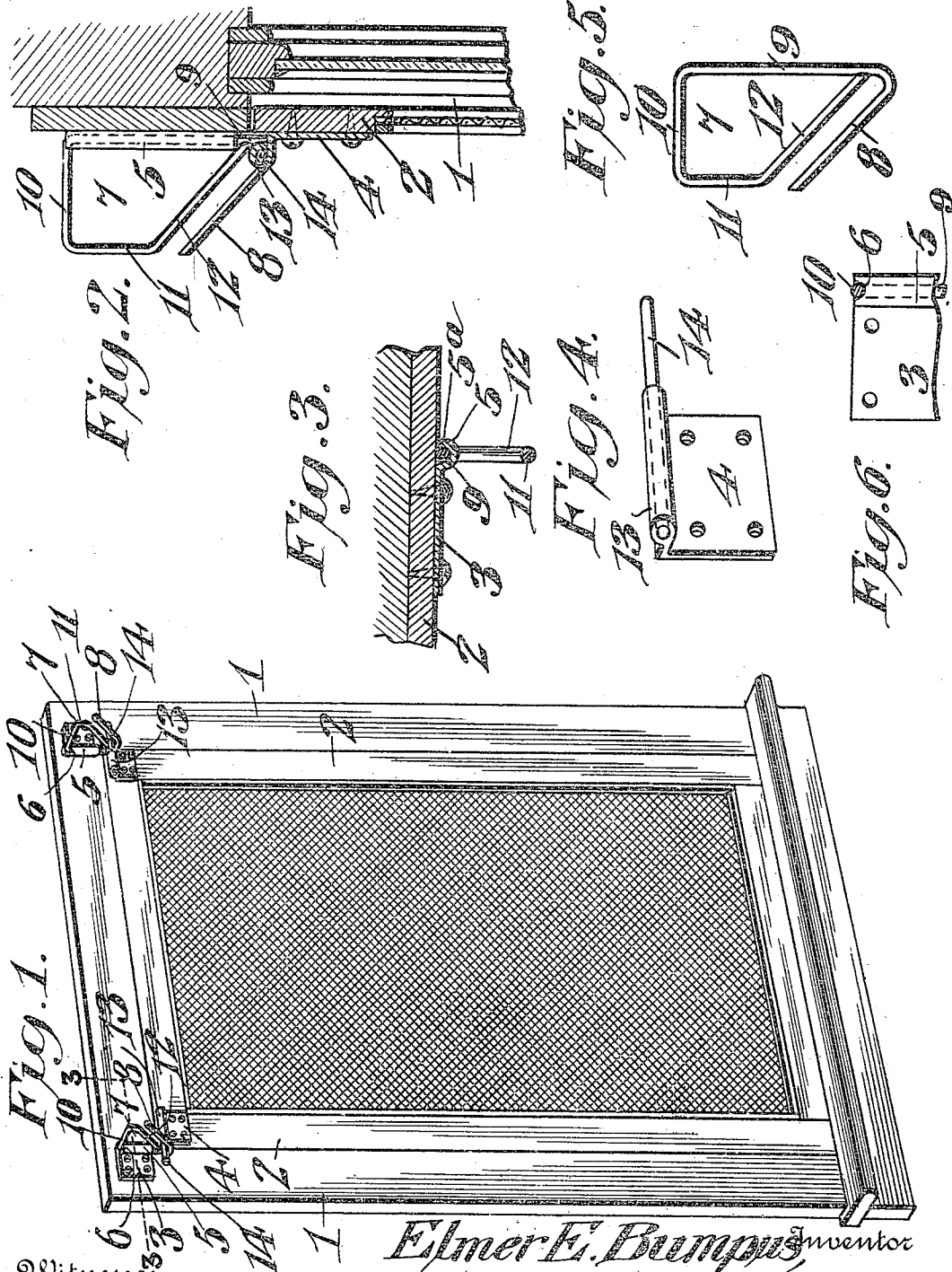


E. E. BUMPUS.
SEPARABLE HINGE FOR SCREENS.

APPLICATION FILED MAR. 15, 1909. RENEWED NOV. 12, 1909.

961,751.

Patented June 21, 1910.



Witnesses

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SEPARABLE HINGE FOR SCREENS.

961,751.

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To all whom it may concern:

Be it known that I, ELMER E. BUMPUS, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a new and useful Separable Hinge for Screens, of which the following is a specification.

This invention relates to separable hinges designed for use with vertically swinging sashes, transoms and the like, although more particularly adapted for use with either half length or full length window screens.

One of the objects of this invention is to provide a device of the character described which will permit of a sash or screen being readily disengaged from the hinge by a slight vertical lift of the same, the said operation causing the sash or screen to clear the head casing of the frame, and also capable of accomplishment by an operator from the inside of a room.

A further object of the invention is to provide a hinge which is simple in construction, cheap to manufacture, and which can be easily applied to a frame and screen.

In the drawings, Figure 1 is a perspective view of a vertically swinging screen, showing the invention applied thereto; Fig. 2 is a vertical section showing the screen and frame with the invention applied thereto; Fig. 3 is a detail horizontal section of the supporting hinge member, taken on the line 3—3 of Fig. 1; Fig. 4 is a perspective view of the other hinge member, showing a bearing pintle extending therefrom; Fig. 5 is a detail view of the combined guide and hanger, the same comprising a part of the supporting hinge member; Fig. 6 is a detail view showing the hanger arranged in its normal position.

