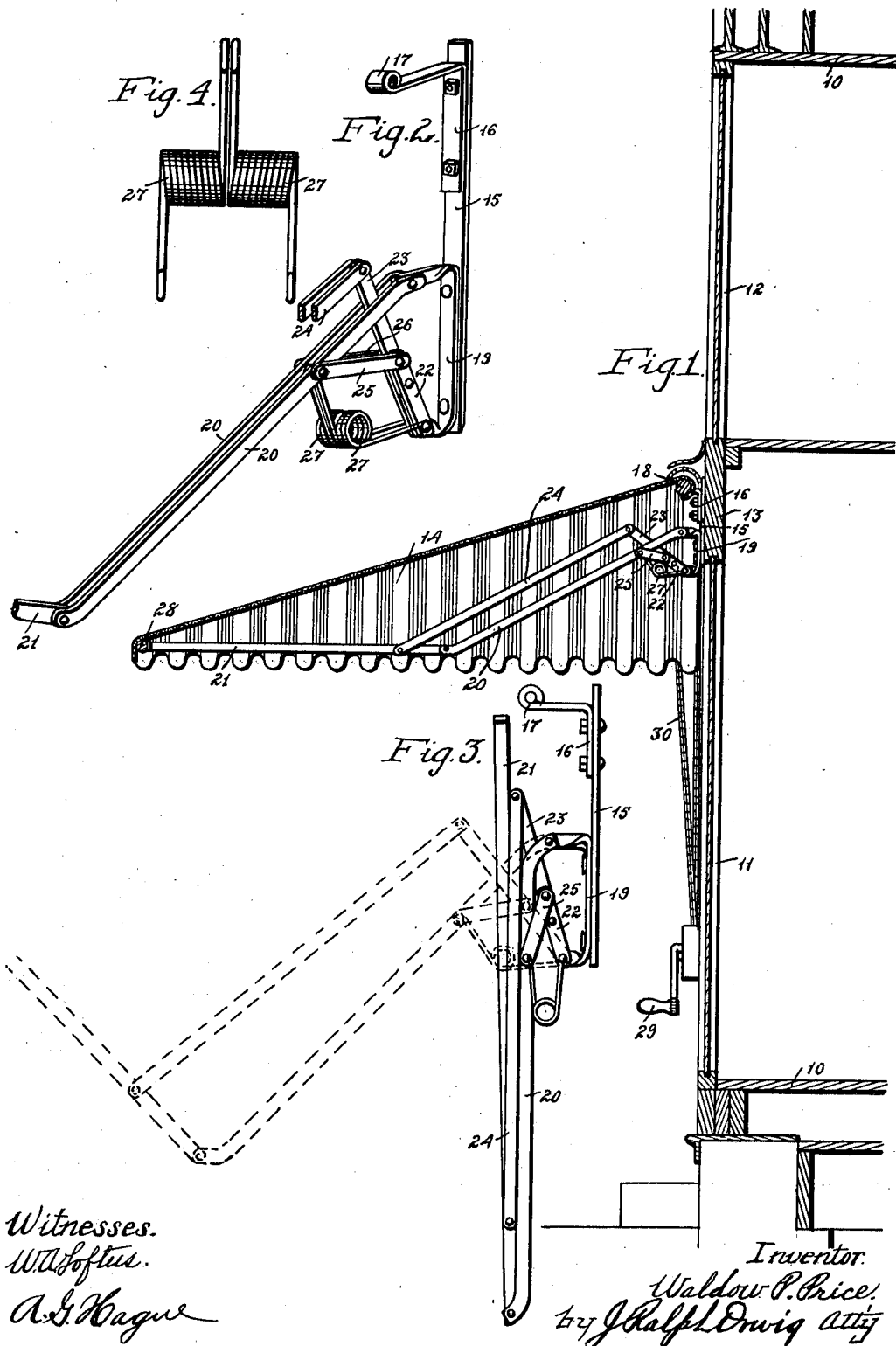


W. P. PRICE.
AWNING ARM.
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1,021,330.

Patented Mar. 26, 1912.



