

A. ISKE.  
REVERSIBLE WINDOW SASH.  
APPLICATION FILED DEC. 29, 1903.

2 SHEETS—SHEET 1.

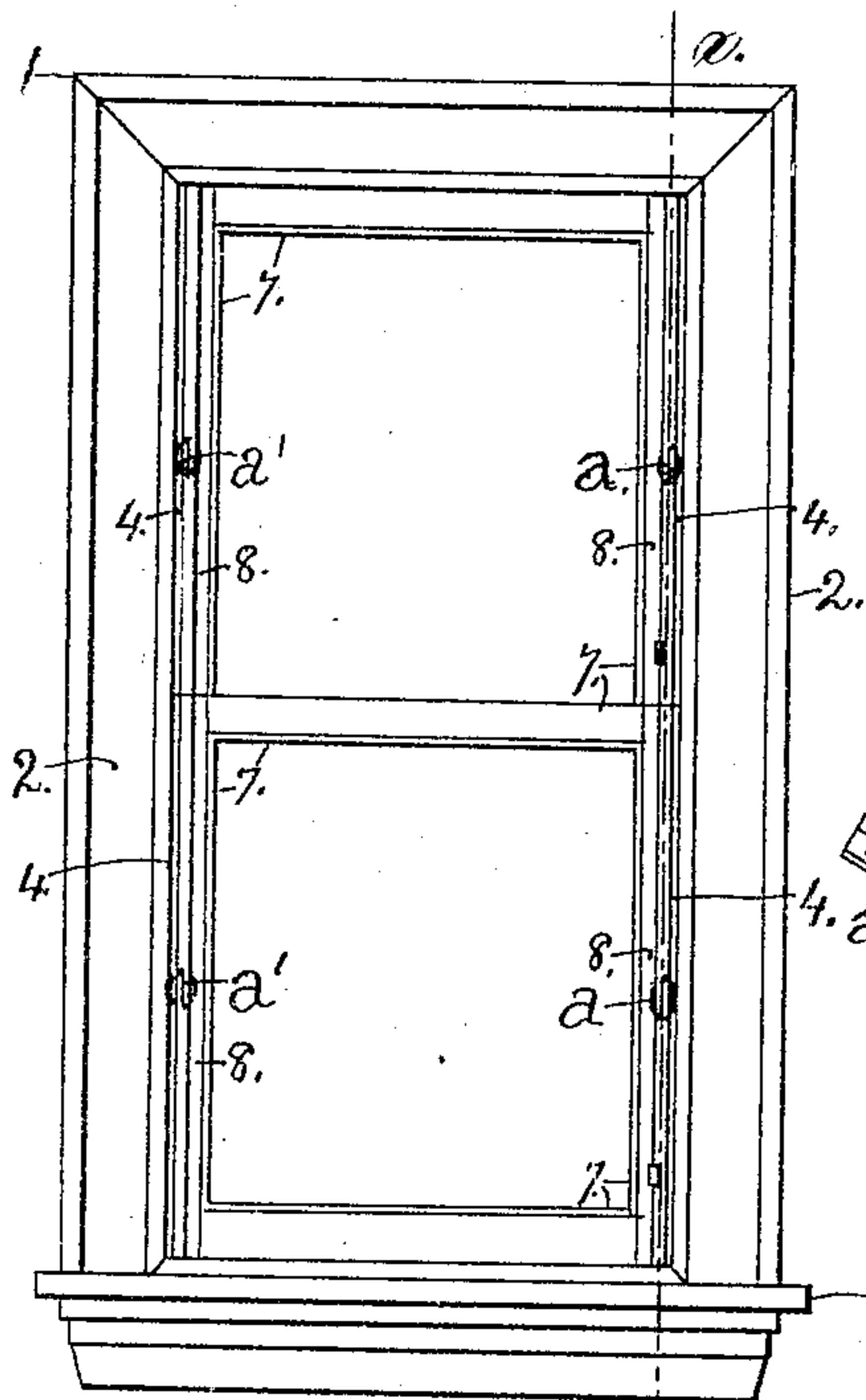


Fig. 1.