Like reference numerals indicate corresponding parts in all the figures of the drawing.

Referring to the drawings, 1 designates a window or other frame having a window screen frame, 2, arranged therein. The screen frame is pivotally supported on the window frame by means of separable hinges, each hinge comprising two members, a supporting hinge member, 3, and a pintle carrying member 4. The member 3 is formed of any suitable flat metal, one edge thereof being bent to form a bearing 5, the edge 5^a of the same being substantially in alinement with the flat metal body, and the open space of the bearing being adapted to be

closed by the frame. The bearing is further provided at its upper edge with a centrally arranged notch 6, for the purpose hereinafter described. A combined guide and hanger, designated as a whole by the numeral 7, is preferably formed of a single piece of wire which is bent in the following manner. One end 8 of the wire is bent at an acute angle to the bearing arm 9. The wire at the upper end of said bearing arm 9 is bent at right-angles thereto to form an arm 10, which is in the same plane and directly above the end arm 8. The wire is then bent downwardly substantially at right-angles to the arm 9 to form an arm 11 which is substantially parallel to the arm 9 and in the same plane as the other of said arms. The end of the wire is then bent at an obtuse angle to form an arm 12, which is spaced from, but substantially parallel to the other end arm 8, thereby forming a guide for the purpose hereinafter described. The other member 4 of the hinge is also formed of any suitable flat metal and is provided at one edge with an outstanding and longitudinal sleeve, 13, which is adapted to embrace a pintle 14, said pintle extending for a certain distance from one end of said sleeve.

From the foregoing description, and by reference to Figs. 1 and 2 of the drawings, the application of the invention will be readily apparent. Hinge members 3—3 are respectively arranged on either side of the window or other frame and at any desired height thereon, although when used in conjunction with full length screens, as illustrated in the accompanying drawings, the said hinge members are preferably arranged above the screen so that the bearing 5 is substantially in vertical alinement with the meeting edges of the frame 1 and the screen 2. The bearing 5 is adapted to embrace the bearing arm 9 of the combined guide and hanger 7, and the notch 6 of said bearing is adapted to receive the arm 10 thereof, and thereby retain the same in an outstanding position. The pintle-carrying members, 4—4, are respectively secured on the screen frame by any common fastening means, and near the upper edge thereof and in such a manner that the pintle 14 extends laterally beyond the bearing 5 which embraces the arm 9 of the combined guide and hanger 7. Whenever it is desired to position a screen, the pintles are respectively

passed between the arms 8 and 12 of the combined guide and hanger, the inclination of the said arms causing the pintles to slide into the bearing formed at the intersection of the arms 8 and 12. It will be evident also that when it is desired to remove the screen, the said screen is given a slight outward movement from the bottom. An upward movement is then imparted to said screen which causes the pintles 14—14 to respectively bear against the arms 12—12 of the combined guide and hanger. Thus, an outward and upward movement is imparted to the said pintles and consequently to the sash or screen, and thereby causing the upper edge of the said sash or screen to clear the head casing of the frame. The hangers can then be swung around against the frame and out of the way on their vertical pivots.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportions and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent, is:

1. A device of the class described, comprising a pair of plates adapted to be secured on either side of a frame, upwardly inclined guides respectively pivoted thereto by a vertical pivot, each guide having an open and a closed end, and pintle-carrying plates respectively arranged on a sash or screen at such positions that the pintles will coact with the closed end of the guides to form a bearing for the said sash or screen.

2. A device of the class described, comprising a pair of plates adapted to be secured on either side of a frame, upwardly inclined guides respectively pivoted thereto by a vertical pivot, each guide having an open and a closed end, means for respectively interlocking the guides in an outstanding position, and pintle carrying plates respectively arranged on a sash or screen at such positions that the pintles will co-act

with the closed ends of the guides to form a bearing for said sash or screen, said pintles being movable outward toward the open ends of the inclined guides.

3. A detachable hinge comprising a pintle-carrying member, and a supporting member consisting of a plate having a vertical bearing formed therein, a horizontally swinging guide arranged within the bearing and adapted to be interlocked therewith in an outstanding position, said guide having one end open and the other end closed, the closed end forming a bearing and the open end forming an entrance and exit for the pintle of the pintle-carrying member.

4. A detachable hinge comprising a pintle-carrying member and a supporting member consisting of a plate having a vertical bearing formed therein, a horizontally swinging guide arranged within the bearing and adapted to be interlocked therewith in an outstanding position, said guide being formed of wire and having one end bent at an acute angle to the bearing arm to form the bottom arm of the guide, an arm extending from the other end of the bearing arm and arranged in the same plane and directly above the end arm, a depending arm extending from the last-named arm to a point in close proximity to the end of the end arm, and another end arm extending inwardly to the bearing arm, said arm being arranged at an obtuse angle and parallel to but spaced from the first-named end arm to form an open-ended inclined guide and hanger for the said pintle.

5. A detachable hinge comprising a pintle-carrying member adapted to be secured to a sash or screen and provided with a projecting pintle, and a supporting member adapted to be secured to the frame above the sash or screen and provided with a horizontally swinging guide to receive the said pintle, and means for locking the guide in a fixed position when desired.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ELMER E. BUMPUS.

Witnesses:

A. WINDT,
JAMES H. WOODS.