

1,012,498.

Patented Dec. 19, 1911.
2 SHEETS—SHEET 1.

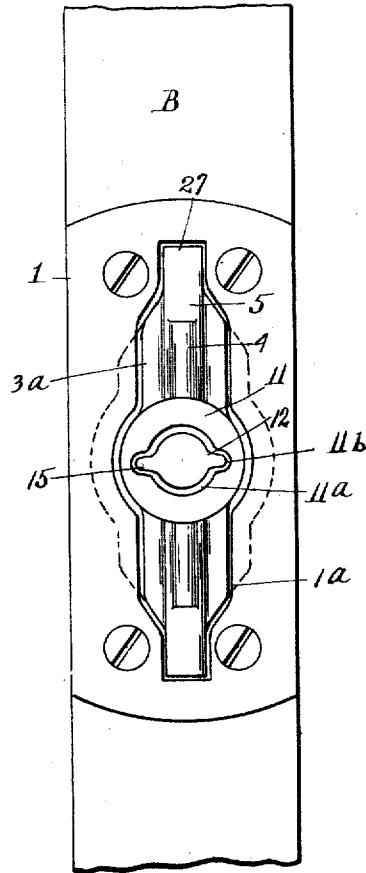


Fig. 1A.

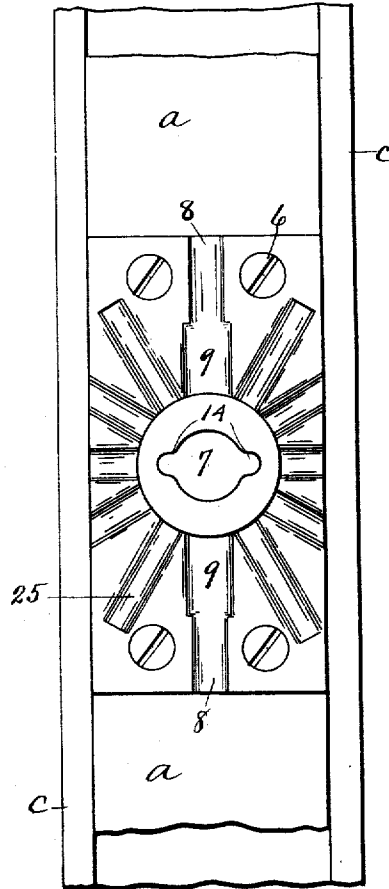


Fig. 1.

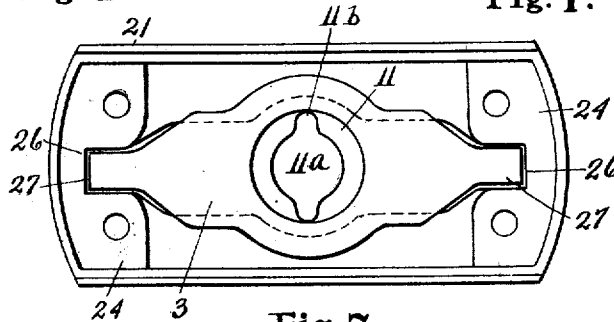


Fig. 7.

Witnesses

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2 SHEETS--SHEET 2.

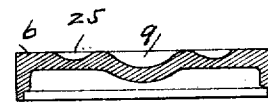
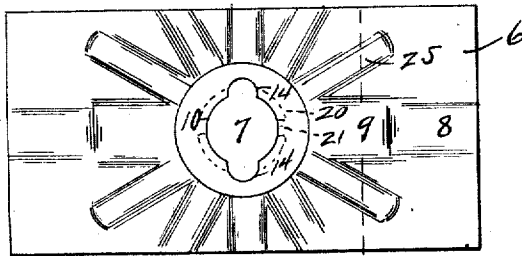
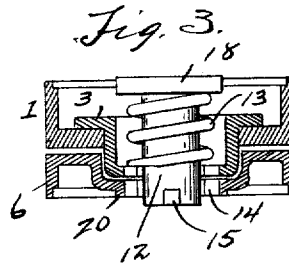
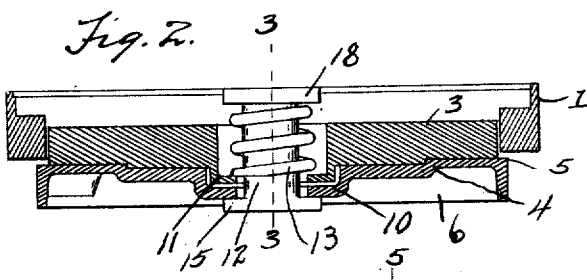
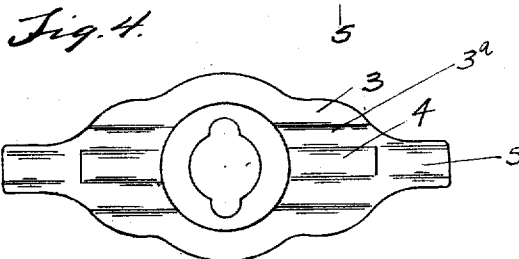