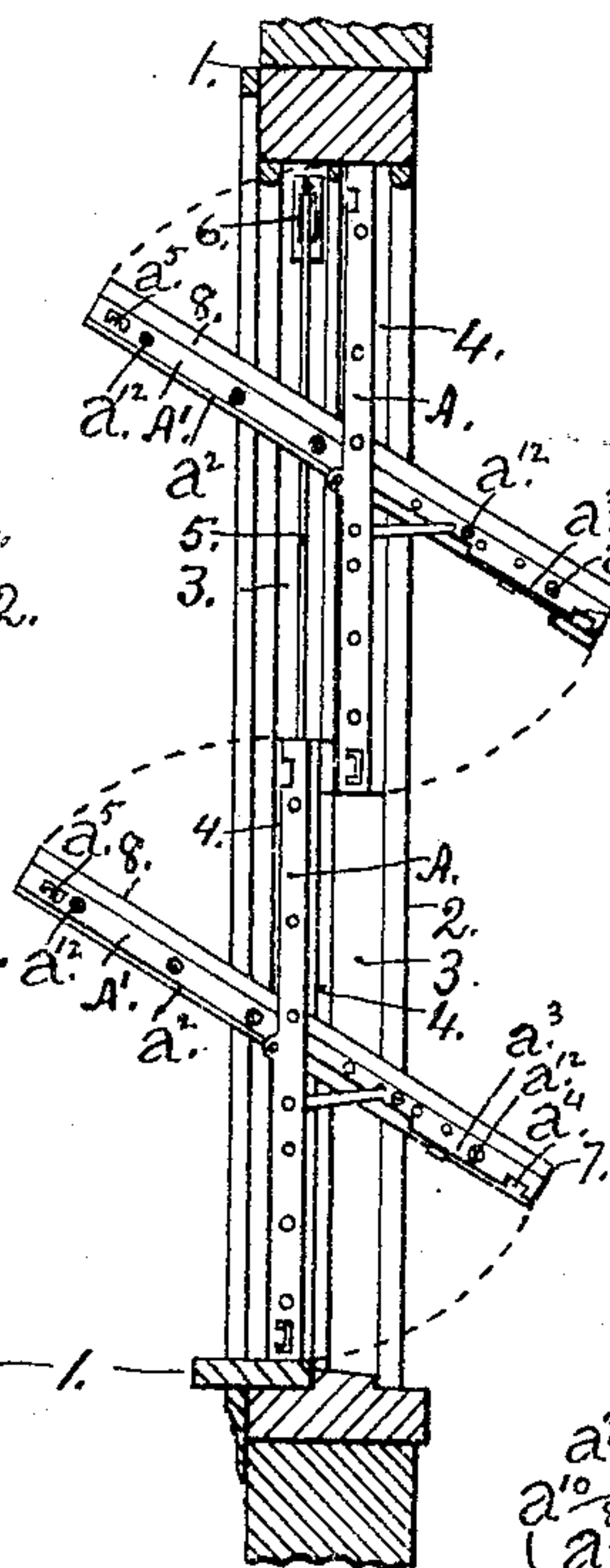


Fig. 2.

