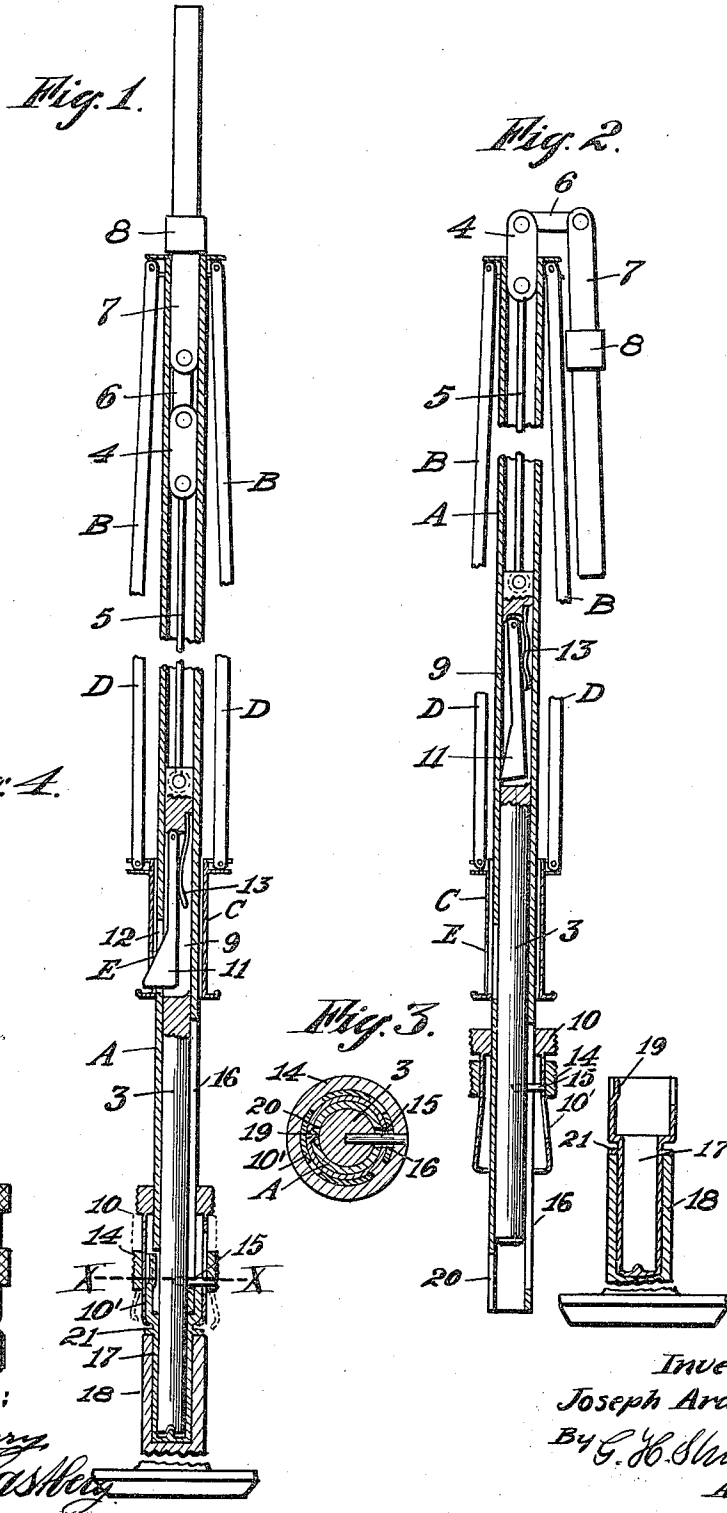


J. ARAGALL.  
FOLDING UMBRELLA.  
APPLICATION FILED MAR. 11, 1912.

1,042,522.

Patented Oct. 29, 1912.



Witnesses:

*R. S. Barry*  
*Chas. Kashner*

Inventor  
*Joseph Aragall*  
By *G. H. Strong*  
Atty.

# UNITED STATES PATENT OFFICE.

JOSEPH ARAGALL, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO  
JOSEPH H. MORAN AND ONE-HALF TO THOMAS SLATTER, BOTH OF SAN FRAN-  
CISCO, CALIFORNIA.

## FOLDING UMBRELLA.

1,042,522.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed March 11, 1912. Serial No. 682,993.

*To all whom it may concern:*

Be it known that I, JOSEPH ARAGALL, a subject of the King of Spain, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Folding Umbrellas, of which the following is a specification.

