

No. 887,764.

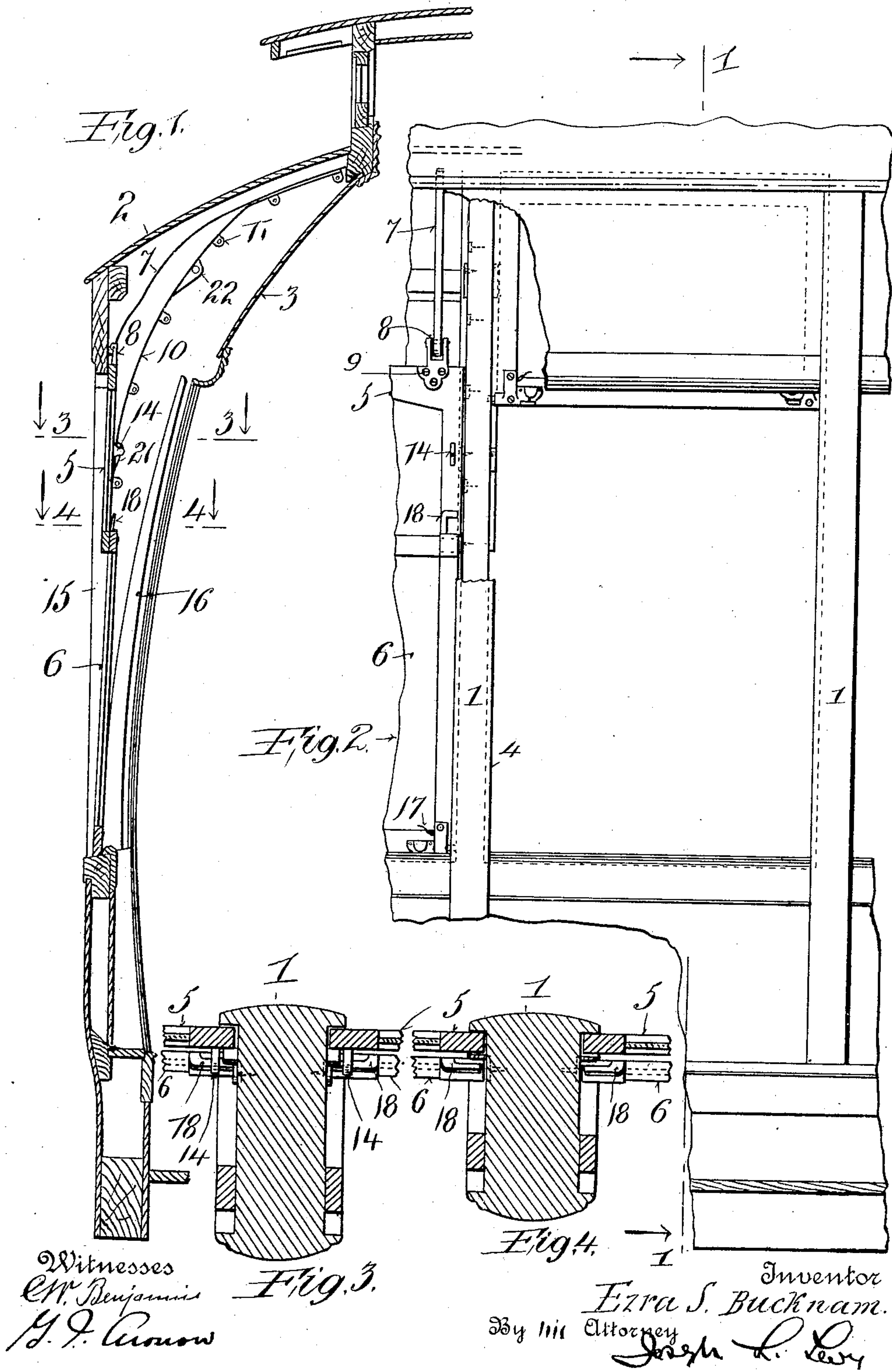
PATENTED MAY 19, 1908.

E. S. BUCKNAM.

CAR.

APPLICATION FILED JUNE 7, 1906.

