

No. 884,154.

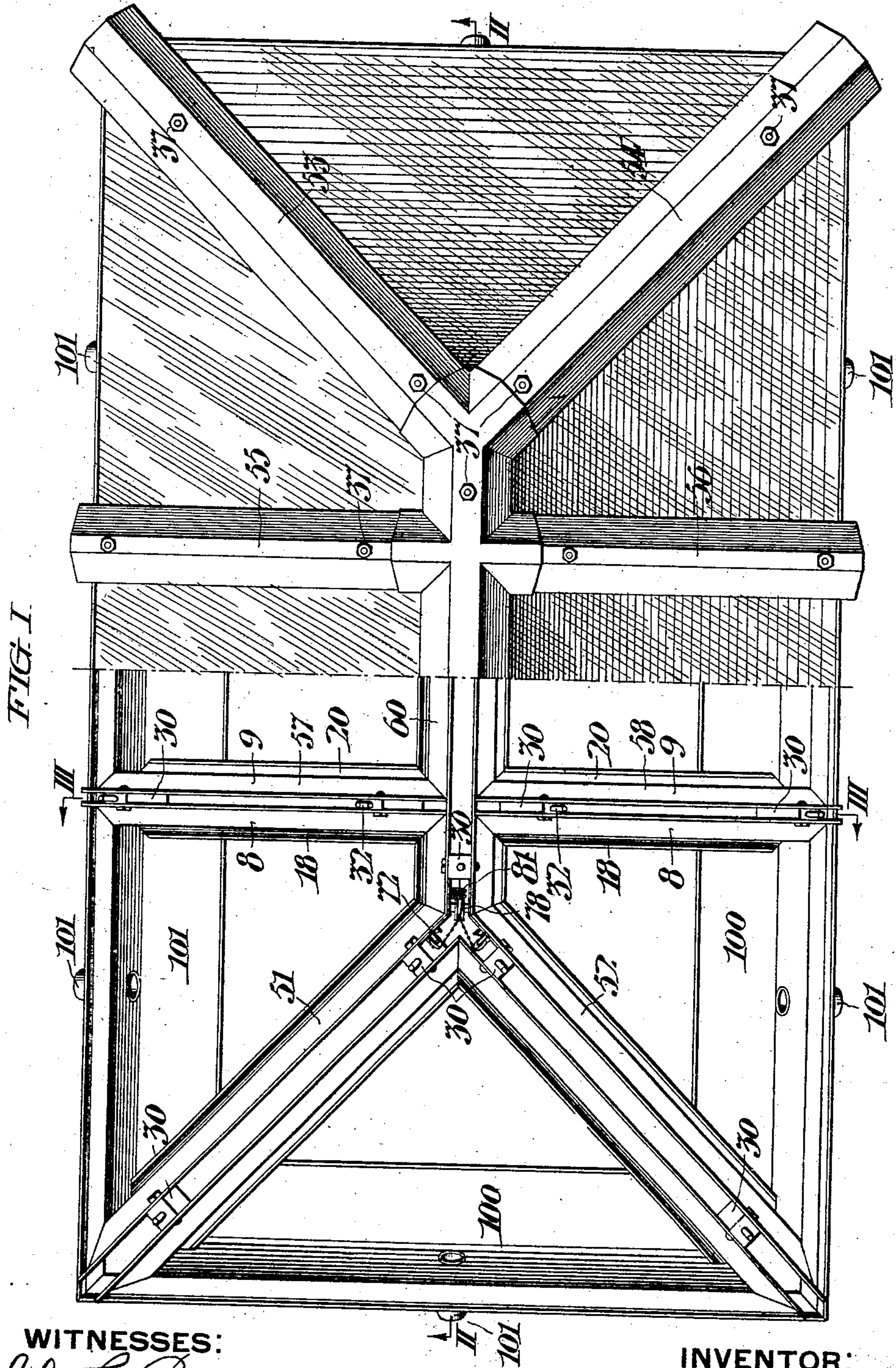
PATENTED APR. 7, 1908.

H. E. HERSH.

VENTILATING SKYLIGHT AND ITS SASH BARS.

APPLICATION FILED JUNE 12, 1907.

