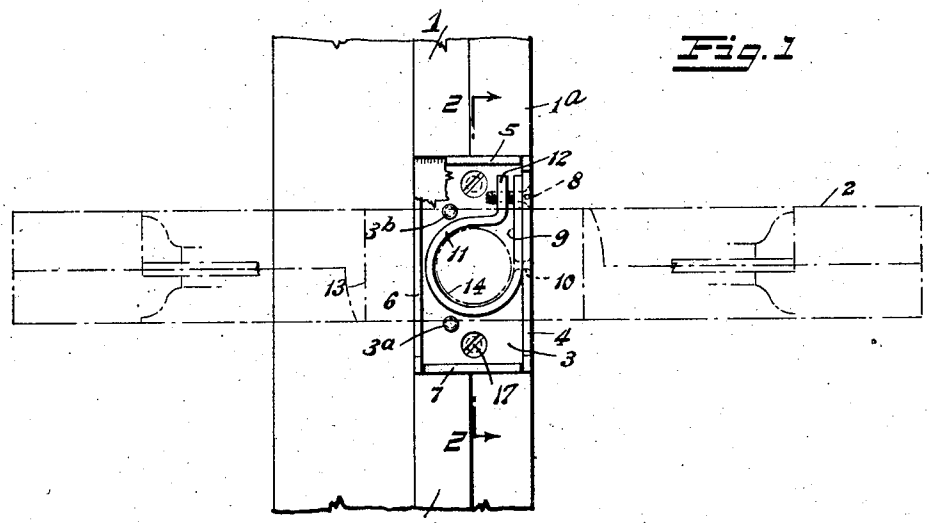
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TRANSOM HINGE

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Fig. 1



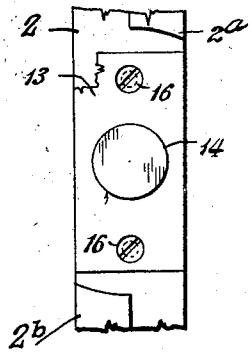


Fig. 3

Fig. 2

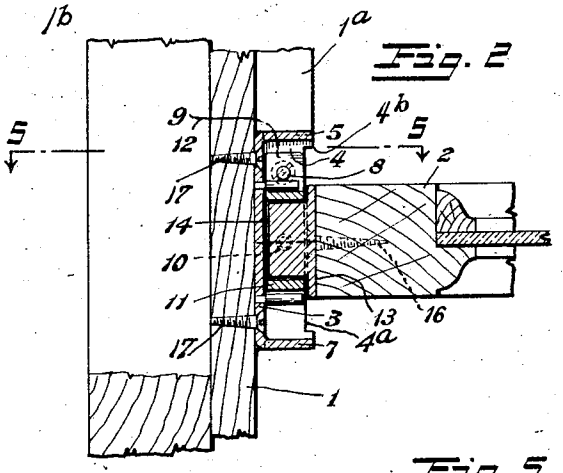


Fig. 4

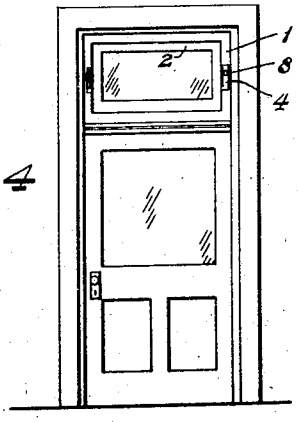
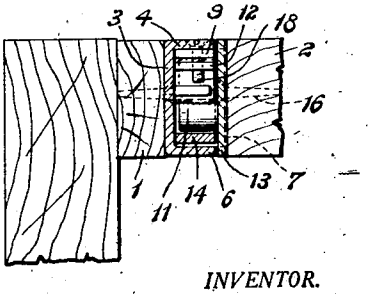


