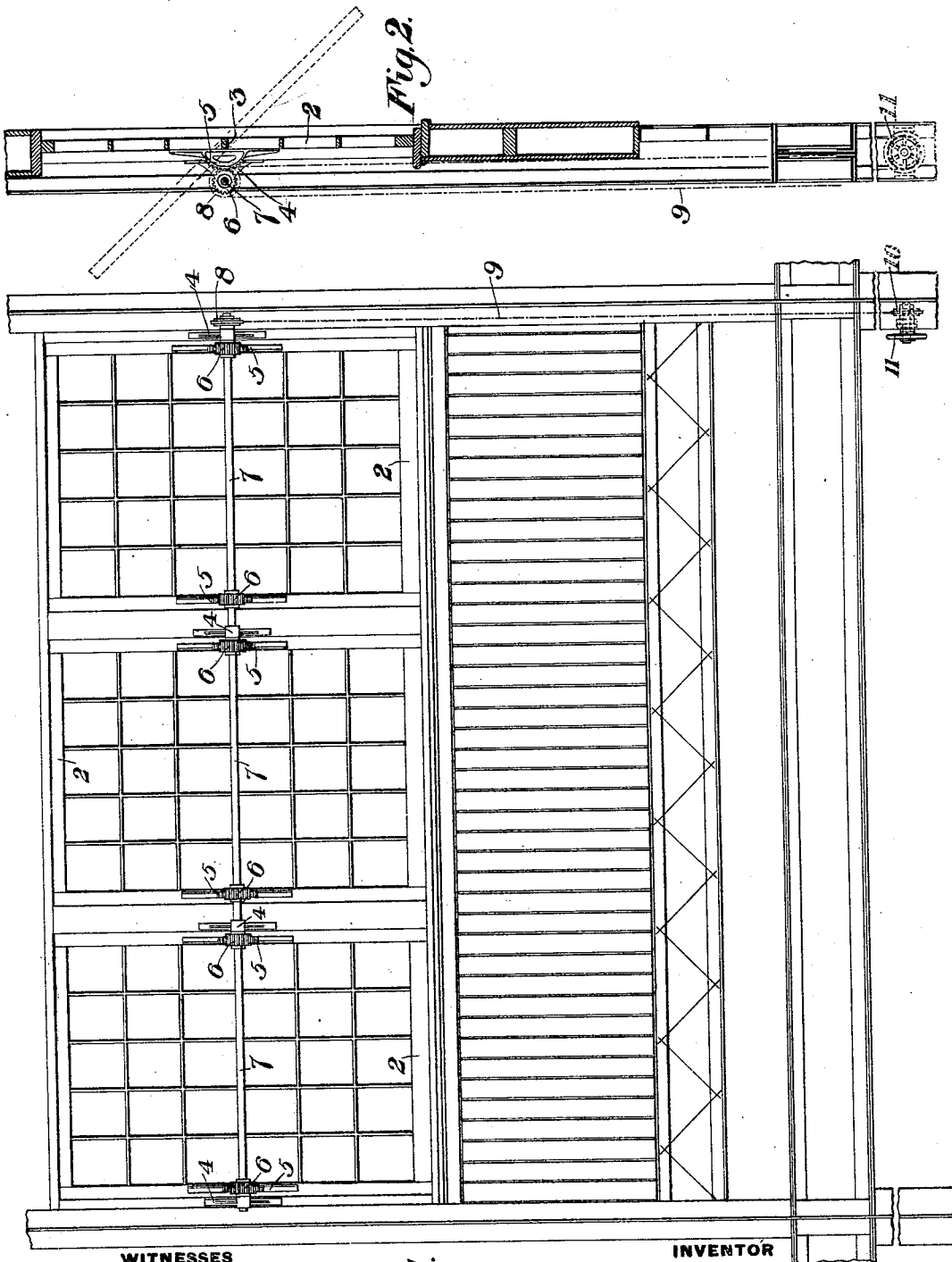


(No Model.)

E. G. FLANAGAN.
SASH OPERATING MECHANISM.

No. 544,428.

Patented Aug. 13, 1895.



WITNESSES

Harriet M. Burt
W. H. Conner

Fig. 1.

INVENTOR

Edward G. Flanagan
by his Attorneys
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UNITED STATES PATENT OFFICE.

EDWARD G. FLANAGAN, OF PITTSBURG, PENNSYLVANIA.

SASH-OPERATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 544,428, dated August 13, 1895.

Application filed September 6, 1894. Serial No. 522,238. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. FLANAGAN, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Sash-Operating Mechanism, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a front elevation of my improved sash-operating device, and Fig. 2 is a vortical section of the same.

My invention relates to the operating of pivoted window-sashes, and is designed to afford a cheap and convenient device therefor, which shall at the same time strengthen and brace the sash against wind-pressures or other strains thereon.

20 To that end it consists in a segmental rack secured to the window opposite to its pivotal point, and a gear-wheel intermeshing with said rack and operated through any suitable mechanism.

25 It also consists in the construction and arrangement of the parts, as hereinafter more fully described, and set forth in the claim.

In the drawings, 2 are the window-sashes, pivoted at the point 3 and having a brace 4 secured to the side of each sash and extending preferably about one-third of the height of the sash. Integral with this brace is a segmental rack 5, which intermeshes with a pinion 6 upon a horizontal shaft 7, which extends along the windows opposite their pivotal points.

35 I have shown a segmental rack and inter-

meshing pinion at each side of the sashes, but it is evident that only one may be used for each sash. At the end of the shaft 7 is a sprocket-wheel 8, connected by chain 9 with a lower sprocket-wheel 10, operated by hand-wheel 11, by means of which the windows may be swung to any desired angle.

The advantages of my invention will be apparent to those skilled in the art. Instead of swinging the window-sash by a rod or rack attached to the upper or lower end thereof, in operating which against a wind-pressure a heavy strain is brought upon the window, which will eventually bend the same, so that it will not seat perfectly, the power is applied at the center and the strain equalized. Moreover, the segmental rack itself helps to brace and stiffen the sash, and the entire device is simple and not liable to get out of order.

Many variations in the form, construction, and arrangement of the parts may be made without departing from my invention, since What I claim is—

The combination with a pivoted window-sash, of a centrally located brace plate having a segmental rack opposite the pivotal point of said window, a pinion engaging said rack at substantially the same level as the pivot and means for operating the pinion; substantially as described.

In testimony whereof I have hereunto set my hand.

E. G. FLANAGAN.

Witnesses:

W. B. CORWIN,
C. BYRNES.