4 SHEETS—SHEET 1.



WITNESSES:

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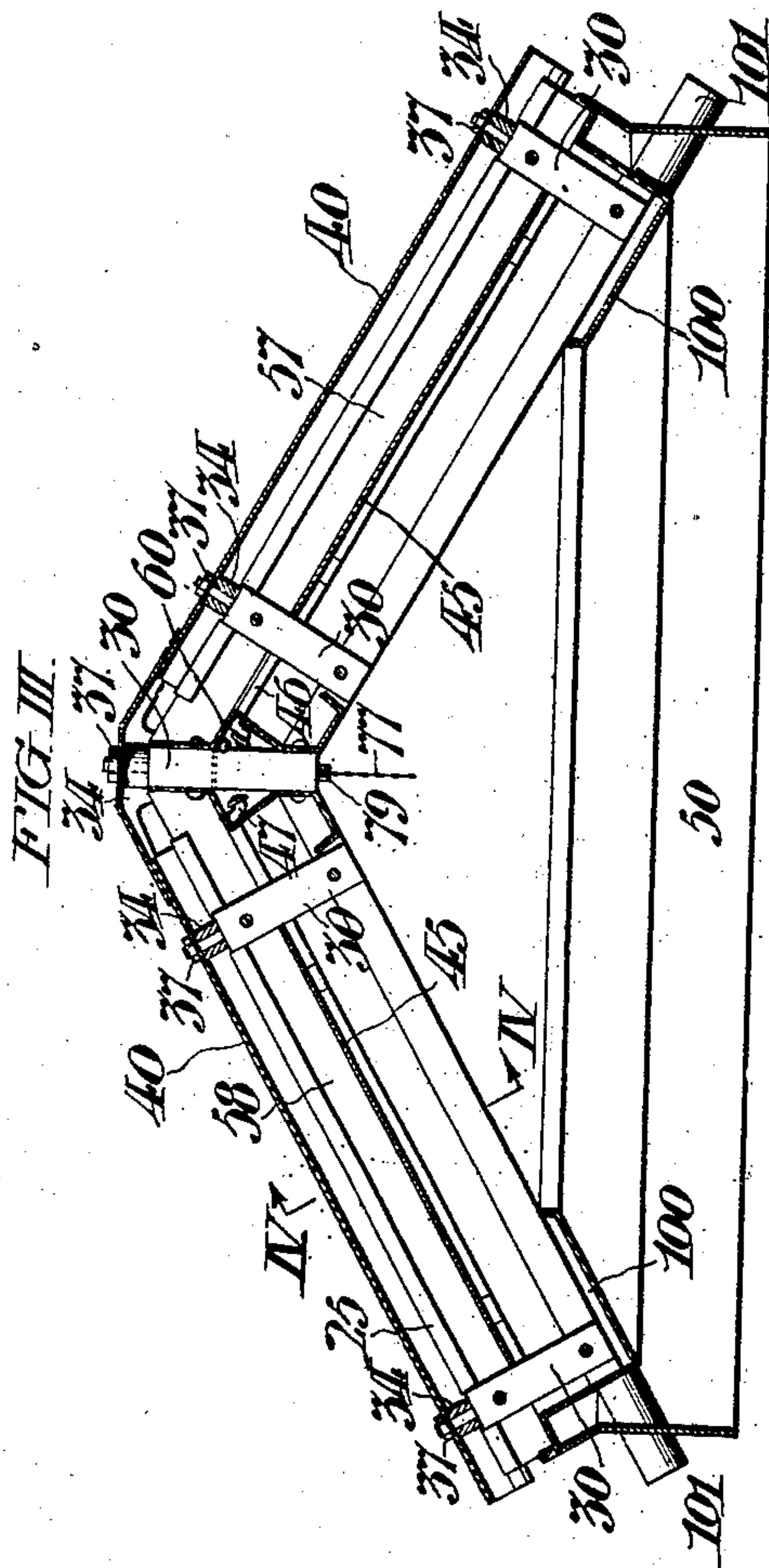
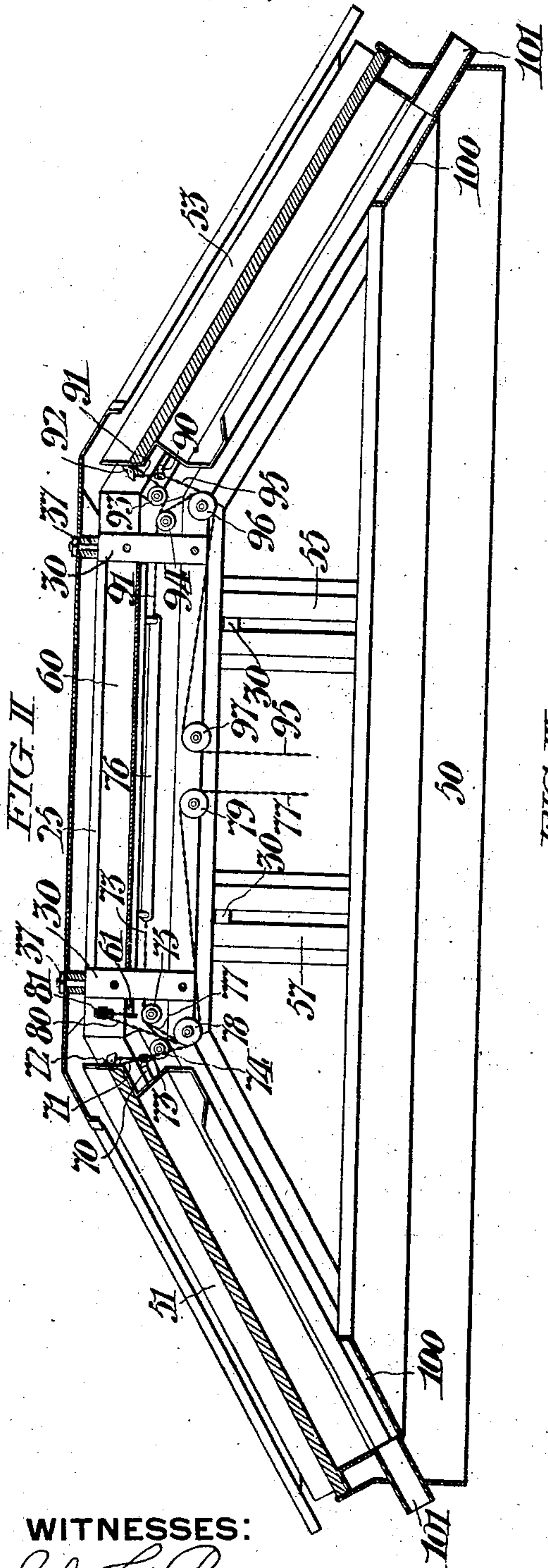
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4 SHEETS—SHEET 2.



