

No. 706,005.

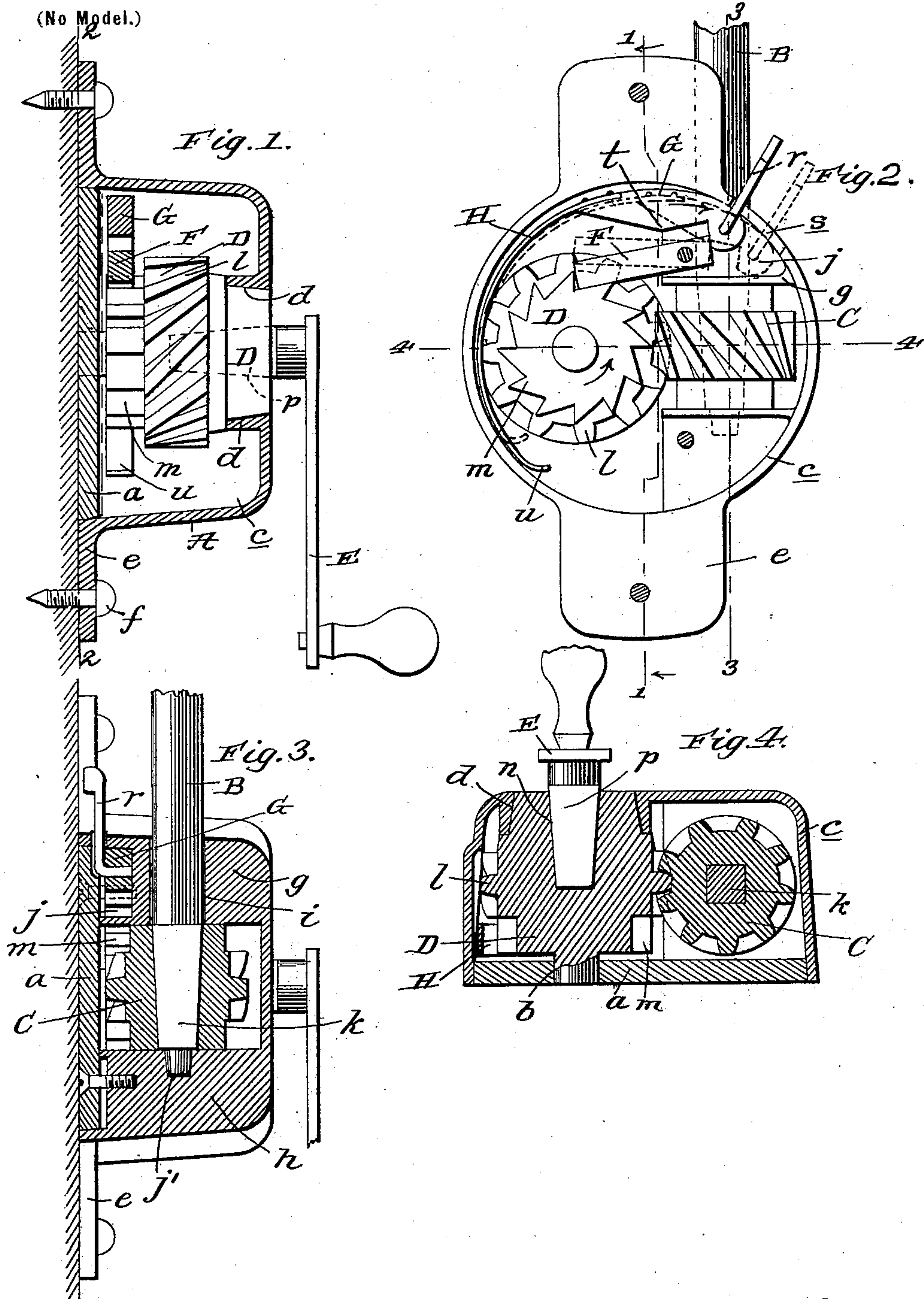
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W. H. ARNOLD.

