Ogden & Hart,

Sash Holder.

No. 4,433. Patented Mar. 21, 1846.

Fig. 3

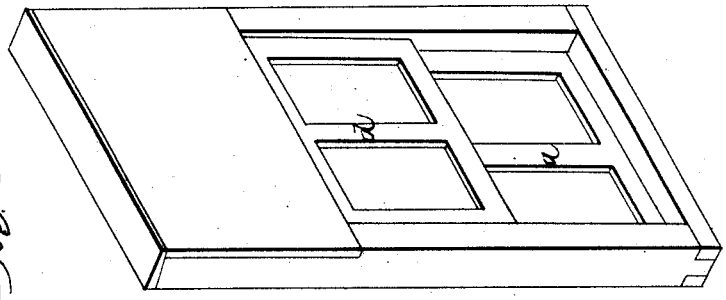


Fig. 4

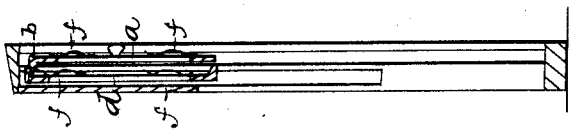
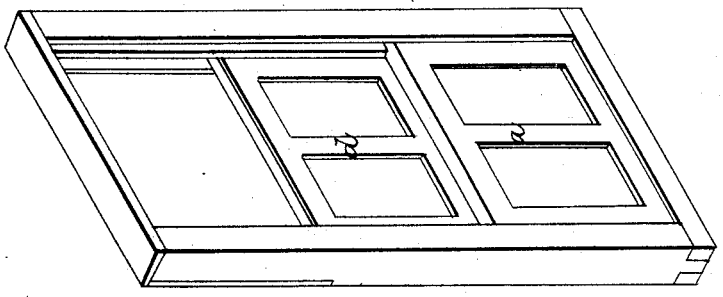


Fig. 2

Fig. 1



UNITED STATES PATENT OFFICE.

JAMES OGDEN AND D. R. HART, OF TROY, NEW YORK.

CARRIAGE-WINDOW.

Specification of Letters Patent No. 4,433, dated March 21, 1846.

To all whom it may concern:

Be it known that we, JAMES OGDEN and D. R. HART, of Troy, in the county of Rensselaer and State of New York, have invented several new and useful Improvements in Windows, which improvements are applicable to cars, stages, and other carriages, and that the following is a full, clear, and exact description of the principle or character thereof which distinguishes them from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the inside of a window of an omnibus; Fig. 2, a vertical section; Fig. 3, an outside view, and Fig. 4, a section of the window raised.

The same letters indicate like parts in all the figures.

The advantages resulting from our improvement are as follows: Experience has proved, that when a carriage is made with a recess for the window to slide down below the arm, the body is subject to decay from the effect of the dampness, occasioned by water leaking into the aperture for the reception of the frames, and thus destroying the lower frame work; and in addition to this evil, when the windows are down, they are apt to swell, and stick, so that they cannot be drawn up. To obviate these difficulties the arms have been made solid, to protect the lower frame work; but a serious difficulty presented itself in the height, and consequent weight required in the top, to enable the frames to slide up so as not to obstruct the view, thus carrying the body up nine or ten inches higher than when the windows slide down, which causes the body to give way sooner, as well as adds to its weight. To obviate these difficulties we form our window frames in two or more parts which slide up and down in separate grooves as shown in the drawings, the lower frame (*a*) being the innermost one and having a projecting ledge (*b*), at the top on its outside, that is on a line with a similar one (*c*), on the lower edge of the next frame (*d*) above, like the commonly constructed window frames in houses, but in addition to this, we form a projecting ledge (*e*) on the top of the upper frame on the inside, against which the ledge (*b*) on the lower frame strikes when raised and carries up the second frame with it, as shown in Fig. 4. Thus it will be seen, that by taking hold of the knob, attached to the lower frame and raising it, all that are above are carried up, and when that is lowered, those above are made to slide down to their places. A window can thus be formed of any given height, which will slide up into the smallest desired spaces, without any more inconvenience than a single frame. It will be evident that blinds can also be arranged on the same principle.

To prevent the shaking of the windows, we attach to the four corners of each of the frames a light spring (*f*) on the inside, that bears against the inner face of the groove in which the frame slides. It has been usual to place springs at the edges of the frames but that will not prevent the jar, which is effectually remedied by our improved application of them to the side.

Having thus fully described our improvements and their application, what we claim as our invention and desire to secure by Letters Patent, is—

Constructing the windows of carriages in the manner described, having two or more divisions or frames with ledges at the top and bottom, so that by raising the lower frame, all the others will be raised in the manner and for the purpose set forth.

JAMES OGDEN.
DAVID R. HART.

Witnesses:
J. STEVENS,
HIRAM TAYLOR.