3 SHEETS—SHEET 1.



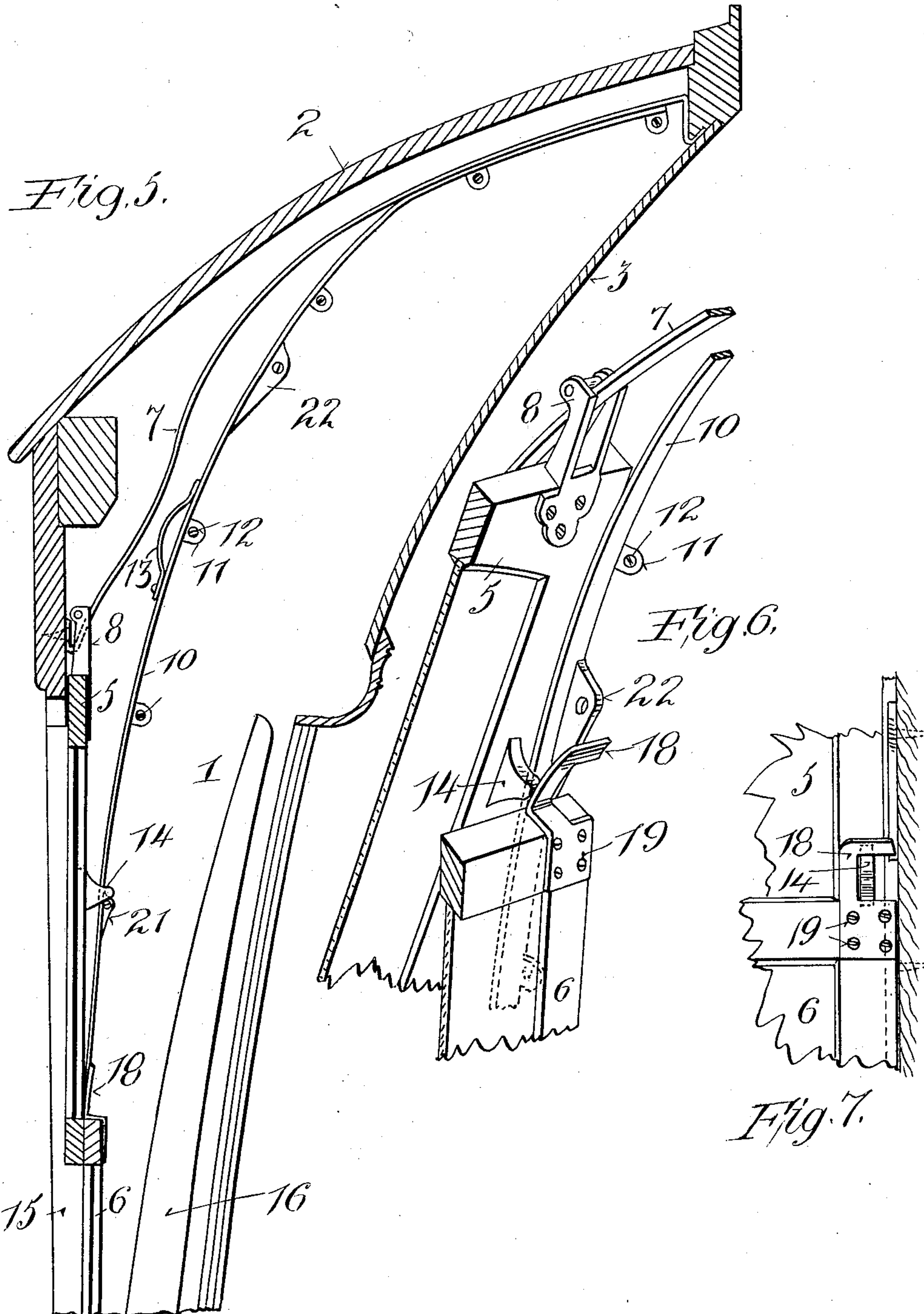
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Witnesses
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