ACTUATING MECHANISM FOR AWNINGS.

(Application filed Oct. 14, 1901.)

(No Model.)



Witnesses
E. J. Rader
N. C. Kaly

Inventor
W. H. Arnold.
By *James J. Shuey* Attorney
Also

UNITED STATES PATENT OFFICE.

WILLIAM H. ARNOLD, OF OAKLAND, CALIFORNIA.

ACTUATING MECHANISM FOR AWNINGS.

SPECIFICATION forming part of Letters Patent No. 706,005, dated August 5, 1902.

Application filed October 14, 1901. Serial No. 78,602. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ARNOLD, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Actuating Mechanism for Awnings; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in awning mechanism—*i. e.*, mechanism for raising and lowering awnings and securing the same in the positions desired; and it consists in the peculiar and advantageous construction hereinafter described, and particularly pointed out in the claims appended.

In the accompanying drawings, Figure 1 is a vertical section of my improved mechanism, taken in the plane indicated by the line 1 1 of Fig. 2; Fig. 2, a vertical section taken in the plane indicated by the line 2 2 of Fig. 1 with the inner casing-wall removed; and Figs. 3 and 4, vertical and horizontal sections taken in the planes indicated by the lines 3 3 and 4 4, respectively, of Fig. 2.

In said drawings similar letters of reference designate corresponding parts in all of the several views, referring to which—

A is the casing of the mechanism. This casing in the preferred embodiment of the invention comprises an inner section or wall *a*, having a circular aperture *b* and an outer hollow section *c*, which receives the inner section and is provided in its front wall with a circular flanged aperture *d*, at its top and bottom with apertured lugs *e*, designed for the passage of attaching-screws *f*, and interiorly with upper and lower thick portions *g h*, the portion *g* having a circular vertically-disposed bore *i* and a recess *j* and the portion *h* a socket *j'* coincident with the bore *i*.

B is a vertical shaft designed to be connected with an awning-roller (not shown) by the ordinary or any approved gearing, which I have also deemed it unnecessary to show. Said shaft in the preferred embodiment of the invention is journaled in the bore *i* of the

casing portion *g* and stepped in the socket *j'* of the portion *h*, and its part *k* intermediate of said portions *g h* is of angular form in cross-section and snugly fitted in a corresponding bore of a worm-gear C, interposed between the portions *g h*.

D is a gear disposed at right angles to the gear C and journaled at one end in the aperture *b* of casing-section *a* and at its opposite end in the flanged aperture *d* of casing-section *c*. Said gear is preferably formed of one piece and provided with teeth *l*, complementary to and intermeshed with the teeth of the gear C, ratchet-teeth *m*, disposed at the inner side of the teeth *l*, and a tapered socket *n* of angular form in cross-section to receive the correspondingly-shaped stem *p* of a crank E. When the crank E and the gear D are rotated in the direction indicated by the arrow in Fig. 2, the gear C and the shaft B will be rotated and the awning, connected by interposed gearing with the latter, will be raised, while when said crank E and gear D are turned in the reverse direction the awning will be lowered.

In order to hold the awning against casual retrograde movement incident to the raising thereof and secure the same in various raised positions, I provide in conjunction with the ratchet-teeth *m* of gear D a gravitating detent F, fulcrumed at an intermediate point of its length in the recess *j* of casing portion *g* and arranged to normally engage said ratchet-teeth *m*, while to disengage the said detent from and hold it out of engagement with the ratchet-teeth, so as to permit of the awning being lowered, I provide the slide G, having a finger-piece *r*, extending through a slot *s* in the circular wall of casing-section *c*. The said slide, which is curved at its outer side in conformity with the circular wall of section *c* and provided at its inner side with a projection *t*, adapted to engage the heel of the detent F, is pressed and held against said circular wall by a curved spring H, which also bears against the circular wall, as best shown in Fig. 2. Said spring is free to move endwise in the casing with the slide G, and its free end is curved away from the casing, as indicated by *u*, this in order to prevent said end from catching against the casing when the slide and spring are moved in the

direction opposite to that indicated by the arrow on the slide.