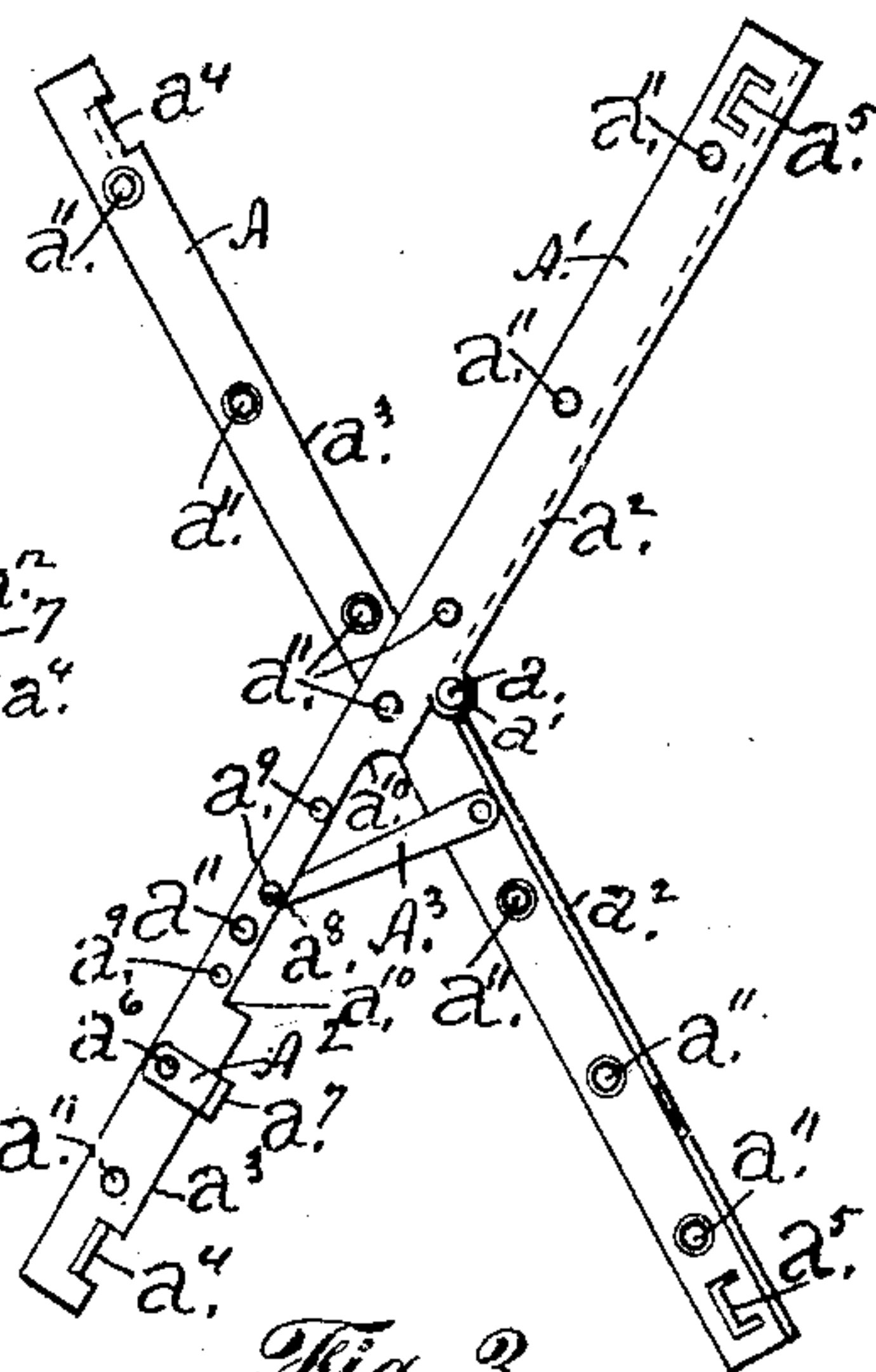


Fig. 3.

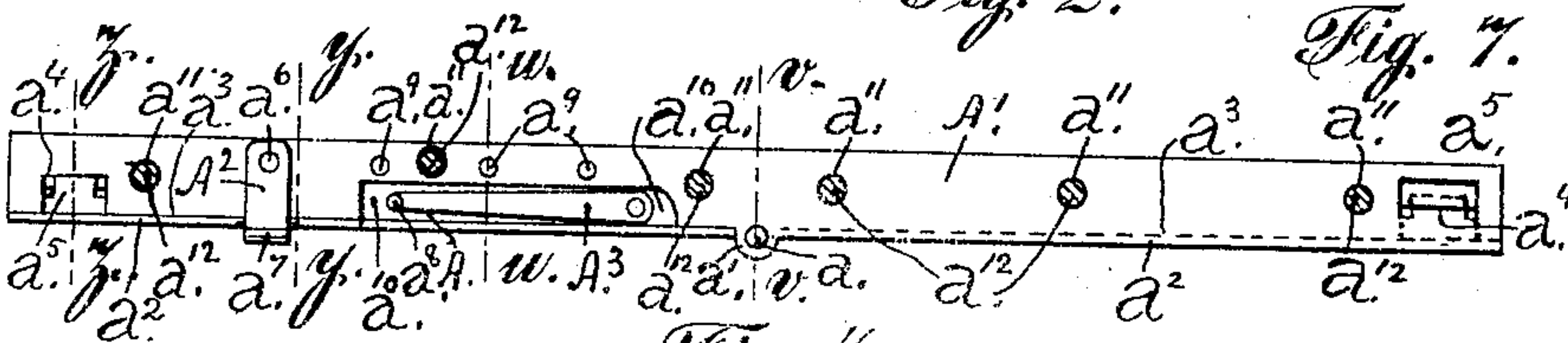


Fig. 4.