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4 SHEETS—SHEET 3.

FIG. IV

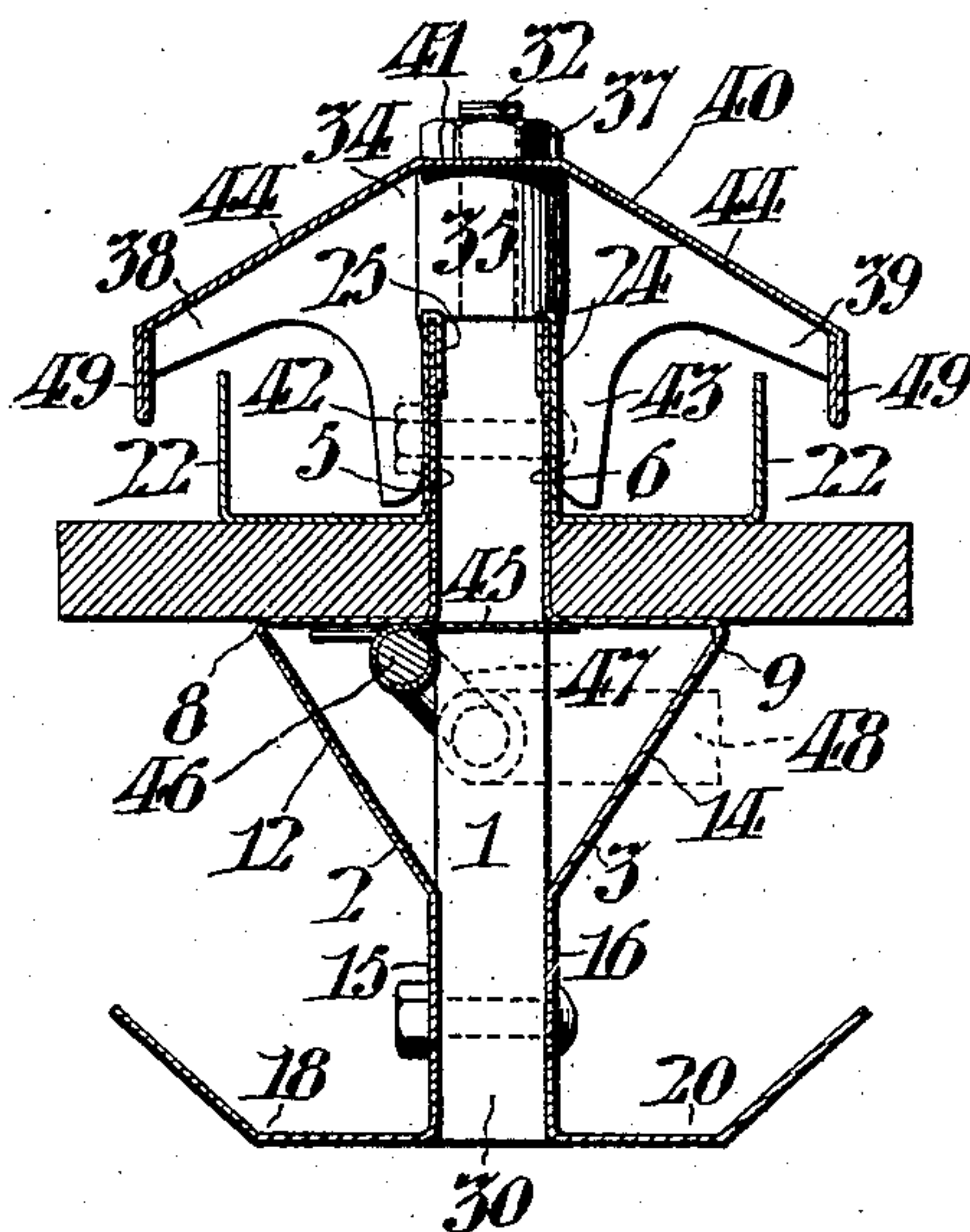


FIG. V

