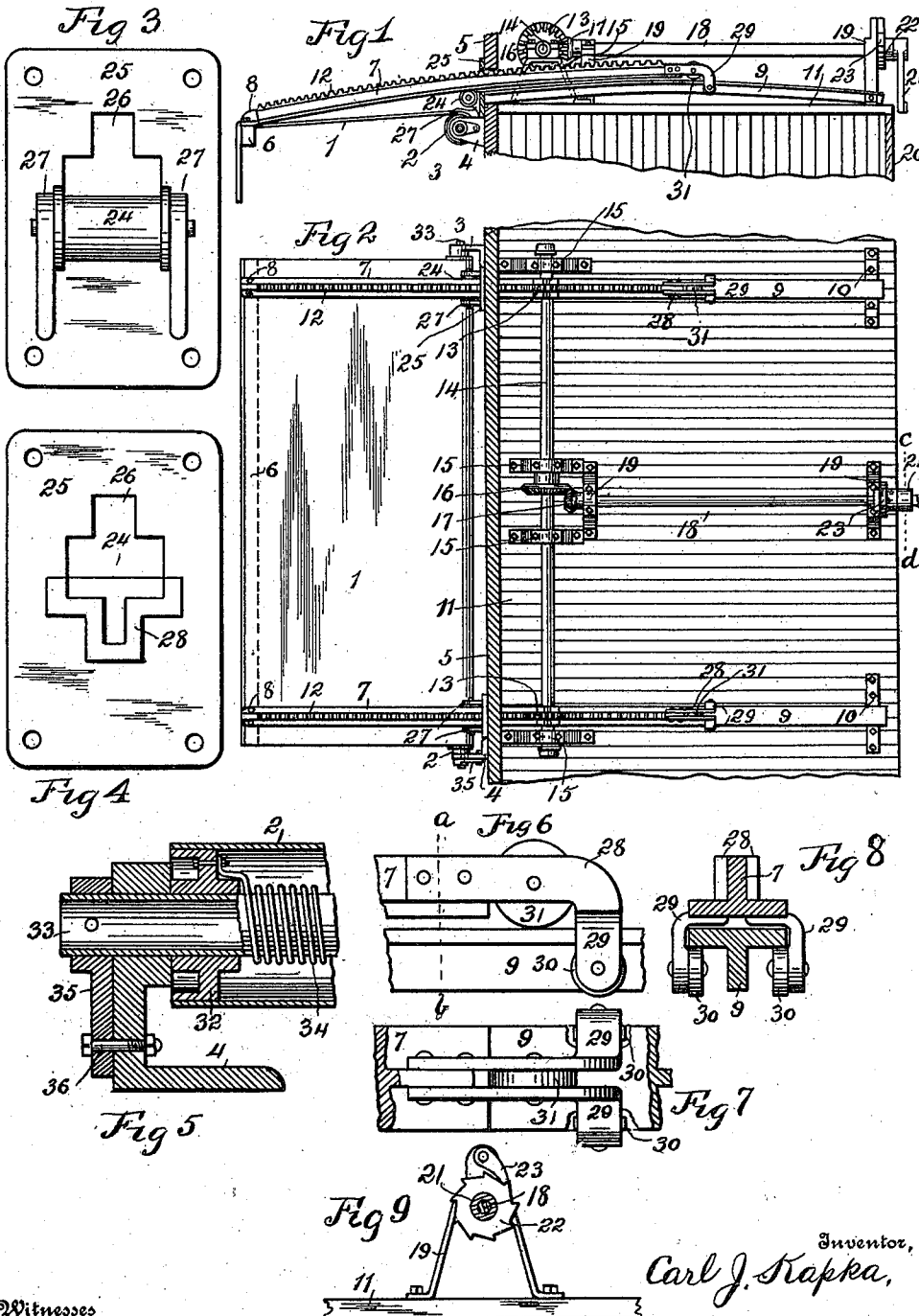


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AWNING.
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963,714.

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UNITED STATES PATENT OFFICE.

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AWNING.

963,714.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARL J. KAPKA, a citizen of the United States, residing at Kansas City, in the county of Wyandotte and State of Kansas, have invented new and useful Improvements in Awnings, of which the following is a specification.

My invention relates to improvements in awnings.

It relates to the class of awnings in which one end of the awning sheet is secured to the periphery of a roller on which the sheet is adapted to be wound, the outer end of the awning sheet being secured to an awning pole supported upon a plurality of inwardly and outwardly movable members, means being provided by which when the awning pole is inwardly moved the roller is rotated so as to wind thereon the awning sheet.

My invention provides curved members supporting the awning pole, and a plurality of arcuate guides curved similarly to the curved members and on which said members are longitudinally movable.

My invention provides further rollers disposed forward of the guides and upon which the awning pole supporting members rest.

My invention provides further rollers interposed between the guides and the supporting members for carrying the rear ends of said members.

Other novel features are hereinafter fully described and claimed.

In the accompanying drawings illustrative of my invention, Figure 1 is an end elevation view, showing the awning sheet partly extended. Fig. 2 is a plan view of what is shown in Fig. 1. Fig. 3 is an outer elevation view of the housing which supports one end of one of the guides. Fig. 4 is a rear elevation view of one of the housings. Fig. 5 is a horizontal sectional view of one end of the awning sheet roller and parts connected thereto. Fig. 6 is a side elevation view of the rear end of one of the awning pole supporting members and a part of the adjacent guide. Fig. 7 is a top view of what is shown in Fig. 6, parts of the guide at each side being broken away. Fig. 8 is a cross section taken on the dotted line *a-b* of Fig. 6. Fig. 9 is a cross section taken on the dotted line *c-d* of Fig. 2.

Similar characters of reference denote similar parts.