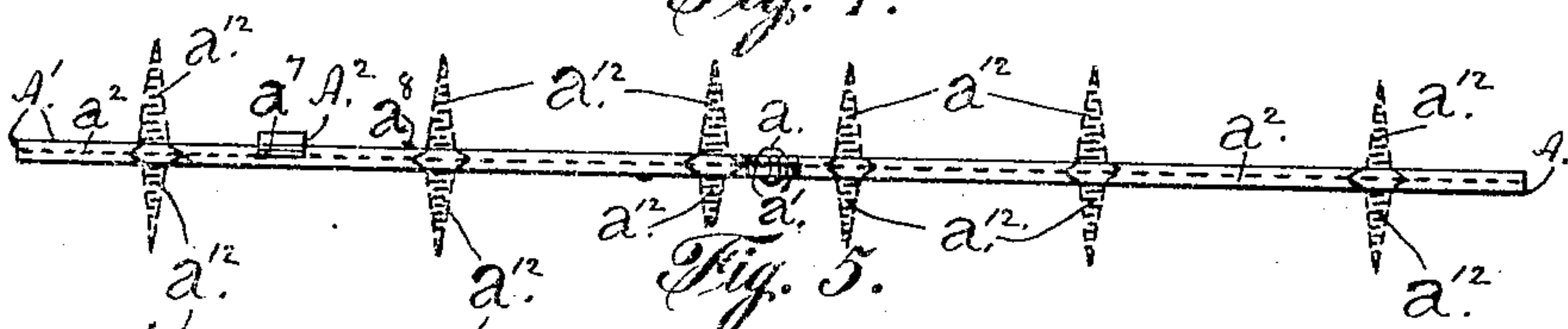


Fig. 5.

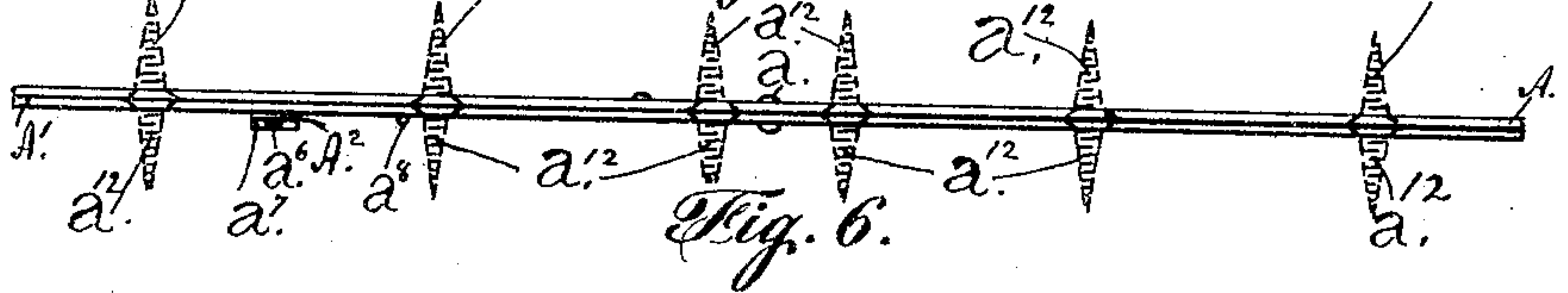


Fig. 6.

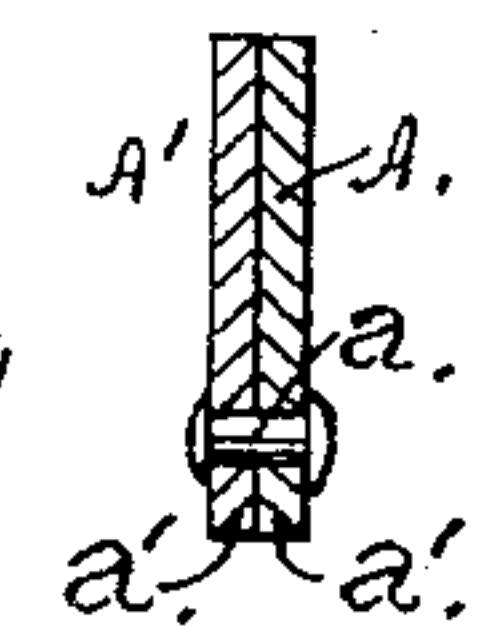


Fig. 7.



Fig. 8.

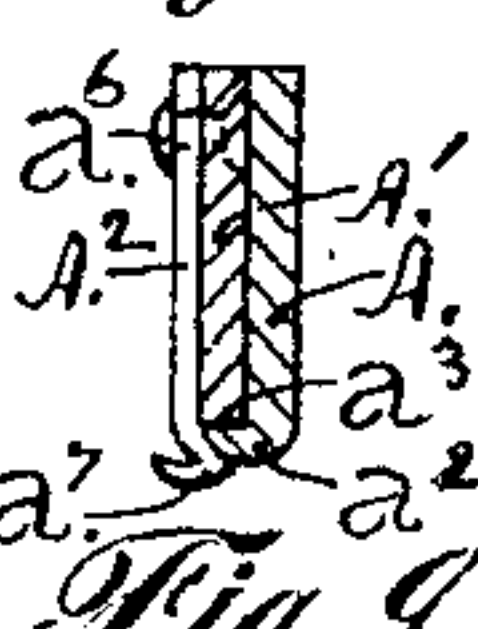


Fig. 9.