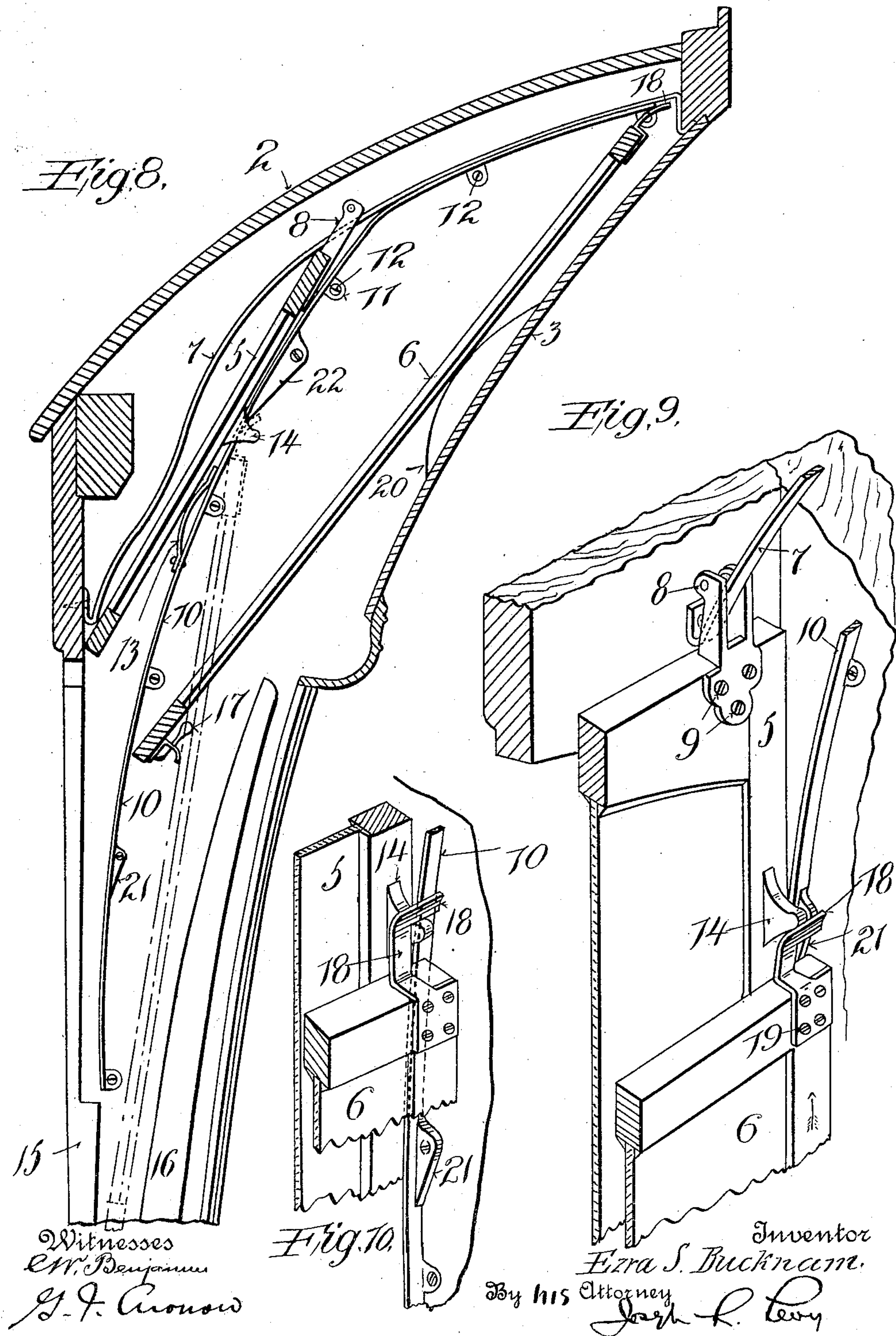
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3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

