thereof. As the said arm rest members are alike with the exception of being "right" and "left", a description of one will suffice for both. The arm rest member 35 (as shown in perspective in Fig. 7 is the "left" hand member), constitutes an upright casing which is open at its rear and bottom end. It comprises outer and inner spaced upright walls 35ª, 35ᵇ, a top wall or rail 35ᶜ and a front wall 35ᵈ, the inner upright wall 35ᵇ terminating at its bottom edge a distance above the like edge of the outer wall for a purpose presently to appear.

Each arm rest member 35 is operatively connected to each end member 13 of the couch frame by means of a pair of hinges 36, so as to have a swinging movement in a vertical plane in a manner similar to that of a parallel rule. Said hinges are attached to the end frame member 13 adjacent its ends and to the inner faces of the upright wall 35ª of the arm rest frame members, near its bottom edge. When in use as a divan, each arm rest member 35 is in a position closely engaging the associated end frame member 13 of the divan frame which frame member is then located in a plane intermediate the upright outer and inner walls of the arm rest member, this position being permitted by reason of construction of the inner upright wall before described. The arm rest member 35 as a whole is locked to the associated divan frame end member 13, with its rear edge engaging the ends of the casing front wall 18 by means of a spring held latch 37 fixed to the inner face of the upright outer wall 35ª, said latch engaging with and projecting a short distance beyond an upright catch 13ª on the inner face of said divan frame end member 13 intermediate its ends. It is apparent from the foregoing description that when the arm rest is locked to the end frame member 13, the casing 16 as a whole is securely held against displacement or movement about the hinges 17, by reason of the engagement of the rear end of said arm rest member with the ends of the casing wall 18, and the inner face of the front, upright wall 35ᵈ will engage the adjoining ends of the heel board 11 and end frame member 13 of the divan frame so as to inclose the same to present a finished appearance thereto.

To the bottom surface of the ends of the seat cushion 30 intermediate the front and rear edges thereof is provided a tripping lug 30ˣ which projects into the vertical plane of the free end of the arm rest member 37 and which when the device as a whole is operated to make the change from a divan to a bed, is adapted to engage said latch so as to release the same from locking engagement with the catch 13ª in the end frame member.

The operation in making a change from a divan to a bed and vice versa is as follows. As an example, the parts are in the position to provide a divan, with the casing 16 locked in the upright position to provide the back

of the divan by the arm rest members, which in themselves, are locked to the end frame members of the divan frame by the engagement of the latches 37 with the catches 13ª on the said end frame members 13, the seat cushion 30 of course, being in its normal horizontal position wherein it is pivotally supported on the brackets 32, with its front edge resting upon the top edge of the heel board 11. It is now desired by the operator to make the change from a divan to a bed. The operator grasps the front edge of the seat cushion 30 and swings it upwardly about its trunnions 31. The projecting lug 33 fixed to the bottom rear edge of the seat cushion contacts against the body of the spring catch 34 projecting forwardly from the bottom wall of the casing so as to depress and pass the same to engage the front edge thereof only. This locks the seat in a position approximately parallel to the upright casing 16. During the upwardly swinging movement of the seat cushion as described, the trip lugs 30ˣ on the ends thereof engage the latches 37 and raise them from locking engagement with the catches on the end members of the divan frame. Said arm rest members may then be swung vertically outward, away from the end members 13 of the divan frame about the hinges 36, as before described, and the casing 16 as a whole then swung downwardly about the hinges 17 (the counter weight 24 assisting in preventing the rapid downward movement) until the front wall 18 thereof engages and rests upon (at its ends) the top edges of the end members of the divan frame, said casing then being in a horizontal position with its end walls in a plane parallel and adjacent to the arm rest members 35 which now form the head and foot pieces respectively of the bed. When in this position the top wall part 20ª may be swung about its hinges as shown in Figs. 2 and 3, so as to give free access to the mattress upon which the bed clothing may now be placed, and, a free sitting edge is presented by said mattress.

With the parts in this position and it is desired to change the device back into a divan, the bed clothing is removed, the bed frame as a whole (the casing 16) is swung about the hinges 17 into an upright position. The operator then steps on the projecting end 34ª (see Fig. 8) of the spring catch 34 to depress the same beyond its locking engagement with the lug 33 on the seat cushion 30, which may then be swung downwardly about its trunnions which bear in the brackets 32 on the casing 16, until the front bottom edge of said seat cushion rests upon the top edge of the heel board 11 of the divan frame.

The arm rest members 35 are then moved inwardly about the hinges 36 when the front inclined edges of the latches 37 will ride over and engage behind the associated catches on the end members 13 of the divan frame. The device now in all respects presents the appearance of a good substantial divan.

It is apparent that my improved structure possesses many advantages over structures of the present time for the same purpose. A full size standard spring and mattress, each of which are integral in themselves, may be used instead of the sectional folding springs and associated thin mattress which are not conducive to comfortable sleep.

Another advantage is that there is no possible manner in which the various parts may shift under the weight of persons occupying the same (as when a divan or bed) to automatically or partially make a change from one form to the other. It consists of but a few parts which cannot get out of order, and is simple to operate in making the change from one form of the device to the other. Also the spring and mattress may be easily removed for the purpose of cleaning and it is also possible to clean underneath the divan without moving the same as a whole.

While in describing my invention I have referred to the details of construction and arrangement of parts, I do not wish to be limited thereto except as may be pointed out in the appended claims.

I claim as my invention:—

1. A combined divan and bed, comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of its ends but capable of movement beyond said planes, said rail members being adapted to become head and foot board members of the bed, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, and means for locking said seat member to said combination member when said seat member is swung upon its pivotal connection with said combination member.

2. A combined divan and bed, comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of

its ends but capable of movement beyond said planes, said rail members being adapted to become head and foot board members of the bed, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, and means for automatically locking said seat member in substantially parallel relation to said combination member when said seat member is swung upon its pivotal connection with said combination member.

3. A combined divan and bed, comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of its ends but capable of movement beyond said planes, said rail members being adapted to become head and foot board members of the bed, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, said device being detachably connected to said seat member, and means for locking said seat member in substantially parallel relation to said combination member when said seat member is swung upon its pivotal connection with said combination member.

4. A combined divan and bed, comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, said frame being provided with rear extensions to engage the bottom edge of said combination member when said combination member is in upright position, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of its ends, but capable of movement beyond said planes, said rail members being adapted to become head and foot board members of the bed, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, and means for locking said seat member in substantially parallel relation to said combination member when said seat member is swung upon its pivotal connection with said combination member.

5. A combined divan and bed comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of its ends but capable of movement beyond said planes, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, means for locking said rail members to said frame when the seat member is in horizontal position, and means actuated in raising the seat for unlocking the seat member from said rail members.

6. A combined divan and bed comprising a horizontally disposed frame having a front member and two end members, a combination member hinged near one edge to the frame end members with its ends projecting beyond said frame end members, rail members connected to said frame, extending at right angles to said combination member and normally located within the planes of its ends but capable of movement beyond said planes, a seat member normally resting at its forward edge upon the front frame member, devices extending from said combination member and pivotally connected to said seat member providing rear supports for said seat member, means for locking said rail members to said frame when the seat member is in horizontal position, means actuated in raising the seat for unlocking the seat member from said rail members, and means for locking said seat member in substantially parallel relation to said combination member when said seat member is swung upon its pivotal connection with said combination member.

In testimony that I claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 26th day of November, A. D. 1915.

JOHN P. SANDELL.

Witnesses:
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KARL W. DOLL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."