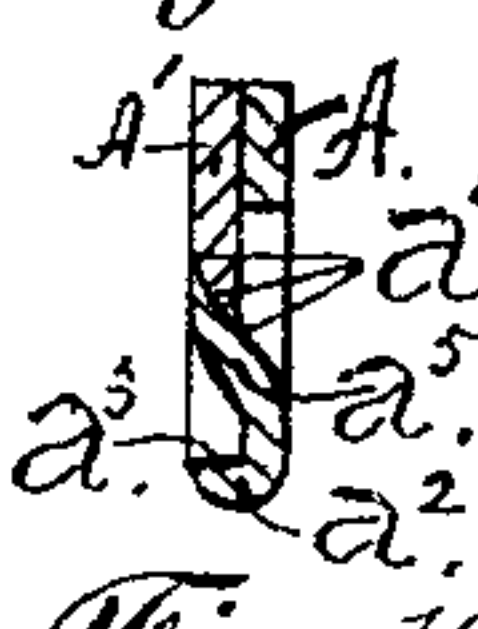


Fig. 10.

WITNESSES:

*And. P. Menger.*  
*Clara L. Kuger.*

INVENTOR

*Anthony Iske.*

BY

*Daniel H. Herr.*

ATTORNEY.

A. ISKE.  
REVERSIBLE WINDOW SASH.  
APPLICATION FILED DEC. 20, 1903.

2 SHEETS—SHEET 2.

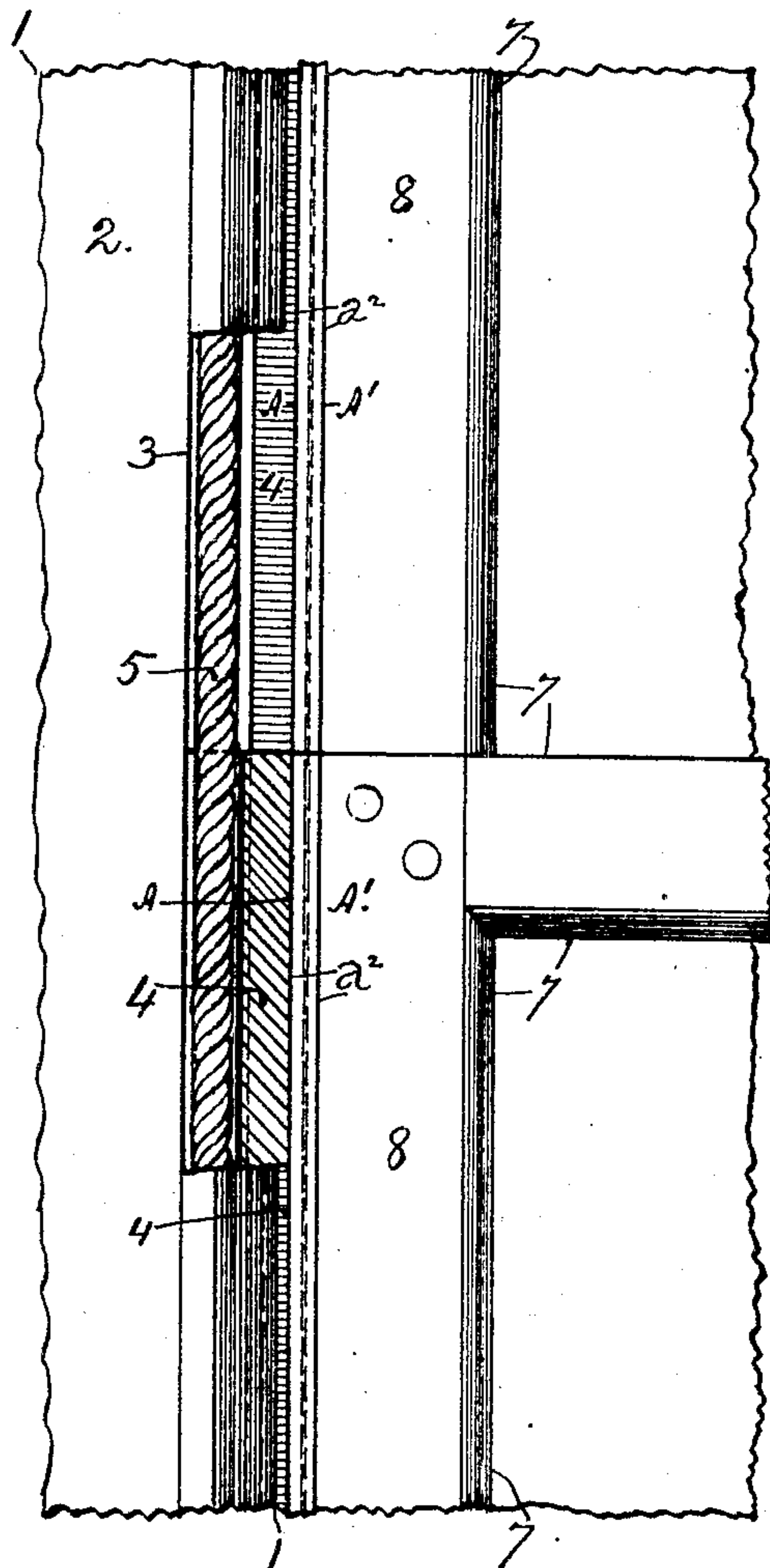


Fig. 11.