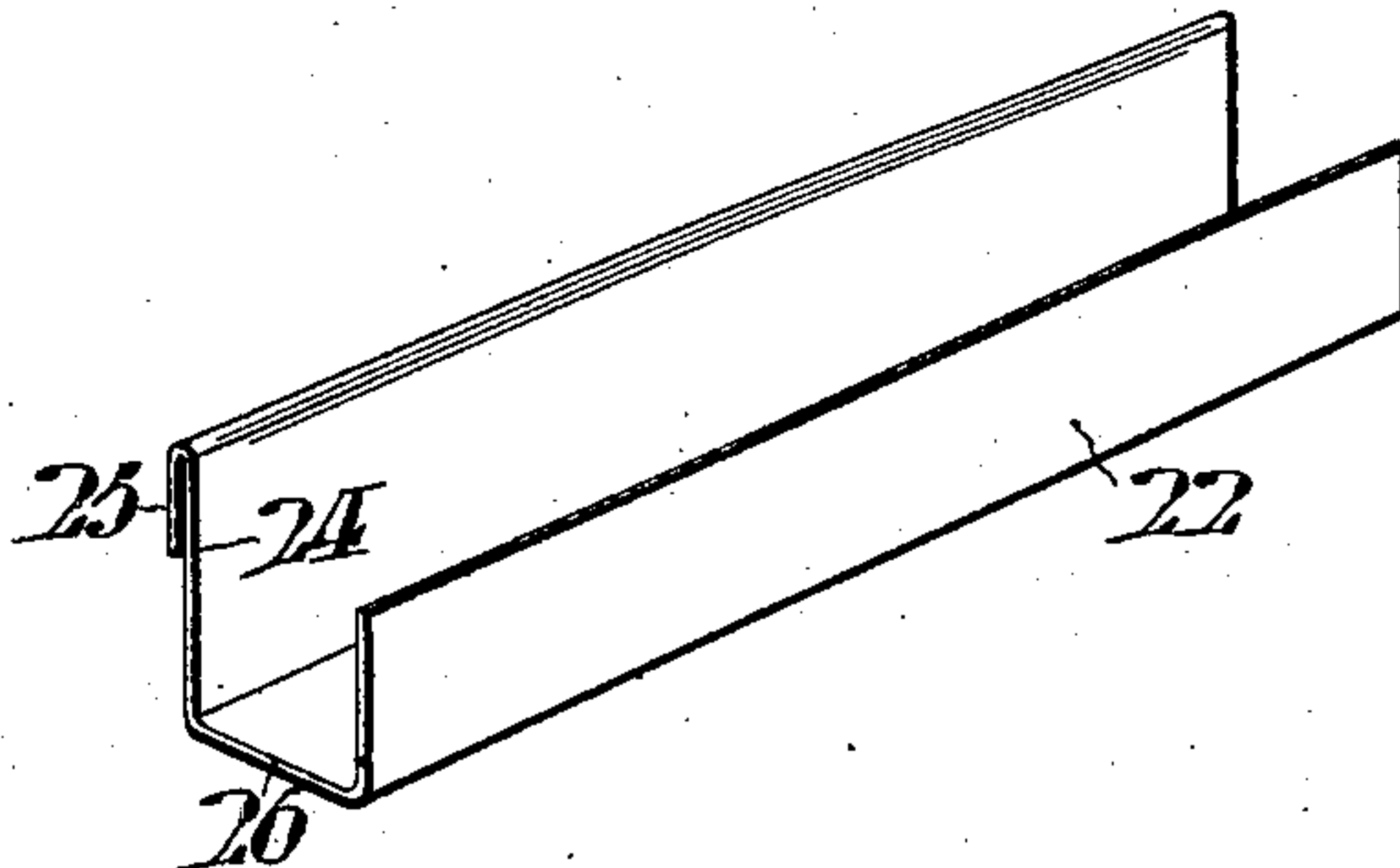
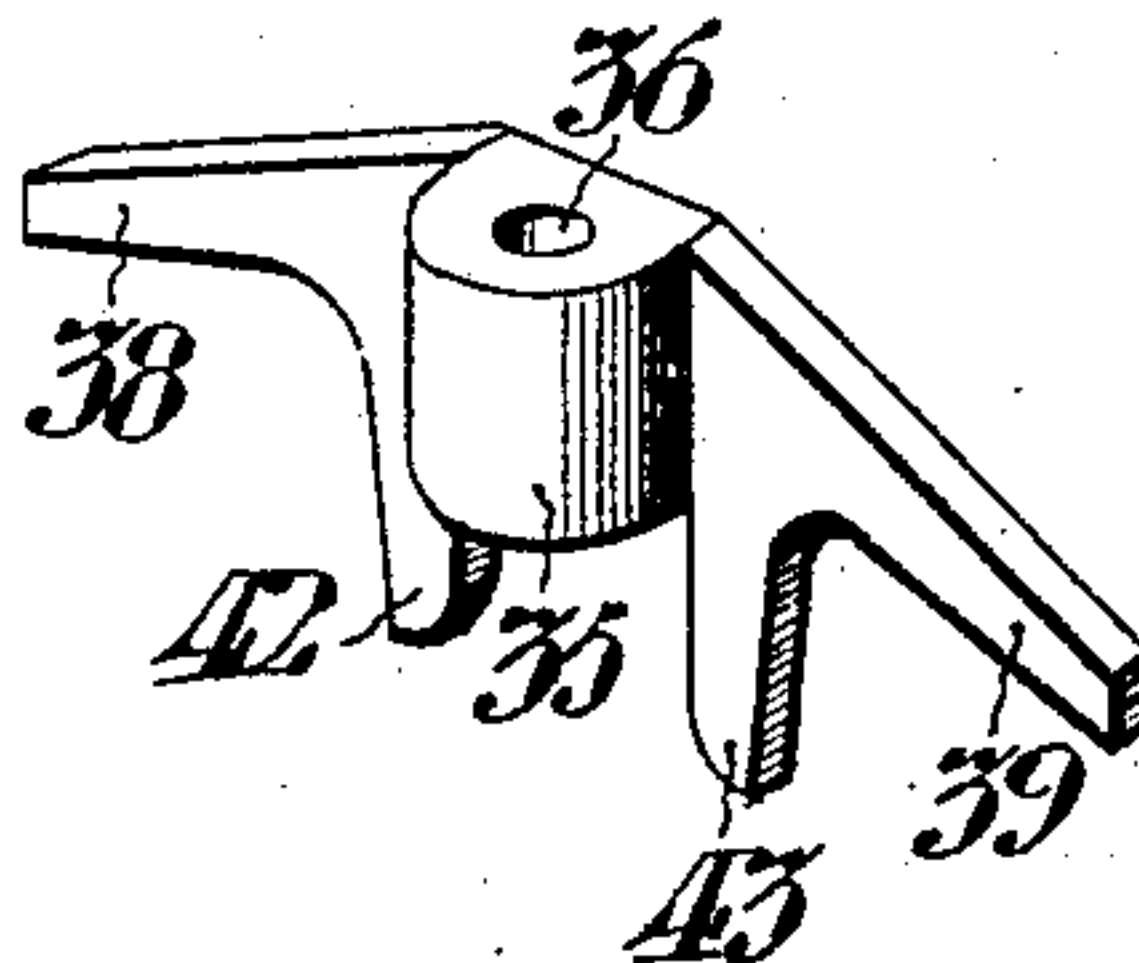


