

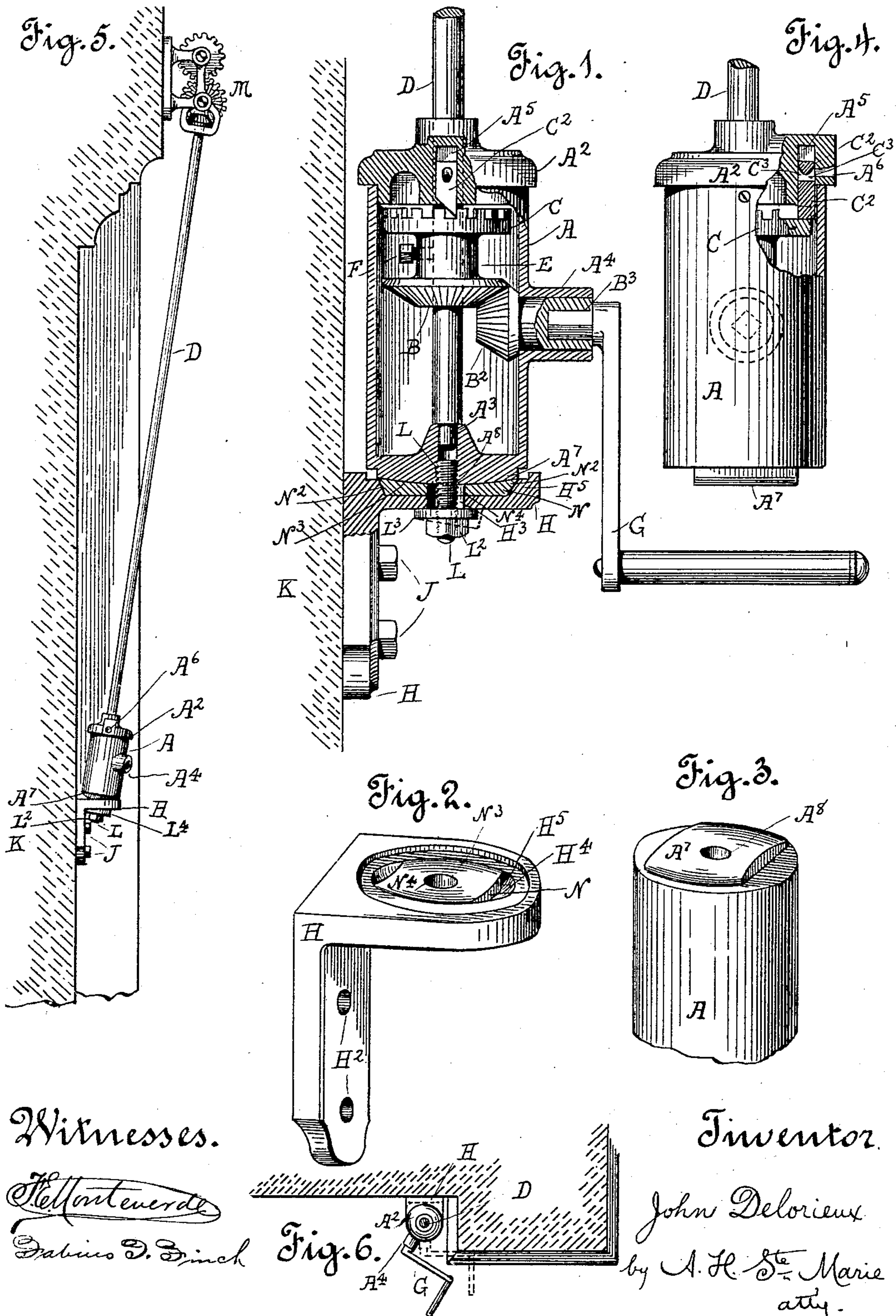
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Patented Aug. 15, 1899.

J. DELORIEUX.  
AWNING.

(Application filed July 25, 1898.)

(No Model.)



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## AWNING.

SPECIFICATION forming part of Letters Patent No. 631,065, dated August 15, 1899.

Application filed July 25, 1898. Serial No. 686,834. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN DELORIEUX, a citizen of the United States of America, and a resident of the city and county of San Francisco, in the State of California, have invented certain new and useful Improvements in Awnings, of which the following is a specification.

My improvements relate to the mechanism employed for working the frame of a crank-awning. It is the common practice when setting up an awning of this class to place the lower gears, to which the crank is applied, in a box or bracket that is bolted or rigidly secured to the building where the awning is set up. This method of attaching the box or bracket holding the gears may answer when there are no obstructions to prevent the free turning of the crank; but when the box or bracket is to lie close to a pillar or to a projecting wall it becomes a difficult task to attach the same so that the crank can be properly inserted and turned in it. Blocks of irregular forms and various contrivances have then to be used to bring out the box or bracket in the required position, and the like are more or less unsightly and generally objectionable, because of the extra work entailed and additional expense involved in putting them up and other reasons. Again, when that part of the awning-frame which carries the cloth is to be placed on a cornice or other portion of a building that stands out and the box or bracket for the gears, on the contrary, has to be placed farther back on the wall of the building in the ordinary way the cloth cannot be rolled and unrolled with a single upright shaft, and consequently recourse is had in such cases to divided shafts and universal joints, which are harder and more costly to make and adjust than single shafts and are never so satisfactory. It is therefore the object of my invention to provide an improved device for holding the lower gears of awnings that is so constructed and applied that it will cure the above-noted defects, which are inherent to the construction and mode of attachment of the ordinary box or bracket used for the same purpose.