Fig. 5.



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HENRY F. YOE, OF DETROIT, MICHIGAN, ASSIGNOR TO THE MONARCH MANUFACTURING COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

SASH-CENTER.

1,012,498.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed September 6, 1910. Serial No. 580,739.

To all whom it may concern:

Be it known that I, HENRY F. YOE, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Sash-Centers, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to sash centers, and is more especially adapted for use in connection with sashes, which both slide and turn in the window frame.

It has for its object a sash center which may be more easily fitted and for which accurate manufacture is not so necessary for the proper fitting together of the members.

A further object of this invention is a sash center, which when in position will cause a tight fit of the sashes and the members of the center itself and thereby more effectually exclude the weather.

Another object is a sash center, which, when the opposite members are in alinement, will not readily turn so that the window may be lifted together with the auxiliary sliding sash without the chance of the members turning, but which when turned by a strong initial exertion, will thereafter turn comparatively easy.

In the drawings:—Figure 1, is an elevation of the plate-member attached to the sliding sash. Fig. 1^a, is an elevation of the shell-member attached to the swing sash. Fig. 2, is a longitudinal section through the several parts which comprise the center. The central pin is in elevation. Fig. 3, is a cross section of the same parts. The central pin is in elevation also. Fig. 4, is a plan of the plate-member. Fig. 5, is a cross section at the line 5—5 of Fig. 4. Fig. 6, is a plan view of the clamp bar. Fig. 7, is a rear elevation of the shell-member.

The sash center comprises two housing members, either of which may be attached to the swinging sash B in which the window glass is held or to the sliding sash A, which slides vertically, in the window frame C. In the drawings the housing-member 1, which will hereinafter be called the shell-member, is attached to the swinging sash B, and the housing-member 6, which will be hereinafter called the plate-member, is shown attached

to the sliding sash A. The shell-member 1 is rectangular in form and consists of a front-plate which has a rim 21 raised on its rear side. The front-plate of the shell has an aperture 1^a, which extends lengthwise almost the entire length, being nearly the width of the shell at the mid-point and narrowing toward each end. On the under side of the front-plate at each end a boss 24 is raised having a central notch 26. On the front of the plate screw holes are counter-sunk at each corner in which screws may be driven to fasten the plate to the sash. The clamp 3 which comprises a narrow plate of substantially the same shape as the aperture in the shell member, but which is of sufficient length and breadth to prevent dropping through the aperture, is placed within the shell-member under the front-plate and its narrowed ends 27 loosely engage within the notches 26 of the bosses. On the front face of the clamp 3 is a raised portion 3^a, which brings the face of the clamp approximately level with the face of the shell-member. This raised portion conforms to the shape of the aperture 1^a, but is somewhat smaller so as to give the clamp a limited freedom of movement. These loose engaging parts permit a fit of the housing-members, although they have not been accurately set. Upon the raised portion 3 a rib 4—5 is raised, which protrudes beyond the face of the shell-member. This rib is parallel to the sides of the shell-member and comprises two steps, the step portion 4 being raised somewhat higher than the step portion 5. At the center of the clamp 3 is a circular opening 11^a surrounded by a projecting hub 11 which is sunk from the back side of the clamp and which protrudes at the front beyond the shell even farther than the step portion of the rib 4—5. This hub projects through the aperture of the shell-member, which curves about it but is slightly spaced therefrom. The hub is provided with notches 11^b diametrically opposed.