FIG. VI



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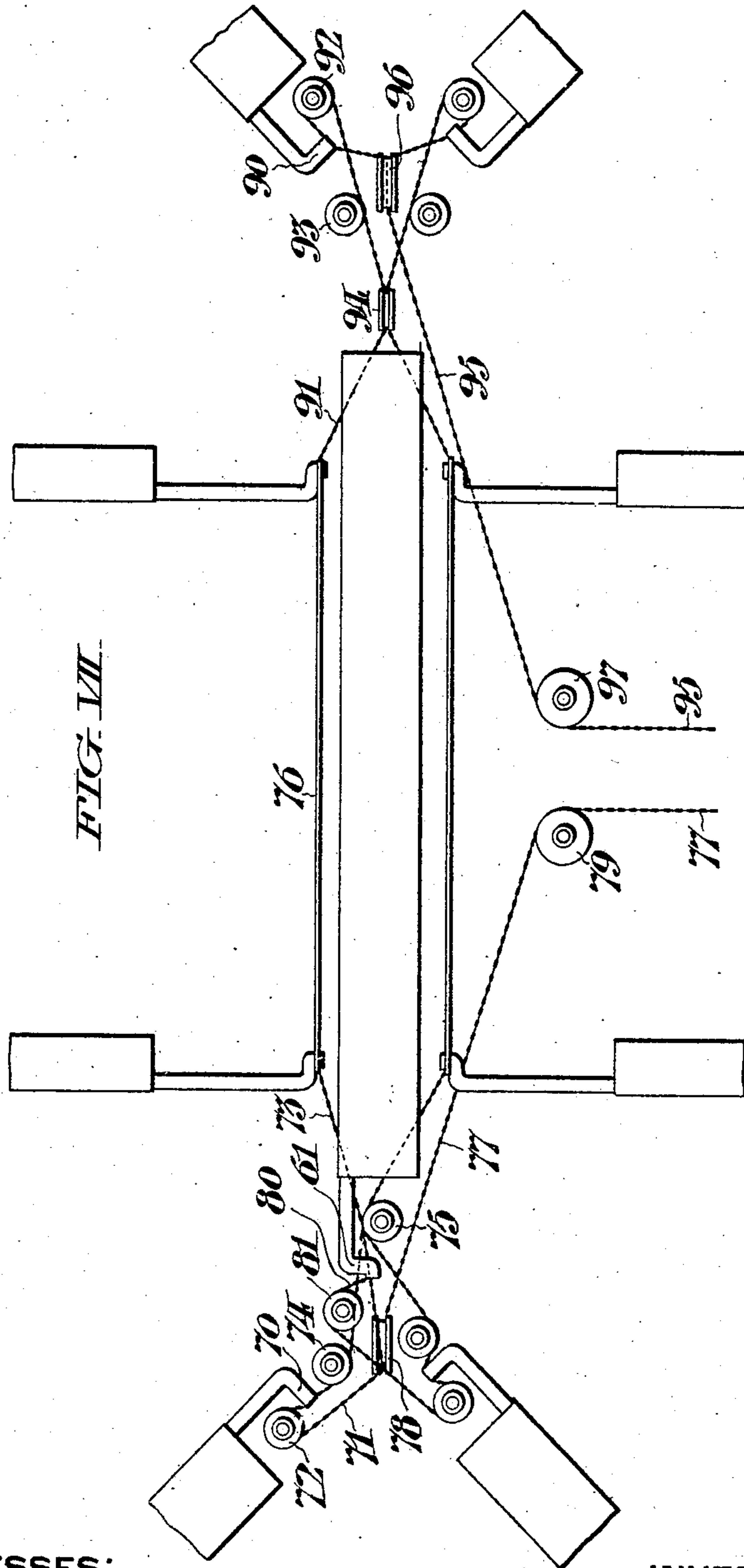
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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

HARVEY E. HERSH, OF ALLENTOWN, PENNSYLVANIA, ASSIGNOR TO HIMSELF, JAMES N. HERSH, G. WILLIS HERSH, AND EDGAR E. HERSH, TRADING AS HERSH & BRO., OF ALLENTOWN, PENNSYLVANIA.

VENTILATING SKYLIGHT AND ITS SASH-BARS.

No. 884,154.

Specification of Letters Patent.

Patented April 7, 1908.

Application filed June 12, 1907. Serial No. 378,644.

To all whom it may concern:

Be it known that I, HARVEY E. HERSH, of Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Ventilating Skylights and Their Sash-Bars, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to ventilating skylights and their sash bars.

