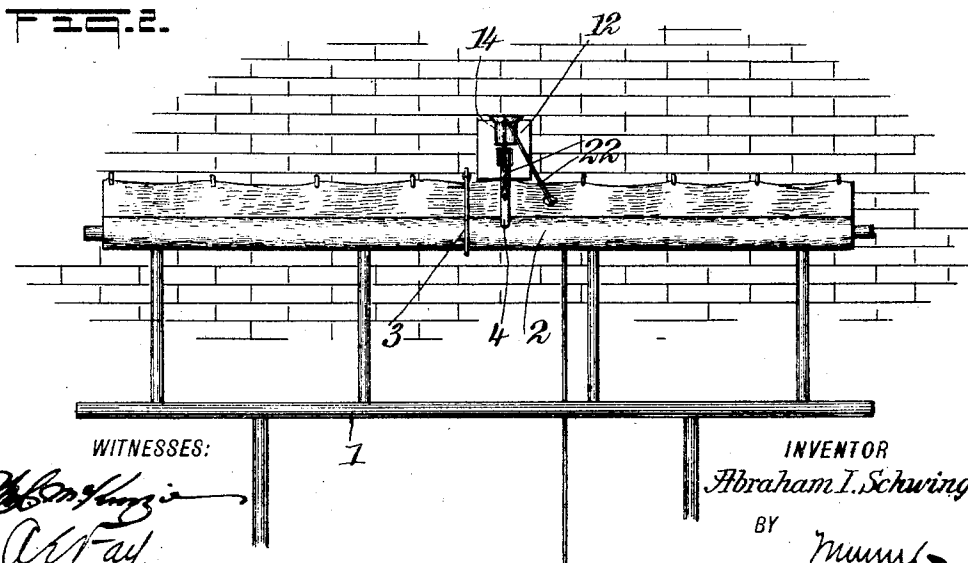
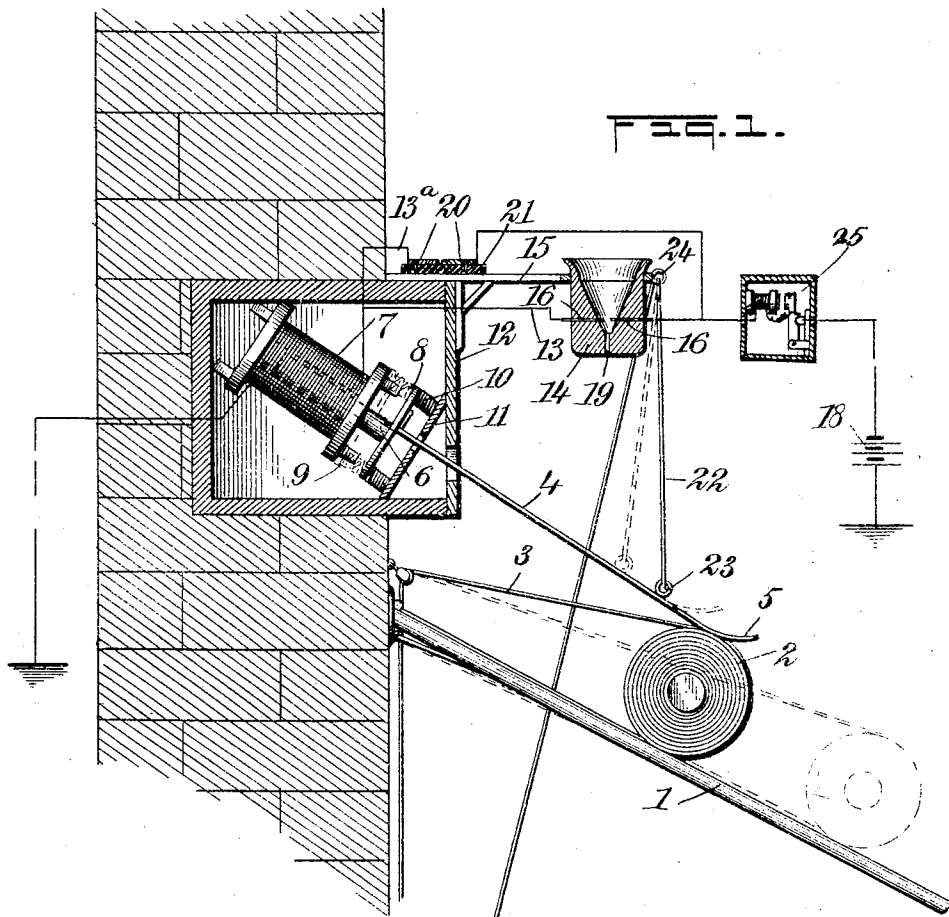