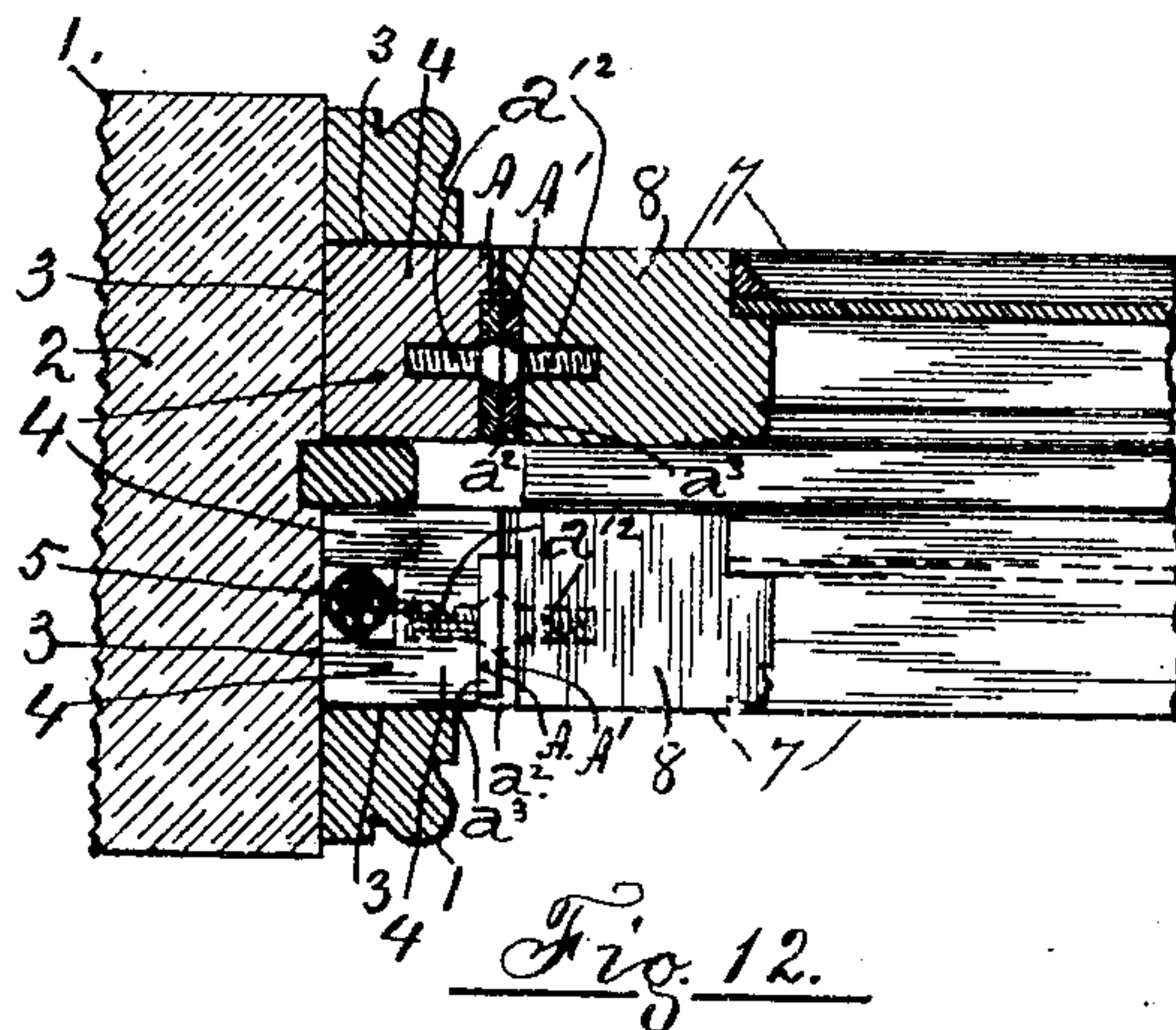


Fig. 12.

Witnesses:  
Fred. P. Menter.  
Berj. Hill

Inventor:  
Anthony Iske.  
By Daniel H. Herr.  
Attorney



# UNITED STATES PATENT OFFICE.

ANTHONY ISKE, OF LANCASTER, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO PAUL HEINE, OF LANCASTER, PENNSYLVANIA.