This invention relates to an umbrella, and particularly pertains to improvements in a foldable umbrella-rod.

It is the object of this invention to provide an umbrella-rod, which is so constructed and arranged that it may be shortened to permit the umbrella being packed in a suitcase, trunk, or the like, which is too small to receive the ordinary umbrella, and which can be easily and quickly adjusted to either its shortened or extended position.

Umbrellas and parasols, now generally in use, are of such length as to prohibit their being packed in ordinary suit-cases, which necessitates their being carried in the hand or strapped to the outside of the suit-case, either of which arrangement is inconvenient and unhandy.

The present invention provides a means by which an umbrella or parasol may be rendered sufficiently compact, by shortening the rod, to permit its being disposed in a suitcase or the like.

Another object of the invention is to provide a foldable umbrella-rod, which is simple in construction, strong, durable and not liable to get out of order, and which can be applied to the well-known umbrella or parasol tops of common use without necessitating any change in the construction of the latter.

Other objects and advantages of this invention will appear in the following specification.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a longitudinal section of the invention, showing the rod in its normal extended position. Fig. 2 is a similar view illustrating the rod in its shortened or folded position. Fig. 3 is an enlarged cross-section on the line X—X, Fig. 1. Fig. 4 is a detail elevation of the lower portion of the rod showing the sliding sleeve.

In the drawings A represents a tubular

umbrella-rod, open at its ends, on the upper end of which the spreading ribs B of a parasol or umbrella are pivotally connected at 2, and on which rod the usual sleeve C, to which the lower ends of the brace-ribs D of the parasol or umbrella are attached, is slidably mounted in the usual manner.

The essence of this invention resides in mounting a slidable element in the tubular rod A, and providing means for connecting and disconnecting this element to and from the rod A and for attaching the tip and handle portions thereto, in such manner that the tip may be folded and the handle detached by sliding the element in the rod A to reduce the working length of the umbrella rod.

The slidable element just referred to is here shown as consisting of a bar 3, substantially of a diameter equal to that of the inside of the rod A which is slidable in the lower portion of the rod, and a cylindrical block 4 slidably mounted in the upper portion of the rod A, which is connected to the bar 3 by means of a wire rod 5. Pivotally connected to the upper end of the block 4 is a short link 6 connected with the lower end of a bar 7 which forms the tip of the umbrella-rod; the bar 7 being adapted to extend into the upper end of the tubular rod A, as shown in Fig. 1. A collar 8 on the bar 7 is arranged to abut against the upper end of the rod A to limit the downward movement of the slidable element in the rod A and the extent of the projection of the bar 7 into the end of the rod A.

The bar 3 is formed with a longitudinally extending slot 9, and mounted in the slot 9 is a catch 11 which is adapted to extend through a slot 12 in the umbrella rod A and engage a slot E in the sleeve C, to prevent the upward movement of the latter, as is common in umbrella construction. A plate spring 13, mounted on the bar 3, bears against the rear face of the catch 11 to normally retain the latter in its outermost position.

Slidably mounted on the tubular umbrella-rod A is a sleeve 10 which is formed with a series of longitudinally extending slots, arranged at suitable intervals around its periphery, forming a series of resilient tongue members 10' on one end of the sleeve. The outer ends of the tongues 10' are bent

inwardly at right angles to form engaging members, the function of which will be later described. The other end of the sleeve 10 is provided with a flange or collar, the outer

- 5 face of which is milled and forms a surface which may be readily gripped with the forefinger and thumb for the purpose of sliding the sleeve 10 back and forth on the rod A.
- 10 Slidably mounted on the sleeve 10 is a milled sleeve 14 which is connected to the bar 3 by means of a pin 15 which extends through the sleeve 10 and through a longitudinally extending slot 16 formed in the
- 15 umbrella-rod A and is engaged with the bar 3, as shown in Figs. 1 and 3. The sleeve 14 is provided as a hand-hold, by means of which the bar 3 and its connected parts may be reciprocated within the tubular umbrella-
- 20 rod A.

- The lower end of the bar 3, when in its lowermost position, extends some distance beyond the end of the umbrella-rod A, and is designed to enter a sleeve or tube 17 on
- 25 which a handle 18 of any suitable description is mounted. The tube 17 is enlarged at its outer end to pass over the lower end of the umbrella-rod A, as shown in Fig. 1; a longitudinally extending rib 19 being
- 30 formed in the enlarged portion of the tube 17, which is adapted to extend into a slot or groove 20 formed on the umbrella-rod A, as shown in Figs. 1 and 3.