Fig. 5



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Fig. 6

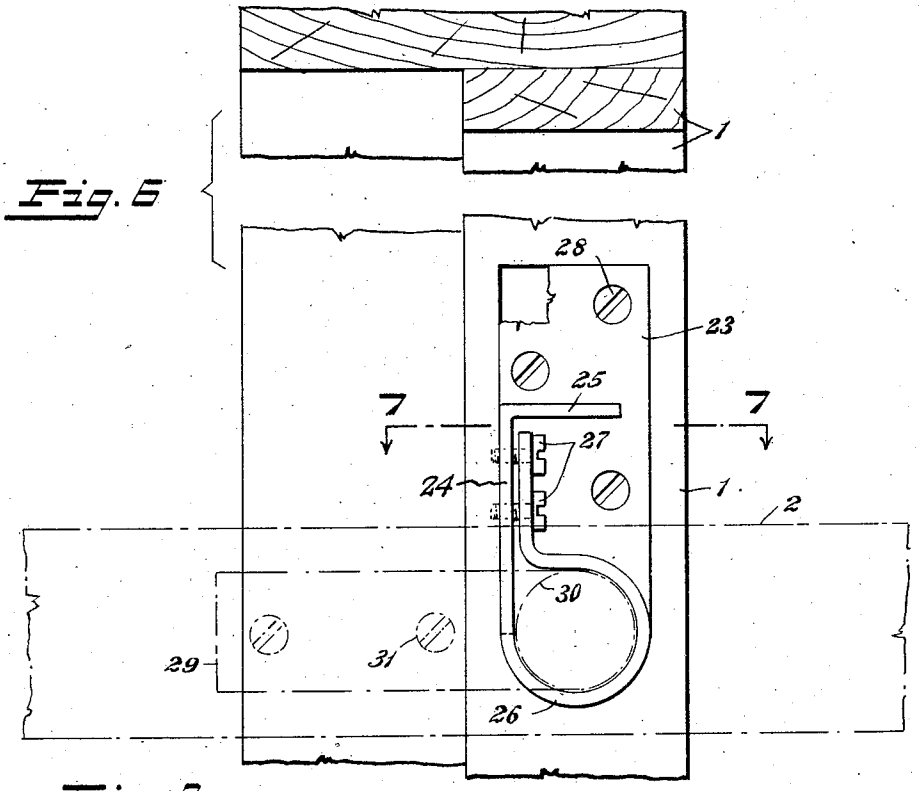


Fig. 8

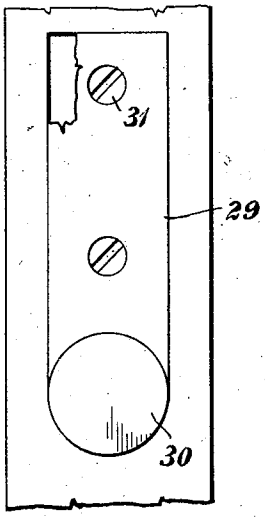
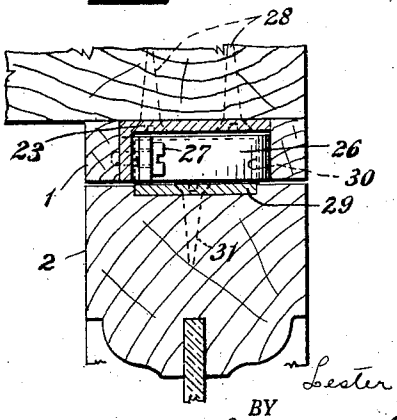


Fig. 7



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Patented Aug. 9, 1927. 1,638,065

UNITED STATES PATENT OFFICE.

LESTER S. SIMON, OF NEW YORK, N. Y., ASSIGNOR TO LESTER S. SIMON, INC., A CORPORATION OF NEW YORK.

TRANSOM HINGE.

Application filed January 8, 1926. Serial No. 79,916.

This invention relates to swinging devices, such as transoms and the like.

An object of this invention is to provide a device of the character described, which may be held in adjusted position in a new and improved manner.

A further object is to provide a device of the character described in which the resistance to displacement may be varied at will and with ease and without dissassembling the hinge.

A further object is to produce a transom which will be held in adjusted position, but which may have its adjustment varied noiselessly.

A further object is to produce a device of the character described, in which allowance may be made from time to time for wear so that the friction of adjustment may be maintained throughout the life of the transom.

Other objects of the invention will be in part obvious, and will in part appear hereinafter.

The invention accordingly comprises the features of construction, combinations of elements, and arrangement of parts, which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawing, in which:

Figure 1 is a side view of a door frame showing a fragmentary portion of an application of the invention;

Fig. 2 is a section on the line 2—2 of Fig. 1, the pintle and transom being added;

Fig. 3 is an elevation of the transom showing the pintle, and

Fig. 4 is an elevation of a transom and frame embodying the invention.