## REVERSIBLE WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 779,426, dated January 10, 1905.

Application filed December 29, 1903. Serial No. 186,992.

*To all whom it may concern:*

Be it known that I, ANTHONY ISKE, a citizen of the United States, residing at Lancaster city, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Reversible Window-Sashes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in a reversible window-sash of that class in which hinges composed of two flat members having a length equal to the height of the sash and of the desired width are placed side by side, centrally pivoted together, and adapted to be placed in the joint-seams between the sash side posts and their adjacent guide-strips, to the adjacent edge surfaces of which posts and strips said members, one to each, are respectively secured, neatly filling said seams, in which halves of said members from their respective pivoting-ears to their outer ends are each provided with oppositely-disposed flanges which overlie the edges, being flangeless, of the adjacent halves of the members when the sash is closed or in its normal position, in which means are provided to draw the outer ends of the members closely together as the sash is being closed, with automatic means provided to hold the sash securely locked in closed position until required to be opened, and with means provided to hold the sash in certain opened positions when it is partially reversed.

The object of the invention is the production of a simple but effective hinge at the minimum cost of construction whereby a window-sash may be reversed for ready cleaning without removing the sash from its frame, one whose members or side parts when placed and secured in position therein will completely fill the seams or joints between the opposing edges of the sash side posts and their adjacent guide-strips, keeping said strips from warping or twisting and preventing said edges from sticking together, as from paint or varnish, whose oppositely-disposed edge flanges, completely covering said seams, prevent the

passage of air therethrough and form ornamental beads or moldings thereover, in which provision is made to hold the opened sash in various fixed positions to draw the ends of the hinge members together on closing the sash and to securely lock it in position when the sash is closed.

The elements of the invention will severally and at large appear in the following description, and they will be separately or combinedly pointed out or set forth in the appended claims.

The purposes of the invention are attained by the mechanism, devices, and means illustrated in the accompanying drawings, similar reference characters designating like parts throughout the several views, in which—

Figure 1 is an inside elevation of a window having two sashes with the elements of the invention in place in their respective sides; Fig. 2, a sectional elevation taken on the line *xx* in Fig. 1 viewed from the right, showing the sashes in partially-reversed positions with the near side guide-strips removed; Fig. 3, an enlarged view of a hinge-joint as it appears when detached from the near side of Fig. 2 and inverted with its opposite acute angles in vertical alinement; Fig. 4, an enlarged view of Fig. 3, showing the members of the hinge-joint as they appear when closed and horizontally placed with the securing-screws appearing in section. Figs. 5 and 6, respectively, are bottom and top views of Fig. 4, showing the securing-screws in dotted positions; Fig. 7, enlarged sectional elevations taken on the line *uu* in Fig. 4 viewed from the right and left. Figs. 8, 9, and 10 are similar sectional elevations taken, respectively, on the lines *vv*, *yy*, and *zz* in Fig. 4; Fig. 11, an enlarged view of the middle portion of the left-hand side of the window shown in Fig. 1 with a portion of the inside sash-retaining strip removed, showing portions of the upper and lower guide-strips in place, the lower one partially in section and the overlying portions of the two sashes in position; and Fig. 12, a top view of Fig. 11, showing the guide-strips and sashes in place with the hinge members between them and respectively secured to their adjacent edges.



In the drawings the numeral 1 designates an ordinary or well-known window-frame; 2, its usual side posts or jambs; 3, the passage-ways, in which ordinarily move the side posts of the sash, but in this instance the guide-strips 4, to which are attached in the usual way the weight-cords 5, passing over the usual pulleys 6, one only being shown; 7, the sashes, having the side posts 8, which posts have such a width as to form between their outer edges and the adjacent edges of said guide-strips seams or openings of the required widths to accommodate the elements of the invention when they are placed therein and secured to the respective edges of the sash side posts and guide-strips and which elements will now be described.