No. 784,897.

PATENTED MAR. 14, 1905.

A. I. SCHWINGER.
AUTOMATIC AWNING ATTACHMENT.
APPLICATION FILED OCT. 11, 1904.



WITNESSES:

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ABRAHAM INNES SCHWINGER, OF NEW YORK, N. Y.

AUTOMATIC AWNING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 784,897, dated March 14, 1905.

Application filed October 11, 1904. Serial No. 227,994.

To all whom it may concern:

Be it known that I, ABRAHAM INNES SCHWINGER, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Automatic Awning Attachment, of which the following is a full, clear, and exact description.

My invention relates to an attachment for awnings and similar devices by means of which they can be spread out automatically upon certain changes in the weather taking place.

Although the invention is especially applicable to ordinary awnings, it can be applied to tent-covers, shades, and all similar devices.

The principal object of the invention is to provide automatic means for permitting devices of the character above mentioned to be operated by a rise in temperature above a certain degree and also by a fall of rain or snow.

Further objects will appear in the course of the subjoined description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a sectional view of the wall of a building, showing one embodiment of the invention applied thereto; and Fig. 2 is a plan view of the same on a smaller scale.

A frame 1 of ordinary construction is provided with an awning 2, which is supplied in the usual manner with guy-ropes 3 and is adapted to roll down the frame by gravity, as is customary. Although I have illustrated a rolling awning, it will be obvious that one which folds up instead of rolls—such, for example, as that shown in the patent to J. E. Briggs, No. 373,549—or an ordinary curtain which rolls up upon a stationary roller instead of a movable one could be substituted for the form shown.

I provide means for holding the rolled awning when it is near the top of the frame and means for automatically disengaging the holding means from the roll. The holding means which I have illustrated is in the form of a bar 4, having a curved end 5. This bar is held in such position that when the roll is brought up under it it will be permitted to as-

cend as far as the bottom of the curved end 5 and will then be held by the bar, as indicated in Fig. 1. This bar is mounted upon an armature 6 of a magnet 7. The armature is provided with a plate 8 and with guides 9 for the plate. Springs 10 are mounted upon a plate 11 and connect the latter with the plate 8. These springs normally tend to keep the bar 4 in the position shown in full lines. The magnet is preferably mounted in a receptacle 12, secured to the wall of the building or in any other convenient place, and the magnet is for convenience shown as being located at an angle to the wall of the building slightly less than the angle which the frame 1 makes with the wall. It will be readily observed that when a current is applied to the magnet it will operate to pull the armature into the magnet and will also operate upon the plate 8 if the latter is made of permeable material, so as to cause the resistance of the springs 10 to be overcome sufficiently to draw the bar 4 upwardly and move the end of the bar from contact with the roll 2. This will free the awning, so that it will readily roll down the frame.