EZRA S. BUCKNAM, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO JOHN A. BRILL, OF PHILADELPHIA, PENNSYLVANIA.

CAR.

No. 887,764.

Specification of Letters Patent.

Patented May 19, 1908.

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To all whom it may concern:

Be it known that I, EZRA S. BUCKNAM, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Cars, of which the following is a specification.

The object of my invention is to provide a car with windows closed by two sashes, which sashes move in independent slide-ways and yet are so arranged and disposed that one is adapted to move the other either into or out of the storage chamber immediately under the roof of the car. This object is accomplished by means of my invention, one embodiment of which is hereinafter set forth.

For a more particular description of my invention, reference is to be had to the accompanying drawings forming a part hereof, in which,

Figure 1 is a sectional view of a car provided with my improvements. Fig. 2 is a side elevation of the inner portion of a car, only one window being shown in full. Figs. 3 & 4 are sectional views taken on the line 3—3 and 4—4 of Fig. 1, looking in the direction of the arrows. Fig. 5 is an enlarged view of the upper portion of the structure shown in Fig. 1. Fig. 6 is a perspective view of a portion of the sashes and sash guiding mechanism. Fig. 7 is a front elevation of a portion of the sashes in the position indicated in Fig. 6. Fig. 8 is a similar view to Fig. 5, except that the sashes are shown in the positions they occupy when stored in the roof chamber. Figs. 9 & 10 are perspective views showing portions of the sashes and their guides, the views being taken just before the upper sash has been raised by the lower, and just after the completion of the downward movement of the upper sash, respectively.

Throughout the various views of the drawings, similar reference characters designate similar parts.

The car is provided with the usual posts 1, roof 2, which is preferably a deck roof of the usual form, head-linings 3, a window 4, closed by the sashes 5 & 6, the numeral 6 designating the lower sash, and the numeral 5 designating the upper sash.

The upper sash 5 is suspended from the

guiding strap 7 by means of standards 8 fixed by screws 9 to the upper edge of the sash 5 and near each side thereof, two being used on each sash. The guiding strap 7 is secured in the roof chamber between the roof 2 and head-lining 3 by any suitable means, as by screws set in the walls of the car, the precise manner of fastening not being material.

The lower end of the sash 5 is guided in its movement by a parting-strip 10 which is preferably made of metal and bent so as to conform to the roof of the car and to the movement of the sashes, and is preferably bent as shown in Figs. 1, 5 & 6. This parting-strip 10 is held in position by means of lugs 11 through which screws 12 pass and hold the parting-strip 10 to the post 1. This parting-strip 10 separates the slideways of the sashes 5 & 6 so that under no circumstances can these slideways be said to merge or be in common. As shown clearly in Fig. 8, the strip 10 has a spring 13 which is so located and shaped as to secure the sash 5 in its raised position when stored in the roof of the car. This spring 13 is preferably a leaf spring, but its precise shape is not material provided it performs its function.

Near each side edge, and about the middle of its length, the sash 5 is provided with lugs 14 shaped substantially as shown. The function of these projections 14 will appear below.

The sash 6 is guided in its movements only by the strip 10, and the strips 15 & 16 which are found on every car. At its lower end and at each edge, the sash 6 is provided with the usual spring bolt 17, which bolt holds the sash and locks it in any position in which it may be placed, suitable sockets, not shown, being provided for this bolt, wherever necessary.

The upper edge of the sash 6 is provided with two hooks 18, one being placed at each corner. These hooks 18 are secured by suitable screws 19 and are preferably bent back slightly so as to more easily perform their functions, as will appear below.

The sash 6 is supported in its raised position, as indicated in Fig. 8, by means of a bolt 17 and a spring or other support 20, secured to the head-lining 3. A spring is preferred because it is elastic, and therefore car-

ries the sash with less danger of breaking the glass.

The parting-strip 10 is provided with two cams 21 & 22 respectively. The cam 21 is placed opposite, or nearly opposite, and slightly below, the position occupied by the projection 14 when the upper sash 5 is in its lowermost position, and the cam 22 is located just above the position occupied by the lug 14 when the sash 5 is in its uppermost position. The correct locations of the cams is indicated in Fig. 8.