Fig. 5 is a horizontal section along the line 5—5 of Fig. 2;

Fig. 6 is a side elevation of a modified form of construction;

Fig. 7 is a horizontal section on the line 7—7 of Fig. 6, and

Fig. 8 is an elevation of the pintle of the modification shown in Figs. 6 and 7.

In the drawings, the numeral 1 designates generally a frame as for example, the frame in which a transom is to be pivoted, and the numeral 2 designates in general the transom. Attached to the frame 1 is a housing, comprising a base 3 and side flanges 4, 5, 6 and 7. This housing is preferably of a depth measured from the base to the edges of the flanges 5—7, equal to the thickness of the inner and outer parting stops 1^a and 1^b on the frame, such that when the said stops are cut away flush with the frame, the housing may be set completely within the recess so formed with the outer face of the housing substantially flush with the outer faces of the parting stops. The outer face of the flange 4 of the housing is preferably mounted flush with the inner edge of the inner parting stop 1^a so that an adjusting screw 8 extending through it will be accessible when the transom is in place.

Mounted within the housing is a journal 11 comprising a strap 9 attached to the exposed wall 4 as by rivet 10. The other end of the strap 9 is bent around in circular form as shown, to form a bearing surface of the journal 11, the extreme end being bent parallel to the wall 4 as shown at 12. This end 12 is threaded to receive the screw 8, whereby it will be clear that the turning of the screw 8 may be caused to increase or decrease the size of the journal 11. The housing may be secured in position on the frame by screws 17 as shown. A plate 13 is adapted to be attached to the transom and carries centrally disposed thereon, a pivot or pintle 14 of a size and in position to fit snugly within and engage the journal 11.

The pivot 14 and pivot plate 13 are of such dimensions and are so attached upon the adjacent face of the transom that the plate 13 will be positioned completely within the plane of the outer surface of the housing and below the outer edges of the flanges 5 and 7, so that the pintle or pivot 14 may be attached to the transom by cutting the parting stops 2^a and 2^b down level with the end or parting surface of the transom without cutting the transom itself, as will be apparent upon reference to Figs. 2 and 3. In this connection it will be observed that the parting surfaces between the frame and transom are disposed in closely mating relation so as to form a tight joint when the transom is in closed position. The arrangement of the pintle with reference to the pivotal support or housing also provides a tight closure joint at and adjacent to the pivotal mounting of the transom by virtue of the

mating relation between the housing and the pintle plate 13. This arrangement also enables the pintle plate to be easily attached to the transom without cutting into the frame thereof. Furthermore the transom can be easily installed in operative position without mutilation or disassembly of the frame or adjacent parts.

In order to permit the plate 13 to turn after the parts are assembled, the side flanges 4 and 6 are cut away as shown at 4^a in Fig. 2. Furthermore, it will be obvious, since the upper edge of the plate 13 turns in the arc of a circle about the axis of the pintle, that the top of this plate will not quite reach the flange 5. There is therefore provided an extension of the flange 4 at the extreme top edge as shown at 4^b such that when the transom is closed, the projection 4^b together with the plate 13 will form a substantially continuous surface.

Where the strain upon the hinge is apt to be severe, suitable lugs 3^a and 3^b may be attached to the plate 3 in position to support the strap 11 should there be any tendency for it to sag. In general, a single type of hinge may be used for both right and left hand side, being turned upside down to effect the change. The lug 3^a will thus be in position to support the strap when the hinge is used as a right hand hinge as illustrated in the drawing, while the lug 3^b will be in position to support it when used as a left hand hinge.

In the modification illustrated in Fig. 7, a plate 23 is adapted to be attached to or set into the frame and carries a strap 24 integral therewith. This strap 24 has a horizontal flange 25 and is bent around as shown at 26 into a journal, the size of which is controlled by screws 27 as in the previous form. This plate is attached to the frame by means of screws 28. A suitable plate 29 attached to or set within the transom carries a pintle 30 adapted to fit within the journal 26. The plate 29 may be held to the transom by screws 31.