Witnesses.
W. A. Loftus.
A. E. Hague

Inventor.
Waldor P. Price.
by J. Ralph Drwig atty

UNITED STATES PATENT OFFICE.

WALDOW P. PRICE, OF DES MOINES, IOWA, ASSIGNOR OF ONE-HALF TO JAMES E. IRELAND, OF DES MOINES, IOWA.

AWNING-ARM.

1,021,330.

Specification of Letters Patent.

Patented Mar. 26, 1912.

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To all whom it may concern:

Be it known that I, WALDOW P. PRICE, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Awning-Arm, of which the following is a specification.

The object of my invention is to provide a folding awning arm of simple, durable and inexpensive construction which will hold an awning firmly in its extended position and which folds readily into a small space when the awning is raised.

A further object is to provide such an awning arm so constructed that yielding pressure is always exerted to hold the awning in its extended position and at the same time permitting the awning to be slightly raised by gusts of wind and to drop again into position so that the wind does not tear the awning canvas as in the case where the awning frame is held rigidly in position.

A further object is to provide such an awning arm which is adapted to be used on a building having show windows below the awning and light windows above the awning.

A further object is to provide such an awning arm composed of few and simple parts which may be readily replaced or repaired, which arm may be folded into a small and compact bundle for storage or transportation.

My invention consists in certain details, in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 shows a vertical, sectional view of a portion of a building and of my improved awning arm installed thereon. Fig. 2 shows a perspective view of the awning arm, parts of which are cut away. Fig. 3 shows a side elevation of the awning arm in its folded position, the dotted lines showing the arm when partly open, and Fig. 4 shows a plan view of the spring which forms part of my awning arm.

In the accompanying drawings, I have used the reference numeral 10 to indicate the frame of a building. In the front of this building is a plate glass window 11 and above the window 11 is a light window 12. Between the windows 11 and 12 is a solid

strip 13 to which my improved awning arm is secured.

14 indicates the canvas of an awning.

My awning arm consists of a bracket 15 which is secured by any convenient means at a proper point on a building, as on the solid strip 13. Near the upper end of the bracket 15 is a bearing 17 which is designed to receive the shaft of a roller 18. The bearing 17 as shown in the drawing is formed by bending the end of a bar 16 secured to the bracket 15 into a circle. Near the lower end of the bracket 15 are two parallel right angled extensions, spaced apart from each other. In the drawing they are shown as ends of a single bar 19 secured to the bracket 15 and having its ends bent at right angles thereto in a vertical plane.

Extending outwardly from the upper end of the bar 19 and pivotally secured to said end, is a jointed arm composed of bars 20, and an arm 21 pivotally secured to the bars 20 between their outer ends. Pivoted to the lower end of the bar 19 are parallel bars 22. Secured between the outer ends of the bars 22 is a bar 23 which is fastened to the bars 22 at two points so that the bar 23 has no pivotal motion relative to the bar 22. The bars 22 and the bar 23 thus form a single lever arm extending upwardly and away from the bracket 15 when the awning arm is in its open position. The outer end of the bar 24 which extends from the bar 23 to the arm 21 to which they are pivoted at a point spaced apart from the inner end thereof, the bars 24 thus forming a link connecting the bar 23 and arm 21. Short parallel links 25 are pivoted to the outer ends of the bars 22 and are also pivoted to the bars 20 at a point spaced apart from the inner end thereof. The bar 23 extends between the bars 20, between the inner ends thereof and the bolt 26, and the downward movement of said strip 23 is limited by said bolt 26. Secured to the bolt 26 are the ends of two extensible coil springs 27, the other ends of which are secured to the frame of the device near the points where the bars 22 are pivoted to the lower end of the bar 19, said springs being arranged to exert yielding pressure to hold the awning arm in its extended position.