The operation of my improved device is as follows: The lower sash 6 is raised, and when its upper edge strikes the cam 21, it is moved away from the sash 5 so that the hook 18 is thrown over the projection 14 as indicated in Fig. 9. The hook 18 cannot engage the cam 21 because it does not extend far enough laterally. The cam 21 is not sufficiently large to cause the sash 6 to clear the lug 14, so that this lug engages the upper edge of the sash and rests between it and the hook 18. From this point on, the two sashes are raised together until the cam 22 is reached by the upper sash. This cam is made much larger than the cam 21, and is so arranged, disposed and proportioned that it disengages both the hook 18 and the sash 6 from the projection 14, so that from this point on, the sash 6 is moved alone. The sash 5 is supported at its upper end by a standard 8, and near its lower by the spring 13, and the sash 6 is supported by the bolt 17 and a block or spring 20 placed on the head-lining, or by any other suitable means.

When the window is closed the sash 6 is first lowered, and then the cam-block 22 causes the lug 14 to be caught between the hook 18 and the sash 6. As the downward movement of the sash 6 is continued, this hook 18 causes the sash 5 to overcome the tension of the spring 13 and to be lowered until in its lowest position, where the sashes are again released by the cam 21.

It is obvious that various other modifications may be made which employ the essential characteristics of my invention, so that I do not regard it as limited to the specific disclosure herein made, but as broad enough to cover all structures that come within the scope of the annexed claims.

Having thus described my invention, what I claim is:

1. In a car having stanchions and roof pockets, an upper and lower sash, guiding means for each of said sashes, means whereby the lower sash will engage the upper sash and carry it into said roof pocket, and means for disengaging the said sashes, so that the lower one may continue upward after its disengagement from the said upper sash.

2. In a car having stanchions and a roof pocket an upper and a lower sash, guiding means for said sashes, means near the top of

said lower sash for engaging the upper sash and carrying it into said roof pocket, and means for disengaging said sashes, so that the lower sash may continue upwardly after the upper sash is in its highest position.

3. In a car having stanchions and a roof pocket, an upper and a lower sash, independent guiding means for the said sashes, whereby they will be caused to move in separate slideways, means whereby the lower sash will engage the upper one and carry the latter into the roof pocket, and means for disengaging the sashes whereby the lower sash may continue to move upward after its disengagement from said upper sash.

4. In a car having stanchions and a roof pocket, an upper and a lower sash, a plurality of straps in said roof pocket for independently guiding said sashes, means on the lower sash for engaging the upper sash and causing it to move into said roof pocket and means for disengaging the sashes whereby the lower sash may continue its movement after raising the said upper sash into the roof pocket.

5. In a car having stanchions and a roof pocket an upper and lower sash, means for guiding said sashes into and out of said roof pocket, means for causing the said sashes to engage whereby the lower will raise the upper, means for disengaging the said sashes so that the lower can continue traveling upward after its disengagement from the upper sash, and means for causing the said sashes to engage on their downward movement.

6. In a car having stanchions and a roof pocket, an upper and a lower sash, means for guiding said sashes in their movement into and out of said roof pocket, means on the upper part of the lower sash for engaging the upper sash to move it into said roof pocket, means for disengaging said sashes so that the lower one can continue upward after its disengagement from the upper, said interlocking means being adapted to cause the sashes to engage on their downward movement, and means for disengaging the sashes when the upper sash has reached its lowermost position.

7. In a car having stanchions and a roof pocket, upper and lower sashes movable into said pocket, means for guiding said sashes, a projection on the upper sash, a hook on the upper end of the lower sash, means interposed in the path of the lower sash adapted to force it inwardly to allow the said hook to pass the projection, whereby both sashes are locked together, and further means interposed in the path of said lower sash adapted to force the latter inwardly to unlock the said sashes.

8. In a car having stanchions and a roof pocket, upper and lower sashes movable into said pocket, means for guiding said sashes, a projection on the upper sash, a hook on the lower sash, a projection on the stanchion dis-

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posed in the path of the lower sash and adapted to divert the latter to allow the hook thereon to pass over the projection on the upper sash another projection on the said stanchion, above the said first stanchion projection, adapted to divert said lower sash whereby both sashes will be disengaged, the said means being adapted, upon the lowering of

the lower sash, to first lock, and then unlock said sashes. 10

Signed at the county of Monroe, State of New York, this 4th day of June, 1906.

EZRA S. BUCKNAM.

Witnesses:

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