My invention comprises a sheet-metal sash bar so constructed as to permit the maximum amount of ventilation capable of being obtained without increasing the distance between the panes. This I embody in a simple, water-proof construction which may be readily assembled or taken apart for reglazing purposes.

A further object of my invention is to provide a sky-light which may be readily assembled and the frame-work of which is provided with a plurality of ventilating valves which may be operated simultaneously from a single point.

In the accompanying drawings, Figure I, is a plan view, the right hand half of which shows the glass in position, and the left hand half of which shows the caps and panes removed. Fig. II, is a vertical section on the line II, II, of Fig. I. Fig. III, is a vertical section on line III, III, of Fig. I. Fig. IV, is a section on an enlarged scale taken on line IV, IV, in Fig. III. Fig. V, is a detail perspective view of one of the upper troughs. Fig. VI, is a detail perspective view of a saddle block. Fig. VII, is a diagrammatic view showing the connections by which the valves may be simultaneously operated.

In said figures, the body portion 1, of the sash bar is formed of two sheet metal sides 2, and 3. The upper portions of these sides are straight to form the vertical walls 5, and 6, respectively, which control the distance between the panes and also maintain the upper troughs in position as will be hereinafter described. At a suitable distance from the top the sides are bent at a right angle to form the ledges 8, and 9, respectively, which form the under support for the panes in the sky-light. The sides are then bent at an acute angle to form the inclined portions 12, and 14, respectively. These inclined portions are contin-

ued until a point is reached in line with the sides 5, and 6, whereupon, the metal is again bent to form an obtuse angle. The vertical sides 15, and 16, are continued for any desired length and bent to form the troughs 18, and 20, respectively.

The upper troughs 22, are rectangular in cross section with the upper side open and one side 24, is provided with a return bend 25, which forms a hook whereby said troughs may be hooked over the upper edge of the walls 5, and 6, of the body portion of the sash-bar. The side 24, is of such a depth as to provide a proper pane groove between the bottom 26, of said trough and the ledge 8, or 9, of the body portion.

The sides 2, and 3, of the body portion are maintained at a proper distance apart by means of spacing members 30, one of which is usually placed at or near each end of the bar. The spacing member 30, is rectangular in cross section and at its upper end is provided with the screw threaded stud 32.

Resting upon the top of the spacing member 30, is a saddle block 34, having a central boss 35, provided with a hole 36, for the reception of the stud 32. The saddle block is provided with wings 38, and 39, which support the cap 40, and is also provided with depending ears 42, and 43, which engage the inside of the troughs 22, and maintain them in position upon the walls 5, and 6, respectively. The cap 40, is provided with a central portion 41, and oblique side portions 44, which extend beyond the outer edges of the troughs 22, each oblique side ending in a depending lip 49. These lips extend below the level of the top of the outer side walls of the troughs 22. The nut 37, clamps the cap 40, together with the saddle blocks 34, and troughs 22, firmly in place.

Within the triangular chamber formed by the ledges 8, and 9, and sides 12, and 14, is a flap valve 45, which is hinged at 46, and supported by the ledge 8, the rod 46, has attached thereto a crank 47, whereby the valve may be operated. This crank is preferably connected to a link 48.

As shown in Fig. I, the sky-light is formed with a rectangular lower frame 50, which supports the hip bars 51, 52, 53, and 54, and also the common bars 55, 56, 57, and 58.

These bars are united by the ridge bar 60. The cap covering the ridge bar overlaps the caps upon the various hip and common bars and is maintained in position by means of screw threaded studs and nuts as described above.

In order to operate the valves in each of the above mentioned bars simultaneously, I provide the following mechanism:—The crank 70, on the valve in the bar 51, has attached thereto a metal cord 71, passing over the pulley 72. To this crank is also attached a cord 73, passing over pulleys 74, and 75, to a link 76. To the cord 73, is attached another cord 77, passing over pulleys 78, and 79. The valve in the ridge bar 60, is also provided with a crank 61, to which is attached a cord 80, passing over pulley 81, said cord being united with the cord 77, and passing over the pulley 78.

The valve in the hip bar 53, has attached to its crank 90, the cord 91, passing over the pulleys 92, 93, and 94, and then attached to the link 76. To the crank 90, is also attached the cord 95, passing over pulleys 96, and 97, a cord is also provided connecting the cord 91, with the cord 95, and passing over pulleys 94, and 96. The valves in the bars 55, and 57, have their cranks connected directly to link 76. It will be understood that the valves in the bars 52, 54, 56, and 58, are also joined by means of cords and a link in a similar manner to that described above. By pulling the cord 77, the various valves may be opened, and by pulling the cord 95, the various valves may be closed simultaneously from a single point.