1 denotes the awning sheet secured at its inner end to the periphery of a horizontal

spring-retracted roller 2, rotatively mounted, in the manner hereinafter described, in the brackets 3 and 4, secured to the forward side of the wall 5 of the building. The outer end of the awning sheet is secured to the ordinary horizontal, transverse awning pole 6, supported at its ends, by means of two fittings 8 to the outer ends respectively, of two longitudinal, curved members 7, each being preferably inverted T-shape in cross section, said members 7 being supported in the manner hereinafter described, by the longitudinal curved guides 9 supported at their rear ends respectively in shoes 10, mounted upon the upper side of a horizontal platform 11, which platform serves as the top of an inclosed show window. The curved guides 9 and curved members 7 provide means by which the awning supporting members 7 may move in a curve from a horizontal retracted position to an inclined position in which the awning is extended. Each guide 9 is preferably T-shape in cross section, the upper sides of the guides being convex and the lower sides being concave. The arcuate guides 9 are curved similarly to the members 7 the chords of said arcuate guides being all disposed substantially in the same horizontal plane. By so curving the guides 9 and members 7 the members 7, when the awning sheet 1 is extended, will be downwardly inclined, and when the said members 7 are retracted the parts of the apparatus within the building will occupy but a small space above the platform 11. A plurality of longitudinal racks 12 are secured preferably to the upper sides of the members 7 and mesh respectively with a plurality of spur gear wheels 13 secured upon and rotatable with a horizontal, transverse shaft 14, mounted in bearings 15, upon the upper side of the platform 11 in the rear of the wall 5. By rotating the shaft 14 the members 7 may be longitudinally moved upon the guides 9 for the purpose of extending or retracting the awning sheet 1.

Rigidly secured upon the shaft 14 is a bevel gear wheel 16 which meshes with a bevel gear wheel 17, secured upon the forward end of and rotatable with a rearwardly extending, horizontal shaft 18, mounted in bearings 19, disposed respectively adjacent the forward and rear ends of the shaft 18. Upon the rear end of the shaft 18 is secured a crank 21, disposed preferably to the rear of the vertical wall 20, comprising the rear

wall of the show-window. By properly turning the crank 21 the shaft 18 may be rotated so as to move inwardly and outwardly the members 7 through the intermediacy of the gears 16, 17 and 13, shaft 14 and racks 12. Upon the shaft 18, to the rear of the rear bearing 19, is rigidly secured a ratchet wheel 22, the teeth of which are adapted to be engaged by a gravity actuated pawl 23, pivotally mounted upon the rear bearing 19. The disposition of the teeth of the ratchet wheel is such that when the pawl 23 engages the ratchet wheel 22 rotation of said ratchet wheel and the shafts 18 and 14 is prevented in a direction such that the members 7 will be inwardly moved. A plurality of rollers 24 are mounted respectively forward of the guides 9.

Upon the forward wall 5 of the building, preferably above the roller 2, are a plurality of housings comprising each a vertical plate 25, having a hole 26 through which extends the adjacent member 7. Upon the forward side of each housing 25 are two brackets 27 disposed respectively upon opposite sides of the hole 26 and rotatively supporting between them one of the rollers 24. Upon the rear side of each housing 25, below the hole 26, is provided a bracket 28 in which is seated and secured the forward end of the adjacent guide 9. Secured to the rear end of each member 7, is a fitting 28 having two downwardly extending arms 29 embracing opposite sides respectively of the horizontal portion of the adjacent guide 9. Upon the inner side of each arm 29 is mounted a roller 30 adapted to bear upon the under side of the adjacent guide 9. Between the arms 29, above the adjacent guide 9, is mounted a roller 31 adapted to run upon the upper side of said guide.

In each end of the roller 2 is secured a collar 32, rotatively mounted upon a horizontal rod 33, preferably tubular and cylindrical in form and having its respective ends extending through openings provided transversely in the brackets 3 and 4 respectively. A coil spring 34 encircles the rod 33 and has one end secured to said rod and the other to one of the collars 32. Said spring is so wound on the rod 33 that the spring will be wound when the roller 2 is rotated, by unwinding therefrom the awning sheet 1. Upon one end of the rod 33 is secured a crank 35 provided with a trans-

verse opening adapted to receive a horizontal bolt 36 removably mounted in a transverse opening extending through the bracket 4. To change the tension of the spring 34 the bolt 36 is removed and the rod 33 is rotated in the direction proper for obtaining the desired tension of the spring, after which the bolt 36 is re-inserted through the openings provided for it in the crank 35 and bracket 4.

When it is desired to retract the awning sheet 1 the pawl 23 is disengaged from the ratchet 22 and the crank 21 turned in a direction such that the members 7 will be inwardly moved. As the members 7 and awning pole 6 move inwardly the spring-retracted roller 2 will wind thereon the awning sheet.

Various modifications of my invention may be made without departing from its spirit.

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

1. The combination with the awning pole, of a plurality of curved guides, a plurality of rollers disposed forward respectively of said guides, a plurality of longitudinally movable members supporting said awning pole and curved similarly to said guides, each member having two arms embracing opposite sides of the adjacent guide, rollers carried by said arms and running upon the lower sides of said guides respectively, and rollers carried by said members and running upon the upper sides of said guides.

2. The combination with the awning pole, of a plurality of curved guides, a plurality of rollers, a plurality of curved members supporting the awning pole and resting respectively upon said rollers, a roller, the awning sheet connected at opposite ends respectively with said roller and the awning pole, means for rotating said roller so as to wind thereon the awning sheet, and a plurality of rollers disposed two on each curved member and engaging respectively the upper and lower sides of the adjacent guide.

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

CARL J. KAPKA.

Witnesses:

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