- Formed on the tube 17 is a collar 21, which is spaced a short distance from the shoulder formed by the enlarged portion of the tube to form an annular groove into which the hooked end portions of the spring
- 35 tongues 10' are adapted to extend to lock the tube 17 and the handle 22 thereon, to the umbrella-rod A and the bar 3. It will be seen that when the bar 3 is in its lowermost position in the umbrella-rod A, and the tube 17 carrying the handle 18 is disposed
- 40 thereon and engaged by the tongues 10', a substantial and rigid structure is formed; the bar 3 being effectively locked against movement in the umbrella-rod A by reason of the tongues 10' being engaged with the
- 50 rod A and the tube 17 by the sleeve 14 on the sleeve 10, which is drawn over the spring tongues to clamp them into their engaged position, as shown in Figs. 1 and 4.

- When the parts are in the position just
- 55 described, the sleeve C may be disengaged from the catch 11, by pressing the latter inwardly in the usual manner, whereupon the sleeve C may be moved upwardly upon the umbrella-rod A, to operate the brace-ribs D
- 60 and the spreading ribs B; the catch 11 re-engaging the sleeve C when the latter is moved to its lowermost position, as is common in ordinary umbrella construction.

- When it is desired to shorten the length
- 65 of the umbrella, the sleeve 14, which con-

nects with the rod 3 through the pin 15, is moved upward on the sleeve 10 by the thumb. This action allows the hooked portion of the tongues 10' on the sleeve 10 to spring out of engagement with the tube 17, and permits the bar 3 being freely moved

70 upwardly within the umbrella handle A; this action being done by moving the sleeves 14 and 10 upwardly on the umbrella-rod. The tongues 10' being disengaged from the tube 17 carrying the handle 18, permits the

75 latter to be removed. The upward movement of the bar 3 forces the bar 7 and the link 6 out of the upper end of the rod A, as shown in Fig. 2; the link 6 permitting the bar 7 being folded back against the side of the umbrella.

When the parts are in the position shown in Fig. 2, and as just described, the length of the umbrella will be reduced to approximately the length of the folded spreading

85 ribs B.

When it is desired to restore the umbrella to its working position, the bar 3 is retracted in the rod A, by means of the sleeve

90 14, which action draws the link 6 and the bar 7 back into the upper end of the rod A and the normal position shown in Fig. 1, and re-positions the catch 11 and the sleeve 10 with the hooked tongues thereon into

95 their normal positions; the pin 15 extending through the slot 16 and acting to prevent sidewise movement of the bar 3, so that the catch 11 will register with the slot E. The tube 17 carrying the handle 18 is then placed

100 on the lower end of the bar 3 and the rod A, as shown in Fig. 1, the rib 19 engaging the slot 20 in the rod A to prevent turning or twisting of the handle in relation to the umbrella-rod.

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

1. In an umbrella, the combination with a tubular umbrella-rod open at both ends

110 and a bar slidably mounted within the rod, of a sleeve slidably mounted on the exterior of the rod, said sleeve being provided with hooked spring members, and a handle carrying tube into which the lower end of the

115 rod extends, said tube being formed with an annular groove with which said hooked spring members are engageable.

2. In an umbrella, the combination with a tubular umbrella-rod open at both ends and

120 a bar slidably mounted within the rod, of a sleeve slidably mounted on the exterior of the rod, said sleeve being provided with hooked spring members, a handle-carrying tube into which the lower end of the rod

125 extends, said tube being formed with an annular groove with which said hooked spring members are engageable, and means for locking said hooked spring members in engagement with the tube.

3. In an umbrella, the combination with  
a tubular umbrella-rod open at both ends  
and a bar slidably mounted within the rod,  
of a sleeve slidably mounted on the exterior  
5 of the rod, said sleeve being provided with  
hooked spring members, a handle-carrying  
tube into which the lower end of the rod ex-  
tends, said tube being formed with an an-  
10 nular groove with which said hooked spring  
members are engageable, and means for  
locking said hooked spring members in en-

gagement with the tube comprising a second  
sleeve slidably mounted on the first named  
sleeve, said sleeve being attached to the slid-  
able rod. 15

In testimony whereof I have hereunto set  
my hand in the presence of two subscribing  
witnesses.

JOSEPH ARAGALL.

Witnesses:

CHARLES EDELMAN,  
HARVEY M. BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,  
Washington, D. C."