The parts just described, are so arranged and constructed that in one position of the movement of the arm 21, it is at right an-

gles to the front of the building. The bolt 26 prevents movement of the arm 21 downwardly past substantially horizontal position. The outer end of the bars 20 are slightly curved, so that when the arm is collapsed, as shown in Fig. 3, the arm 21 rests adjacent to the bars 20, in vertical position. A rod 28 to which is secured the outer end of the awning 14 is fastened to the outer end of the arm 21. I preferably use one of my arms at each end of the awning.

It will be noted from the points where the ends of the springs 27 are secured, and from the views thereof shown in Figs. 2 and 3, that the pressure of the springs 27 is greatest when the awning arm is in its folded position. When the awning is lowered to the position shown in Fig. 1, the pressure of the spring 27 tends to hold the awning down. That pressure however is inadequate to prevent the raising of the awning by the wind. It does however prevent the wind from raising the awning entirely. Thus when the wind blows the awning may be slightly raised after which the pressure of the springs 27 will cause it to drop again into position. On account of the fact that the awning is easily raised by the wind for a slight distance the strain on the awning is very greatly reduced and the danger of tearing the awning cloth to tatters which exists wherever the awning is held rigidly in its lowered position is largely done away with. The springs 27 are preferably wound in opposite directions. On account of the points where they are secured to the awning arm the springs do not counteract each other. Because they are wound in opposite directions and because of the location of the points where they are attached, the action of each spring counteracts the tendency of the other to pull the parts to one side.

My awning arm has the advantage of effecting a great saving to the user on account of the reduction of the strain on the awning cloth.

I preferably make the parts of my awning arm of strips of metal and such a device is of very inexpensive construction.

The parts of my device are few and simple and may be very easily replaced or repaired. The bracket 15 may be secured to almost any building since practically all glass front buildings have horizontal or vertical solid strips above or at the sides of the show windows.

I claim as my invention:

1. In a device of the class described, the combination of a bracket, designed to be secured to a building, an arm pivoted on said bracket, and having a joint at its central portion capable of folding downwardly, a lever pivoted to said bracket, below said arm and extending normally upwardly adjacent

to and past said arm, a second arm pivoted to the upper end of said lever at one end and pivoted at its other end to said first mentioned arm at a point thereon, beyond the joint therein, and inclined normally outwardly and downwardly from the lever, a link pivoted to said lever below said first mentioned arm and extending normally outwardly away from the bracket and pivoted at its other end to said first mentioned arm near the inner end thereof, and means for limiting the downward movement of said first mentioned arm.

2. In a device of the class described, the combination of a bracket, designed to be secured to a building, an arm pivoted on said bracket, and having a joint at its central portion capable of folding downwardly, one portion of said arm being curved at the point of the joint therein, so that when the arm is folded, the two parts thereof may lie adjacent, a lever pivoted to said bracket, below said arm and extending normally upwardly adjacent to and past said arm, a second arm pivoted to the upper end of said lever at one end, and pivoted at its other end to said first mentioned arm at a point thereon, beyond the joint therein, and inclined normally outwardly and downwardly from the lever, a link pivoted to said lever below said first mentioned arm and pivoted at its other end to said first mentioned arm near the inner end thereof, and means for limiting the downward movement of said first mentioned arm.

3. In a device of the class described, the combination of a bracket, designed to be secured to a building, an arm pivoted on said bracket, and having a joint at its central portion capable of folding downwardly, a lever pivoted to said bracket, below said arm and extending normally upwardly adjacent to and past said arm, a second arm pivoted to the upper end of said lever at one end and pivoted at its other end to said first mentioned arm at a point thereon, beyond the joint therein, and inclined normally outwardly and downwardly from the lever, a link pivoted to said lever below said first mentioned arm and extending normally outwardly away from the bracket and pivoted at its other end to said first mentioned arm near the inner end thereof, and means for limiting the downward movement of said first mentioned arm, and a spring secured to said bracket, and to said first arm and designed to exert yielding pressure to hold said first arm in its extended position.