A transom may be hung by the first of these devices in the following manner:

The parting stops 1^a and 1^b of the frame are cut level with the face of the frame for a sufficient distance to provide a recess for the reception of the housing while the parting stops 2^a and 2^b of the transom are cut level with the end parting surface of the transom frame for a distance sufficient to clear the end edges of the housing. The plate 13 may now be attached to the transom in the center of the cut portion. Thereupon the journal 11 is inserted over the pintle and as the transom is put in place, the housing is slipped into its recess in the frame parting stops. The transom 2 may then be turned to the horizontal position exposing the location for screws 17 by which it may be attached to the frame, so that these screws may now be put in place.

With this construction, it will be evident that the friction of the journal 11 upon the pintle may be varied at will by turning the screw 8. At the same time, should the parts bind excessively or tend to become noisy, they may be lubricated when the transom is open.

With the second modification, the plate 23 may be inserted within its recess and fastened. Thereupon the plate 29 carrying the pintle may be inserted and the transom put in place. By swinging the transom to the horizontal position, access may be had to the screw 31 to attach the plate to the transom.

By both of the above constructions, it will be evident that the pintles and journals may move relative to each other along their axes and thus adjust themselves to take care of shrinking or swelling of the transom.

Since certain changes may be made in the above construction and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

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

1. A device of the character described, including, in combination, a frame and transom, a housing seated in a recess in the inner face of said frame and having outturned flanges, certain of which has a cut-away portion at the outer edge thereof to provide a recess positioned below the outer face of the housing, and an adjustable strap journal mounted within said housing, a pintle plate mounted upon said transom adjacent said housing, and having a pintle adapted to extend into said journal so as to provide a support for the transom, said pintle plate projecting above the face of the transom to which it is attached and positioned to move within said recess in the flange.

2. A device of the character described, comprising, in combination, a frame and a transom, a housing, a journal within the housing, a pintle adapted to be frictionally engaged within said journal for hinging said transom to said frame for swinging adjustment, and an adjusting device for said journal positioned wholly within said housing and being accessible from the outside of said housing for adjusting the size of said journal relative to said pintle.

3. A device of the character described including, in combination, a housing adapted to be mounted upon the parting face of a frame so as to have one face of the housing exposed for access outside of said parting face, a variable size supporting journal mounted within said housing and attached thereto, a pintle attached to the parting face of a transom, or the like, and adapted to fit within said journal to provide a transom support through said journal and an adjusting device extending through the exposed face of said housing and cooperating with said journal to vary the size thereof.

4. A device of the character described, including, in combination, a housing adapted to be mounted upon the parting face of a frame so as to have one face of the housing exposed for access outside of said parting face, a supporting strap journal of variable size, having two ends, and mounted within said housing with one end securely attached thereto, a pintle attached to the parting face of a transom, or the like, and adapted to fit within said journal to provide a transom support through the journal, an adjusting device extending through the exposed face of said housing and cooperating with the other end of said journal to vary the size thereof, and a supporting lug on said housing for cooperation with said journal to prevent sagging thereof.

5. A device of the character described, comprising, in combination, a housing adapted to be attached to a frame in position to leave one face of the housing exposed, a variable size journal within said housing, comprising a strip bent into a nearly complete circle with parallel ends, one of which is attached to said face and one of which is free, and a screw extending through said exposed face and threaded into said free end whereby the size of said journal may be varied, and a pintle for attachment to a transom or the like.

6. A device of the character described, including, in combination, a frame and transom, a housing seated in a recess in the inner face of said frame and having outturned flanges, certain of which has a cut-away portion at the outer edge thereof to provide a recess positioned below the outer face of the housing, an adjustable strap journal mounted within said housing, a pintle plate mounted upon said transom adjacent said housing, and having a pintle adapted to extend into said journal so as to provide a support for the transom, said pintle plate projecting above the face of the transom to which it is attached and positioned to move within said recess in the flange, said recess terminating short of the adjacent housing flange so that the edge of the pintle plate cooperates with the housing flange to provide a substantially continuous exterior surface, and a journal adjusting device accessible from without said casing to vary the friction between said journal and said pintle.

7. A device of the character described, including, in combination, sash and frame members each having mating parting stops thereon, a housing attached to one of said members and having a thickness substantially equal to the thickness of the corresponding parting stop, and having its outer face substantially flush with the outer face of the parting stop, a bearing mounted in said housing, a pintle plate secured to the adjacent face of the other said member, and lying substantially wholly within the plane of the outer face of said housing, and a pintle carried by said pintle plate and extending into supporting relation with said bearing.

In testimony whereof I affix my signature.

LESTER S. SIMON.