March 20, 1928. 1,663,175

W. E. PUTNAM

TRANSOM ADJUSTER

Filed April 1, 1925

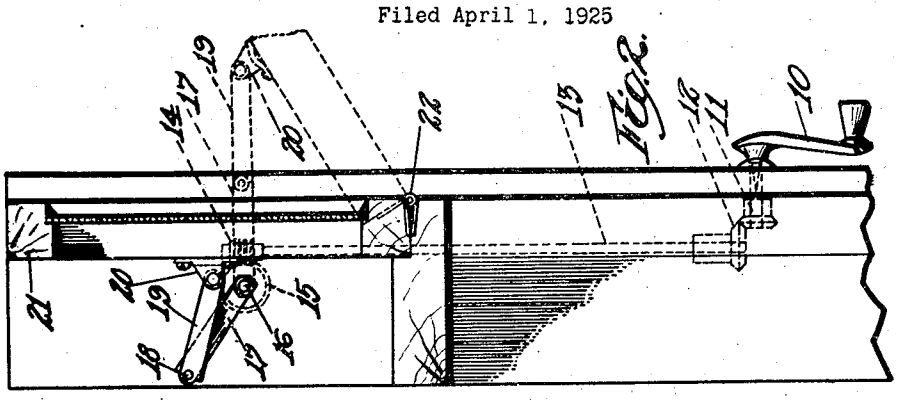

Fig. 2.

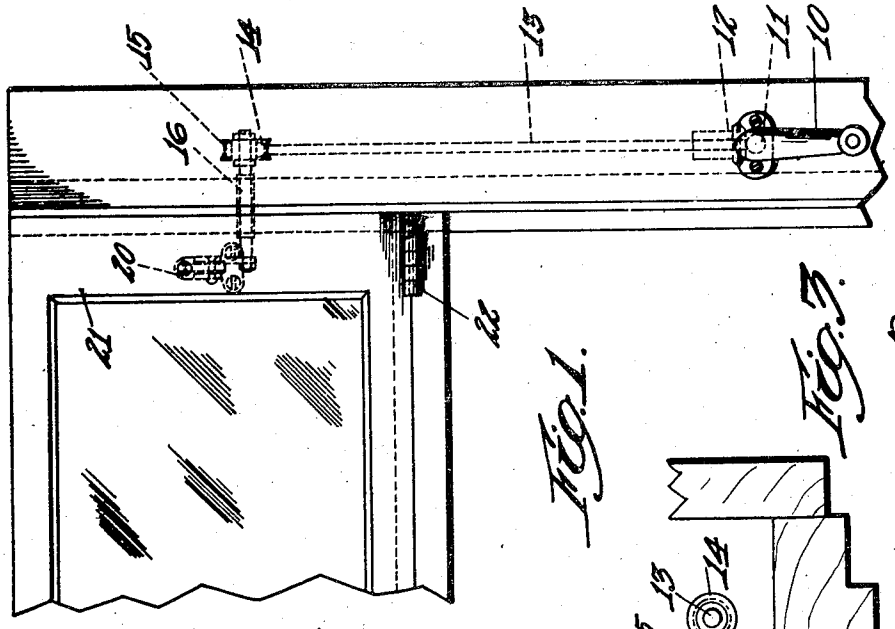

Fig. 1.

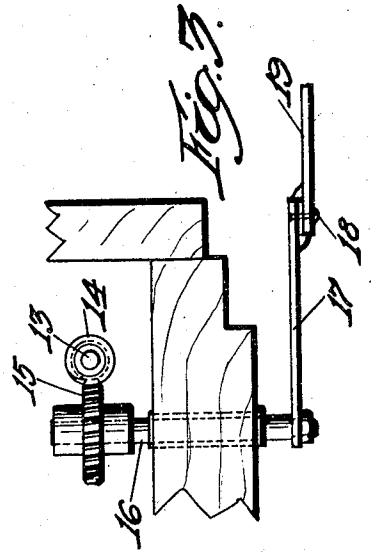

Fig. 3.