By reference to Figs. II, and III, it will be noted that the spacing members 30, are placed at substantially each end of the various bars, thus providing a substantially unobstructed space between the various panes, for ventilating purposes. A certain amount of space must necessarily be occupied by the material for supporting the panes, but it will be seen that by my construction all the available space between the panes may be utilized for ventilation, the flap valve when open affording an unobstructed passage for the air from the inside of the structure to the outer atmosphere. It will also be noted that there is no other constriction interposed by my device to limit the amount of air passing through the sash bars, other than that necessarily imposed by the spacing of the panes; for the lower aperture between the vertical walls 15, and 16, is fully equal to that between the walls 5, and 6, where the panes are spaced; so also the combined space between the outer edges of the troughs 22, and the depending flanges of the cap 40, exceeds that between the walls 5, and 6. It will further be noted that when rain beats against the panes and spatters up under the cap 40, it is caught by the troughs 22. Any water pass-

ing between the bottom of the troughs 22, and the top of the ledges 8, and 9, which form the pane groove, is caught by the lower troughs 18, and 20. These latter troughs together with the troughs 22, are all connected with the gutter 100, which is provided with spouts 101, at suitable intervals along the sky-light. Thus I secure at the same time a perfectly watertight construction, great simplicity and economy of construction and assemblage, and a maximum capacity for ventilation.

Having thus described my invention, I claim:

1. A ventilating sash bar composed of sheet metal parts, forming a body portion having walls for spacing the panes, and ledges for supporting them, said walls being separated throughout their entire width, and forming an unobstructed ventilating space therebetween.

2. A ventilating sash bar composed of sheet metal parts, forming a body portion having walls for spacing the panes, and ledges for supporting them, said walls being separated throughout their entire width, and forming an unobstructed ventilating space therebetween; and a separable cap protecting the top of the ventilating space between the panes without obstructing the ventilation therethrough.

3. In a sash bar, the combination of a hollow body portion formed of two independent sheet metal sides separated by spacing members; a gutter below and a gutter above the panes upon each side of said body portion; and a cap removably secured in position above and out of contact with said sides, said cap extending beyond the sides of said upper gutters.

4. In a sash bar, the combination of a hollow sheet metal body portion; a lower gutter formed therewith; an upper gutter attached to said body portion; a cap removably secured in position above said upper gutter; and a flap valve within and extending substantially the entire length of said body portion.

5. In a sash bar, the combination of a hollow body portion formed of two independent sheet metal sides separated by spacing members; a lower gutter formed integrally with each of said sides; a gutter attached to the upper edge of each of said sides; and a cap removably secured in position above and out of contact with said sides, said cap extending beyond the sides of said upper gutters.

6. In a sash bar, the combination of a hollow body portion formed of two sheet metal sides separated by spacing members; a lower gutter formed integral with each of said sides; a gutter attached to the upper edge of each of said sides; a cap removably secured in position above and extending be-

yond the sides of said upper gutters; and a flap valve within and extending substantially the entire length of said body portion.

7. In a sash bar, the combination of a
5 hollow body portion formed of two sheet metal sides separated by spacing members; a lower gutter formed integral with each of said sides; a gutter attached to the upper edge of each of said sides; a saddle block
10 mounted upon each of said spacing members; a removable cap mounted to rest upon said saddle blocks; and means for securing said cap in position.

8. In a ventilating skylight comprising a
15 ridge bar, common and hip bars, the combination of a flap valve in each bar; a shaft connected to each valve for turning the same; a crank on each shaft; a series of cords each attached at one end to one of said
20 cranks and at the other end to one of said cords, whereby upon turning said cords in one direction said valves are simultaneously

opened, and upon turning said cords in the opposite direction, said valves are simultaneously closed.

9. In a ventilating skylight, the combination of a plurality of common bars; a flap valve in each bar; a crank connected to each valve; a link connecting each pair of said cranks; a plurality of hip bars; a flap valve
30 in each hip bar, provided with a crank; cords connecting the cranks on said hip bar valves to the cranks on said common bar valves; and pulleys for guiding said cords, whereby
35 when said cords are pulled in one direction said valves are opened, and when pulled in the other direction, said valves are closed.

In testimony whereof I have hereunto signed my name, at Allentown, Pennsylvania this fifth day of June 1907.

HARVEY E. HERSH.

Witnesses:

MAME M. BOYLE,
J. W. J. YINGLING.