In practice when it is desired to disengage the detent F from the ratchet-teeth *m* to permit of the awning being lowered the operator simply grasps the finger-piece *r* and draws the slide in the direction indicated by the arrow thereon. When this is done, the projection *t* of the slide engages the heel of the detent F and by depressing the same lifts the forward end of the detent out of engagement with the ratchet-teeth. It will also be observed that by reason of the pressure which the spring exerts against the casing the slide will be retained in its adjusted position and the detent held out of engagement with the ratchet-teeth until such time as the slide is moved, through the medium of its finger-piece *r*, in the direction opposite to that indicated by arrow to restore the detent to the position shown in Fig. 2.

The stem *p* of crank E is readily removable from the socket in gear D, and hence the crank may be detached when desired to prevent unauthorized persons from operating the mechanism. It will also be observed that with the weight of the awning imposed on the ratchet D, as when the awning is raised or partly raised and the crank E is removed, the pressure which the ratchet exerts against the detent F precludes the disengagement of the detent from the ratchet, and hence the lowering of the awning by an unauthorized person.

I have entered into a detailed description of the construction and relative arrangement of parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my claims. I also do not desire to be understood as confining myself to the use of the mechanism described in connection with awnings, as it may be used in other connections to which it is applicable.

Having described my invention, what I claim is—

1. In a mechanism of the character described, the combination of a casing having front and back walls provided with bearings, and also having upper and lower portions provided with a circular bore and a socket, respectively, a gear interposed between the upper and lower portions of the casing and having a bore of angular form in cross-section, a shaft journaled in the upper portion and stepped in the lower portion of the casing and having a portion of angular form in

cross-section occupying the bore of the gear, a gear formed of one piece, interposed between and journaled in the bearings of the front and back walls of the casing and having teeth intermeshed with those of the gear on the shaft, and also having ratchet-teeth, a detent arranged to engage said ratchet-teeth, and suitable means for rotating the gear bearing the two kinds of teeth.

2. In a mechanism of the character described, the combination of a casing, a shaft journaled therein, a gear fixed on the shaft so as to turn therewith, a gear formed of one piece, interposed between and journaled in opposite walls of the casing and having teeth intermeshed with those of the gear on the shaft, and also having ratchet-teeth, a detent for engaging said ratchet-teeth, and suitable means for rotating the gear bearing the two kinds of teeth.

3. In a mechanism of the character described, the combination of a casing having a bearing in its back wall and a circular aperture in its front wall, and also having upper and lower portions provided with a circular bore and a socket, respectively, a gear interposed between the upper and lower portions of the casing and having a bore of angular form in cross-section, a shaft journaled in the upper portion and stepped in the lower portion of the casing and having a portion of angular form in cross-section occupying the bore of the gear, a gear formed of one piece interposed between and journaled in the front and back walls of the casing and having an angular socket in its outer end, and teeth intermeshed with those of the gear on the shaft, and also having ratchet-teeth, a detent for engaging said teeth, and a crank having an angular stem corresponding to and removably arranged in the angular socket of the gear bearing the two kinds of teeth.

4. In a mechanism of the character described, the combination of a casing, a shaft journaled therein, a gear fixed to the shaft so as to turn therewith, a gear mounted in the casing and intermeshed with the gear on the shaft, ratchet-teeth fixed with respect to said latter gear, a pivoted detent adapted to engage the ratchet-teeth, a slide movable in the casing, in a position to engage the detent, and having a finger-piece extending through a slot in a wall of the casing, and a spring connected to and movable with the slide, and arranged to bear against the casing.

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

WILLIAM H. ARNOLD.

Witnesses:

JOSHUA B. WEBSTER,
L. B. HODGE.