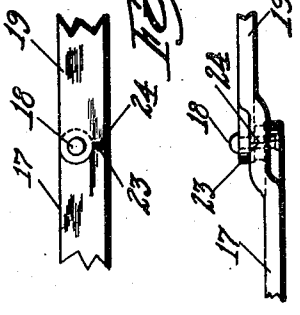

Fig. 5.

Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIS E. PUTNAM, OF WORCESTER, MASSACHUSETTS.

TRANSOM ADJUSTER.

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This invention relates to a device for operating vertical transoms. The principal object of the invention is to provide a smooth working device for this purpose that will open or close a transom in an even and uniform manner so as to avoid any chance of slamming it closed or pulling it wide open suddenly; also to provide this means in a simple and inexpensive form and provide a number of minor improvements.

Reference is to be had to the accompanying drawings, in which—

Fig. 1 is an elevation of the door casing and transom with a preferred embodiment of this invention applied thereto;

Fig. 2 is a side view of the same partly in section;

Fig. 3 is a plan on enlarged scale of a part of the operating device;

Fig. 4 is a bottom plan of the joint for the links; and

Fig. 5 is a side view thereof.

Transom lifters now on the market usually involve a sliding motion and as constructed they often stick so that in closing a transom it is hard to start the device and when it is started the transom is likely to close suddenly with a bang. This sometimes breaks the glass and at any rate the operation is disagreeable.

For the purpose of avoiding these difficulties and providing a smooth working device I locate the rotary operating handle or crank 10 at a convenient point on the casing on a horizontal shaft 11 which by gears 12 drives a vertical shaft 13 having a worm 14 at the top. This worm operates a gear or segment 15 fixed on a shaft 16. On this shaft is positively fixed an arm 17 to swing with it. This arm is connected by a pivot pin 18 with a link 19 which is pivoted to a bracket 20 on the rear of a vertical transom sash 21 which is hinged at 22. The line of hinge pivots 22 on which the sash turns is located below the shaft 16 but parallel therewith. It is also located below the pivot pin 18 and is arranged usually to be substantially underneath it when the transom is wide open.

The arm 17 and link 19 where they meet are provided with stops 23 and 24. These consist merely in bending the ends of the arm and link respectively over toward each other so that they meet on one side of the pivot 18 to limit the motion of the shaft 16 to the position shown in Fig. 2. In other words, when the transom is opened as far as it can be by the straightening out of these links, the crank 10 cannot be turned any further in that direction. This is desirable because if it were not for it the operator might go on turning in the same direction and close the transom again or at least turn it back.

With this construction the operation of the crank 10, starting from the position shown in full lines in Fig. 2, will turn the shaft 16 and arm 17 over to the right as far as the dotted line position and then it will be stopped so that none of the parts can be turned any further. This is as wide open as the transom can be carried by this mechanism. The parts are simple and inexpensive in construction and easy to install and there is no chance of breaking the glass, or even making a perceptible noise, by sudden closing or opening of the transom.

Although I have illustrated and described only a single form of the invention I am aware of the fact that modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claim. Therefore I do not wish to be limited to all the details of construction herein shown but what I do claim is:—

In a device for operating a vertical transom pivoted on a horizontal axis at its lower edge, the combination of a horizontal shaft above said axis and at one side thereof, means for rotating said shaft, an arm fixed to the shaft, and a link pivoted to the free end of the arm and to the sash of the transom at a point above the shaft, whereby when the shaft is turned in one direction and the arm turns with it, the sash will swing open on its pivot, the link and arm being arranged to extend substantially in the same horizontal direction when the sash is closed, so as to exert a powerful leverage to close the sash and hold it closed when the link and arm are moved inwardly into horizontal position.

In testimony whereof I have hereunto affixed my signature.

WILLIS E. PUTNAM.