The object aforesaid is attained by means of the device illustrated in the drawings here-

to annexed, to which reference is had for a detailed description of my improvements.

Figure 1 of the said drawings is a sectional elevation showing my improved device in an upright position. Fig. 2 is a detailed perspective view of a bracket and rotary piece used in connection with the box that holds the awning-gears. Fig. 3 is a broken perspective view of the gear-box inverted. Fig. 4 is an elevation, partly broken and in section, of the gear-box, taken in a position at right angles to that represented in Fig. 1. Fig. 5 is an elevation illustrating the device applied to a building having a cornice and projecting wall, which both would interfere with the placing of the ordinary box or bracket for awning-gears. Fig. 6 is a plan showing also a section of building with projecting wall close to which my improved device is applied.

Similar parts are indicated by similar letters of reference in all said figures.

A represents a box open at its upper end, in which are placed miter-gears B B<sup>2</sup> and a ratchet-wheel and pawl C C<sup>2</sup>, employed for turning the lower end of the vertical shaft D of a crank-awning. The box A is provided with a cap or top A<sup>2</sup>, having a central hole through which the vertical shaft D enters. The said shaft has its bearing in the bottom of the box A, where its lower end is fitted in a socket A<sup>3</sup>. I make the miter-gear B and the ratchet-wheel C in one piece, forming the same with a hub or sleeve E, through which the shaft D passes and which is firmly secured to said shaft by a set-screw F, so that all these parts will rotate together. The other miter-gear B<sup>2</sup>, which meshes with the gear B, has a socket-piece B<sup>3</sup> formed on it, that is fitted in a bearing A<sup>4</sup> on the side of the box A and in which is inserted the crank G, that works the awning. The pawl C<sup>2</sup>, that engages the teeth of the ratchet-wheel C, is placed in a recess A<sup>5</sup> in the cap A<sup>2</sup>, in which it slides vertically. It is a gravity-pawl and whenever desired is lifted out of engagement with the teeth of the ratchet-wheel by means of a pin (not shown) that is adapted to be slipped through a hole A<sup>6</sup> in the top A<sup>2</sup> and enter an upwardly-flaring hole C<sup>3</sup> in said pawl. The hole C<sup>3</sup> is made flaring upward in a similar



manner on both sides of the pawl, so that the latter can be reversed and will allow the ratchet-wheel to be turned either way, thereby enabling it to work the awning either right or left, as may be found more convenient.

The box A aforesaid, with the parts thereto appertaining, is mounted on a bracket H, which is rigidly secured by bolts J to the wall of the building where the awning is set up, as at K, Figs. 1 and 5. The bolts J are passed through holes  $H^2$ , made in the wall-plate of the bracket, as shown in Fig. 2. The bottom of the box A is made so it may rest either directly or indirectly on the sole of the bracket H, and it is secured in position thereon by a stud L, screwed into it from the under side and passing through a hole  $H^3$  in the sole of the bracket and drawn down by a nut  $L^2$ . A washer  $L^3$  is placed between the nut  $L^2$  and the under side of the sole of the bracket H; but this is not indispensable.

It will now be observed that the box A is not fixed in any way to the wall of the building in accordance with the common practice, but only to its supporting-bracket H, and, furthermore, that it can be turned easily about a vertical axis on the latter, so that it can be adjusted in any desired position thereon, and the crank-socket  $B^3$  can be set at any convenient angle with relation to the building. Consequently if the position of the awning on the building is such that the box A, containing the lower gears thereof, has to be placed close to a projecting wall in the manner represented in Figs. 5 and 6, where ordinarily there would be no room for the crank to turn in, as indicated by the dotted lines in the figure last named, it is a simple matter to turn the box A so as to bring the crank-socket to one side and have it lie in the proper position to allow the free insertion and turning of the crank, as the full lines in said Fig. 6 indicate. To turn the box A on its support requires merely the loosening of the nut  $L^2$ , which is tightened after the box has been adjusted in place. When the nut  $L^2$  is tightened, it draws down the stud L and operates to pull down the box A and clamp it or secure it rigidly on its supporting-base in the position it has been set in.