For the purpose of automatically operating the magnet when the conditions of the weather are such as to require the awning to be spread I provide in the circuit 13 a cup 14, adapted to catch rain or snow as it falls. This cup is mounted upon a bracket 15, preferably connected with the receptacle 12, and is provided with two terminals 16, which are normally out of contact with each other, and when the cup is made of conducting material are thoroughly insulated from it. If the cup, however, is made of non-conducting material, these terminals may depend upon the cup itself for their insulation. It will be understood that when water collects in the cup from the falling of either rain or snow the circuit will be closed at this point and the current from a battery 18 will be caused to flow through the magnet. The cup is preferably provided with a perforation 19 for permitting the water to gradually flow out after it has once made the contact.

In order to permit the awning to be automatically operated by the heat of the sun, a

shunt 13^a is made in the circuit. In this shunt are placed a pair of blocks of metal 20, insulated from each other and fixed to a support 21 at their outer ends. These blocks are separated from each other a short distance, and each one is attached to a terminal of the shunt 13^a. They are made of such composition and are spaced such a distance apart that when the temperature reaches a certain predetermined degree they will expand sufficiently to come into contact with each other and complete the circuit through the shunt and the magnet.

In order to provide for operating the bar 4 by hand, it is preferably made slightly elastic, so that a connection 22, attached to a ring 23 and passing over a ring 24, mounted upon the bracket 15, may be used to pull it out of engagement with the awning and may be operated by hand.

It will be readily understood that the operation of the device is entirely automatic and that it is absolutely controlled by temperature and precipitation. It will also be seen that the device is capable of being controlled by hand, so that it can be operated independently of the conditions of the weather. If it is desired to prevent the current from flowing when contact has once been made and the awning has been spread, an automatic switch 25 may be employed to immediately break the circuit again. Any desired means may also be employed for checking the descent of the awning at the bottom.

While I have illustrated and described one form of my invention, it will be obvious that it may be carried out in a large variety of forms and that it is not limited to the one shown.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a frame, and an awning adapted to be rolled up upon the frame, of means for retaining the awning in rolled position, and means adapted to be operated by the fall of rain or snow for automatically releasing said retaining means.

2. The combination with an inclined frame, and an awning adapted to be rolled up thereupon in a position near the top of the frame, of means for retaining the awning in rolled position, means adapted to be operated by the fall of rain or snow for automatically releasing said retaining means, and additional manually-operated means for releasing said retaining means.

3. The combination with a frame, and an awning adapted to be rolled thereupon, of

means for retaining the awning in rolled position upon the frame, and means adapted to be operated by the fall of rain or snow for automatically releasing said retaining means.

4. An awning retaining and releasing device, comprising an armature, a bar connected with said armature and adapted to engage an awning, and means for automatically releasing the bar from the awning under certain conditions of the weather.

5. An awning retaining and releasing device, comprising a cup for receiving rain and snow, means for holding an awning, and means for automatically releasing said holding means when rain or snow enters the cup.

6. An awning retaining and releasing device, comprising a cup for receiving rain and snow, an electric circuit having terminals in said cup spaced from and insulated from each other, means for holding the awning, and means connected with said circuit for releasing said holding means when a connection between said terminals is made.

7. An awning retaining and releasing device, comprising a cup for receiving rain and snow, an electric circuit having terminals within said cup spaced from each other, means for holding an awning, means connected with said electric circuit for releasing said holding means when the circuit is closed, and means for causing the circuit to be closed when the temperature reaches a predetermined point.

8. An attachment for awnings, comprising a retaining device therefor, an electric circuit, connections between the retaining device and the electric circuit, whereby the former is operated to release the awning when the circuit is closed, means for closing the circuit when the temperature reaches a predetermined point, and means for closing the circuit upon the fall of rain or snow.

9. An attachment for awnings, comprising a magnet having an armature, a bar connected with the armature for engaging with the awning, an electric circuit connected with the magnet, said circuit being normally open, means for closing said circuit to force the bar out of engagement with the awning, and additional manually-operated means for releasing the awning.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ABRAHAM INNES SCHWINGER.

Witnesses:

JOSEPH FRIEDMAN,
JACOB RÖTH.