As shown in the drawings, the reversible sash-hinge of the invention is composed of two members A A', having the required dimensions, preferably made of approved sheet metal, placed sidewise together and joined by a rivet  $a$  through ears  $a'$ , projecting edgewise from the center of each of said members and so arranged that the center of said joint will lie in the outer surface line of the pivot-joined members. The members adapted to be closed shearingly together have their respective edges from the pivot-ears to the outer ends provided with oppositely-disposed side projecting flanges  $a^2$ , the respective flanges overlapping the edges  $a^3$  of the members, but on opposite sides of said pivot-joint, said flanges closing the seam or joint between the members, preventing the passage of air there-through, as well as forming an ornamental bead or molding thereover. In the edges  $a^3$  adjacent to their outer ends are cut recesses  $a^4$ , provided with beveled bottom edges made inwardly sloping, adapting them to be engaged by the beveled edges of inwardly-projecting lips  $a^5$ , formed adjacent to the outer ends of the respective flanged portions of the members, drawing said ends together and holding them in close contact when said members are closed. To hold the closed members, as well as the closed sash to which the hinge is applied, in securely-locked position, a spring-catch A<sup>2</sup> is provided to extend across the outer surface of the member A' at the desired distance from the flangeless end thereof, having one end rigidly secured in place, as by a rivet  $a^6$ , and its free end provided with a side projecting catch-lip  $a^7$ , adapted to pass over the edge of and to engage on top of the flange  $a^2$  of the member A when the sash is being closed, holding it securely locked in position until it be desired to have it opened again. To hold the sash in several certain opened or partially-reversed positions, there is provided an approved lever-arm A<sup>3</sup>, having one end pivoted to the inner surface of the flanged portion of the member A underneath its flange  $a^2$  at the required distance from the hinge joint or pivot, and the other or free end

of the arm is provided with a side projecting lug or pin  $a^8$  to engage in any one of the several orifices  $a^9$  formed through the body of the flangeless portion of the member A', while through its edge  $a^3$  said portion is provided with a recess  $a^{10}$ , to be engaged by said lever-arm when said members are closed or the sash is turned to its normal position. Through the bodies of the members at the required points in their adjacent surfaces are formed orifices  $a^{11}$ , with countersunk recesses in said surfaces, through which orifices and recesses taper-headed screws  $a^{12}$  serve to secure the said members or the hinges in position against the respective edges of the sash side posts and the adjacent guide-strips.

It will here be observed, first, that two hinges like the one shown and described are required to be applied to each window-sash, and in order that the sash may be reversible said hinges must have their members arranged in oppositely-disposed pairs—that is, the hinges must be made right and left; second, that only one spring-catch is required to be applied to the members A A' of one of the two hinges to hold the sash in locked position when it is closed; third, that only one lever-arm A<sup>3</sup> is required to be applied to the members A A' of one of the two hinges to hold the sash in opened position when it is partially reversed; fourth, that the center of the hinge-pivot being in the line of the outer surfaces of the flanges  $a^2$  the sash may practically be completely reversed, and, fifth, that the hinge, with its two pivoted-together members, being provided with the edge projecting flanges  $a^2$ , the outer end-securing recesses and recess-engaging lips  $a^4$   $a^5$ , the closed sash-locking spring-catch A<sup>2</sup>, and the partially-opened sash-holding lever-arm A<sup>3</sup>, forms a unit in itself, carrying all the functional elements required in the construction of reversible window-sashes.

The invention having thus been ascertained and described in the manner in which its functions are performed, fully shown, and set forth, what is considered new, and desired to be secured by Letters Patent, is—

1. In a reversible window-sash, the combination with the sash having the side posts and the guide-strips as shown, of the hinge composed of two centrally-pivoted-together members adapted to be placed and secured in position within the seams between said side posts and the adjacent guide-strips, said members having the oppositely-disposed sidewise-projecting edge flanges to cover said seams, with the edge recesses and the inwardly-projecting recess-engaging lips adjacent to the respective ends thereof to draw said ends together, with the spring-catch provided to lock the closed sash, and with the lever-arm provided to hold the opened sash in partially-reversed position, all substantially as described and for the purpose hereinbefore set forth.

2. In a reversible window-sash with the



side posts and guide-strips as shown, the hinge having the pivoted-together members, with the seam-covering edge flanges, and the end-securing edge recesses with the recess-engaging side lips as shown, the spring-catch applied to the side of the flangeless half of one of the members with one end secured to the outer surface thereof and having at its free end the side projecting lip to engage against the edge of and on the top surface of the flange of the flanged half of the other member to securely lock said closed members together, substantially as described and for the purpose hereinbefore set forth.

15 3. In a reversible window-sash having the side posts and guide-strips as shown, the hinge with the centrally-pivoted-together members having the seam-covering edge flanges, and

having the edge recesses with the recess-engaging lips, and the sash-locking spring-catch, 20 all as shown, the sash-holding lever-arm having one end pivoted to the inner surface of the flanged half of one of said members adjacent to the pivot-joint thereof and its free end provided with the side projecting pin or lug 25 to engage in any of the body-orifices of the flangeless half of the other member to securely hold the partially-reversed sash in position, substantially as described and for the purpose hereinbefore set forth. 30

In testimony whereof I affix my signature in presence of two witnesses.

ANTHONY ISKE.

Witnesses:

PAUL A. HERR,

FRED. P. MENTZER.