In addition to being adjustable horizontally about a vertical axis in the manner above described, the box A is also made so that it can be inclined vertically at any suitable angle in order to permit the use of an oblique shaft for working the awning—such, for instance, as is illustrated in Fig. 5 of the drawings hereto annexed. It matters not, then, if the awning is placed on a cornice or other projecting part of a building and the gear-box is located in a different plane farther back. The vertical shaft D will then run directly from the lower gears inclosed in the box A to the upper gears M and no divided shafts nor universal joints need be used, as already stated. I accomplish this by making the hole  $H^3$  in the sole of the

bracket H fairly large, so that the stud L can pass obliquely through it to suit the inclination to be given to the box A, with the gears in it, and the vertical shaft D connected thereto, and by using a wedge-shaped washer  $L^4$  in the place of the straight washer  $L^3$  previously mentioned. The washer  $L^4$  is shown in full lines in Fig. 5 and in dotted lines in Fig. 1. It will be seen that this washer bears squarely against the underside of the bracket H and at the same time affords an inclined surface for the nut  $L^2$  to bear on as it itself becomes inclined with the stud L. The box A can thus be secured in an inclined vertical position as well as adjusted horizontally on the bracket H with the use of a simple stud, nut, and washer; but to make it work more smoothly and perfectly I provide it also with a bearing-piece N, on which it rests. This piece N is made quadrangular and with beveled ends  $N^2$  and is placed so as to lie flat in a circular recess  $H^4$  in the sole of the bracket H, said recess having a downwardly-inclined edge  $H^5$ , against which the ends  $N^2$  bear. The bearing-piece N is also hollowed out or made concave in one direction, as at  $N^3$ , and has a central hole  $N^4$  of suitable size to allow the stud L to pass through. The box A, on the other hand, is made convex at the bottom at  $A^7$ , where it is to bear on the bearing-piece N, so as to fit the concave portion thereof. The stud L then passes through the holes  $H^3$  and  $N^4$  and screws into the hole  $A^8$  provided in the bottom of the box. (See Figs. 1, 2, and 3.) Arranged in this way the box can be turned around freely with the bearing-piece N within the sole of the bracket H to set it in position horizontally, and it can also be inclined vertically at any convenient angle without danger of its slipping off the said bracket after being clamped on it.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In a device of the character described, the combination of a support, a gear-holder on said support and adapted to be inclined relative to said support, a shaft having bearing in said gear-holder and adapted to be inclined therewith, means for securing said gear-holder in its adjusted positions, operating-gears for said shaft carried by said gear-holder, and operating means for said gears, substantially as described.

2. In a crank-awning, the combination with an awning-operating shaft, and operating-gears therefor, of a support adapted to be secured to a window-frame or the like, a gear-holder containing said gears adapted to be inclined vertically, and means for holding said gear-holder at adjusted inclinations, substantially as described.

3. In a crank-awning, the combination with an awning-operating shaft, and operating-gears therefor, of a support, a gear-holder containing said gears vertically rotatable and adapted to be vertically inclined on said support and means for holding said gear-holder



in its adjusted positions, substantially as described.

4. In a device of the nature specified, the combination of a bracket adapted to be secured to a window-frame or the like, a gear-holder on said bracket and rotatable thereon, a shaft having a portion in said holder substantially in the axis of rotation of said holder, and means for holding the holder on the bracket and securing it in adjusted positions comprising a stud passing through said holder and bracket and a nut on said stud, substantially as described.

5. In a device of the nature specified, the combination of a fixed bracket, a gear-holder angularly adjustable thereon, a stud secured to the holder and passing freely through the bracket, a nut on said stud, and a wedge-shaped washer between the bracket and the nut and on which the nut bears, substantially as described.

6. A mechanism for operating crank-awnings comprising a bracket, a gear-holder rotatable on said bracket, means for clamping said holder in adjusted positions on the bracket, a shaft entering the same, a ratchet-wheel and bevel-gear having a common hub adjustably secured to the shaft, another bevel-gear adapted to be turned by a crank and meshing with the first-named bevel-gear, and a pawl engaging the ratchet-wheel, substantially as described.

7. A mechanism for operating crank-awnings comprising a suitable holder, a shaft entering the same, a ratchet-wheel secured to the shaft within the holder, means for turning the shaft, and a reversible pawl also located within the holder and engaging the ratchet-wheel, said pawl having a hole upwardly flaring on each side of the pawl

through which a pin can be passed to raise it from either side, substantially as and for the purpose described.

8. The combination of a bracket, a gear-holder rotatably adjustable on said bracket, gears therein, a shaft operated by said gears, one of said gears having a crank-attaching portion, and means for clamping the holder in its adjusted positions on said bracket.

9. The combination of a fixed bracket, a gear-holder rotatably adjustable on said bracket, gears in said holder, one of said gears having means for attaching a crank, a shaft operated by said gears, a bolt passing through said holder and bracket and a nut on said bolt for clamping said holder in adjusted positions on the bracket.

10. A device of the nature specified consisting of a suitable holder, gears therein, a shaft worked by said gears, a fixed support for the holder, an intermediate bearing-piece between the holder and its support, and means for clamping the holder and intermediate piece to the support, substantially as and for the purpose described.

11. A device of the nature specified consisting of a box having a convex bottom, gears therein, a shaft connected with said gears, a bracket, a concave bearing-piece for the convex bottom of the box, placed on the bracket, a stud passing through the bracket the bearing-piece and the box, a wedge-shaped washer, and a nut, substantially as and for the purpose described.

Signed by me, at San Francisco, California, this 2d day of July, 1898.

JOHN DELORIEUX. [L. S.]

Witnesses:

A. H. STE. MARIE,  
HENRY P. TRICOU.