The plate-member 6 is attached to the sliding sash by screws or other fastening means and is provided on the side toward its sash with a shallow rim which bounds it on all sides. This rim serves to give the member more depth. At the center of the plate-member 6 is a circular opening 7 which has on either side notches 14 semi-circular in form. The face of the plate-member is traversed by a number of radial grooves 25

which extend from the rim of a counter-sunk, circular portion 10. These radial grooves, when engaged by the step 4 of the rib 4—5 allow the housing member and plate member to assume stop positions in turning. The two radial grooves which are parallel to the sides of the plate-member are each composed of two groove portions 8 and 9, the one portion 9 nearer the center of the plate being deeper than the other radial grooves to receive the step portion 4 of the clamp 3, and the more remote grooved portion 8 is shallower and adapted to receive the step portion 5. Raised on the back of the counter-sunk portion 10 are a number of segments 20 which form a broken ring. The holding pin 12 is adapted to be passed through the central openings of the clamp 3 and the plate-member 6. Lugs 15 extend at one end on either side of the holding pin and are adapted to pass through the notches 14 and 11^b. A head 18 confines a spiral spring 13 between itself and the projecting hub 11 of the clamp member, which acts as a shoulder or abutment to confine the spring. In assembling the parts the holding pin is passed through the shell member, the clamp 3, which is inclosed in the shell member, and the plate-member, the lugs passing through the notches 11^b and 14. The head is then pushed toward the plate-member causing the lugs to pass above the broken ring 20 where they are turned around until they engage between some of the segments where they are firmly held by the expansion of the spring 13. The members are then revolved one with respect to the other so that the ends of each are exposed, and each may then be readily secured on to its sash.

As the clamp member 3 has a loose fit within the shell due to the narrow ends 27 fitted loosely within the notches 26, and the loose fit of the raised portion 3^a, the sash-center members will fit together properly, although the housing members are not accurately set on the sashes. The ribs 4—5, engaging in the deep grooves 8—9 when the housing members are parallel, allows the faces of the two housing members to engage in close frictional contact, thereby requiring more of an exertion to turn the members with respect to each other than when the ribs 4—5 have slipped from their complementary grooves and are traveling along the face of the plate member or resting in one of the other radial grooves. The second portion of the turn of the window sash is thereby freer than the initial portion of the turn. It is also easier to release the members from any of the stop positions than from the initial parallel position. The rib portion 4—5 engaging in the deep grooves 8—9 and in connection with the spring, causes the hous-

ing faces to tightly engage, and also the sash members and forms a tight weather-strip at the center and a tight engagement for the sashes.

What I claim is:—

1. A sash center, comprising in combination a shell member provided with a slot, a clamp member having a rib adapted to engage said slot, said clamp member being also provided with a central opening having notches in its edge, a plate member having a central opening which is provided with notches in its edge and radial grooves extending from said central opening, a holding pin having a pair of lugs, the said plate member on its rear side being provided with a segmental ring, the said holding pin being adapted to be passed through the central openings and notches of both the clamp member and the plate member, and then turned to cause the lugs to rest in recesses in said segmental ring, a head on said holding pin and a spiral spring adapted to engage about said holding pin, abutting against said head and the clamp member, thereby, holding the clamp member in close frictional relation with the plate member, substantially as described.

2. A sash center, comprising in combination a shell member provided with a slot, a clamping member adapted to engage in said slot and provided with a projecting hub having a central opening provided with oppositely disposed notches offset therefrom, a plate member having a counter-sunk portion complementary to said projecting hub and in which said projecting hub is adapted to engage, the said counter-sunk portion having a central opening provided with oppositely disposed offset notches, the said plate member being also provided with radiating grooves, a rib on the clamp adapted to engage in said groove, a holding pin having at one end a head and at the other end a pair of oppositely disposed lugs, a segmental ring on the rear side of the counter-sunk portion of the plate member, the said holding pin being adapted to be passed through the said opening, the lugs passing through the notches and then being turned to rest between recesses in said segmental ring, and a spring engaging about the holding pin between the said head and the projecting hub of the clamp member, whereby said clamp member is caused to engage with said plate member, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

HENRY F. YOE.

Witnesses:

LOTTA LEE BRAY,
CHARLES F. BURTON.