M. HYNEK.

AUTOMATIC DOOR OPERATING APPLIANCE.

APPLICATION FILED OCT. 10, 1911.

1,026,805. **Patented May 21, 1912.**

Fig. 1.

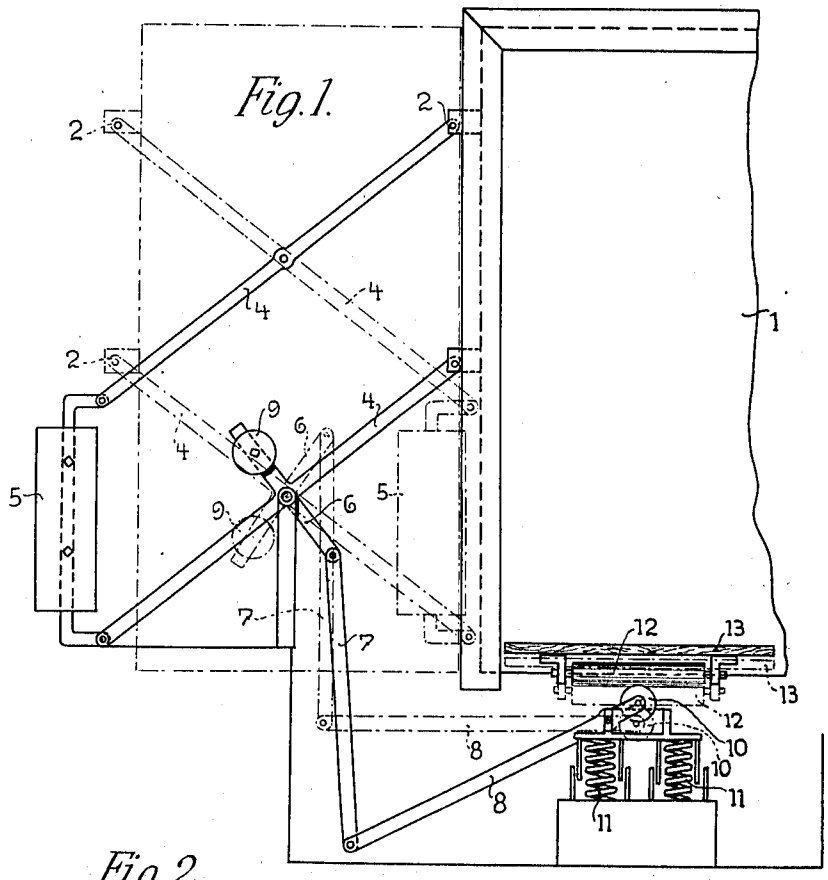


Fig. 2.

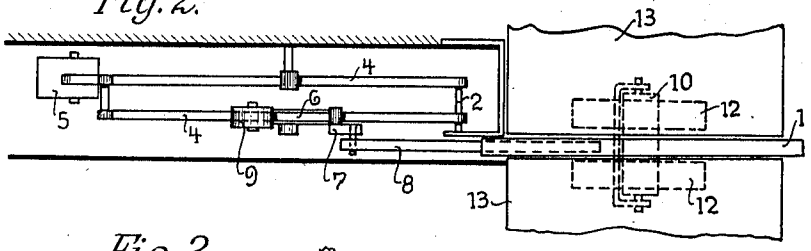
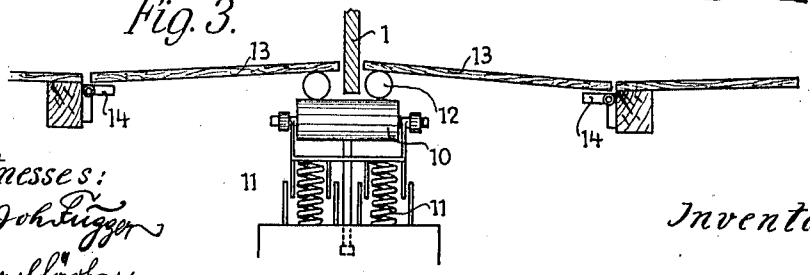


Fig. 3.



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AUTOMATIC DOOR-OPERATING APPLIANCE.

1,026,805. Specification of Letters Patent. Patented May 21, 1912.

Application filed October 10, 1911. Serial No. 653,798.

To all whom it may concern:

Be it known that I, MAX HYNEK, a subject of the Emperor of Germany, and a resident of Riesa-on-the-Elbe, Germany, have invented a certain Improved Automatic Door-Operating Appliance, of which the following is a specification.

The present invention relates to a door operating-appliance of the kind connected to a movable foot-board so as to open automatically when the latter is trod on and reclose as soon as the board is relieved of the weight.

The invention consists in the construction and combination of parts as hereinafter described and claimed in reference to the accompanying drawings of which—

Figure 1 represents a front view of the arrangement, Fig. 2, a plan of the same, and Fig. 3, a cross-section.

The apparatus consists in the first place of two double-armed levers 4 which turn vertically in different planes about pivots arranged at some distance apart one above the other. One end of each lever is connected by means of a pivot 2 to one side of the door 1. The latter is carried by the levers which have their opposite ends connected by a weighted element 5 which balances the weight of the door. The lower lever 4 has a short arm 6 connected to its center at right angles, which arm is linked by means of a connecting rod 7 to a double-armed lever 8. To balance the weight of the latter elements a counter-weight 9 is provided which is mounted on an arm connected to the lever 4 opposite the arm 6 and carried in the opposite direction. The free end of the lever 8 is comparatively short and has a forked formation in which is mounted a roller 10. This roller, and with it the end of the lever, is supported in a cradle actuated by springs 11 which tend to hold the elements in the position indicated in full lines in Fig. 1. A gap is made in the floor at both sides of the door 1, under which the roller 10 is disposed, the removed part of the floor being substituted by two flaps 13 which are controlled by hinges 14. Each flap carries at its free end a roller 12 by means of which it is supported on the roller 10 as shown in Fig. 3. The elements are exactly balanced by the weights 5 and 9, and the pressure of the springs 11 is only just sufficient for maintaining said elements with the door in closed position.

The *modus operandi* is as follows: If one of the flaps 13 is trod on, the pressure of the springs 11 is overcome and the lever 8 turned about its pivot. The long arm of said lever then acts by means of the link 7 on the arm 6 so as to reverse the position of the levers 4, the door 1 being thereby raised and carried in its own plane, about the pivots of the levers, into the position indicated by dotted lines in Fig. 1. As soon as the flaps 13 are relieved of the weight, the springs 11 restore the elements to their normal position, thus re-closing the door.

It is evident that the arrangement may be doubled so as to cause the two parts of a double door to open in opposite directions.

I claim:

An automatic door operating-appliance of the character described, comprising two pivoted double-armed levers carrying the door with one end, a weighted element connected to the opposite ends of the levers so as to balance the door, hinged flaps adjoining the floor at opposite sides of the door, a double-armed lever supporting the free ends of said flaps with one arm, connections between the other arm of the supporting lever and the door carrying-levers so arranged as to cause the latter levers to be turned for moving the door in its own plane into open position when the flaps are trod on, and springs acting on said supporting lever so as to restore the elements to their normal position and reclose the door when the flaps are relieved of the weight, substantially as set forth.

MAX HYNEK.

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