4. In a device of the class described, a bracket designed to be secured to the front of a building, parallel right angled extensions thereon, parallel bars pivotally secured on each side of the upper extension, a single arm pivotally secured between the outer ends of said parallel bars, a second pair of paral-

5 lel bars pivotally secured on each side of the
 lower extension, a single bar rigidly secured
 between the outer ends of said last men-
 tioned parallel bars and extending normally
 10 upwardly and outwardly from said bracket
 between said first mentioned parallel bars to
 a point above the same, parallel arms piv-
 oted at their ends on the outer side of the
 outer ends of said single bar, and pivotally
 15 secured at their other ends to said single arm
 at a point spaced apart from its inner end, a
 third pair of parallel bars pivoted respec-
 tively to the outer sides of the outer ends of
 said second pair of parallel bars and to the
 20 outer sides of said first mentioned parallel
 bars at a point spaced apart from the inner
 ends thereof, means for limiting the down-
 ward and outward movement of said single
 bar, between the first mentioned parallel
 25 bars, said parts being so arranged and con-
 structed that said arm in one position of its
 movement, extends at right angles from said
 bracket and in another position of its move-
 ment it is folded up adjacent to said bracket.
 30 5. In a device of the class described, a
 bracket designed to be secured to the front
 of a building, a bar secured thereto having
 its ends extended at right angles therefrom,
 in a vertical plane, parallel bars pivotally
 35 secured on each side of the upper end of said
 bar, a single arm pivotally secured between
 the outer ends of said parallel bars, a second
 pair of parallel bars pivotally secured on
 each side of the lower end of said short bar,
 40 a single bar rigidly secured between the ends
 of said last mentioned parallel bars and ex-
 tending normally upwardly and outwardly
 from said bracket between said first men-
 tioned parallel bars to a point above the
 45 same, parallel bars pivotally secured on each
 side of the outer end of said last mentioned
 single bar and pivotally secured at their
 outer ends on each side of said arm at a
 point spaced apart from the inner end there-
 of, parallel bars pivotally secured to the re-
 spective outer ends of said second pair of

parallel bars and to the outer sides of said
 first mentioned parallel bars at a point
 spaced apart from the inner end thereof,
 means for limiting the downward and out- 50
 ward movement of the single bar between
 the first mentioned parallel bars, said parts
 being so constructed and arranged that said
 first mentioned single arm, in one position
 of its movement, extends at right angles 55
 from said bracket and in another position of
 its movement is folded up adjacent to said
 bracket and means for exerting a yielding
 pressure for holding said device in its ex-
 tended position. 60

6. In a device of the class described, a
 bracket designed to be secured to the front
 of a building, parallel right angled exten-
 sions thereon, an arm pivotally secured to
 said upward extensions, said arm having a 65
 joint capable of folding downwardly, a bar
 pivotally secured on said lower extensions,
 normally extending upwardly and outwardly
 past said arm, a bar pivotally secured to the
 outer end of said first bar and pivotally se- 70
 cured at its outer end to said arm at a point
 beyond the joint therein, a link pivotally se-
 cured to the said second bar at a point
 spaced apart from the ends thereof and to
 the said first mentioned arm at a point 75
 spaced apart from the inner end thereof be-
 tween the joint therein and said bracket,
 means for limiting the downward and out-
 ward movement of said first bar, extensible
 coil springs wound in opposite directions 80
 but both tending to hold said device in its
 extended position, one end of each spring
 being secured to said first arm at a point be-
 tween the joint therein and said bracket, and
 the other ends of said springs being secured
 to said bracket.

Des Moines, Iowa, July 20, 1911.

WALDOW P. PRICE.

Witnesses:

M. WALLACE,
 M. PETERSON.