

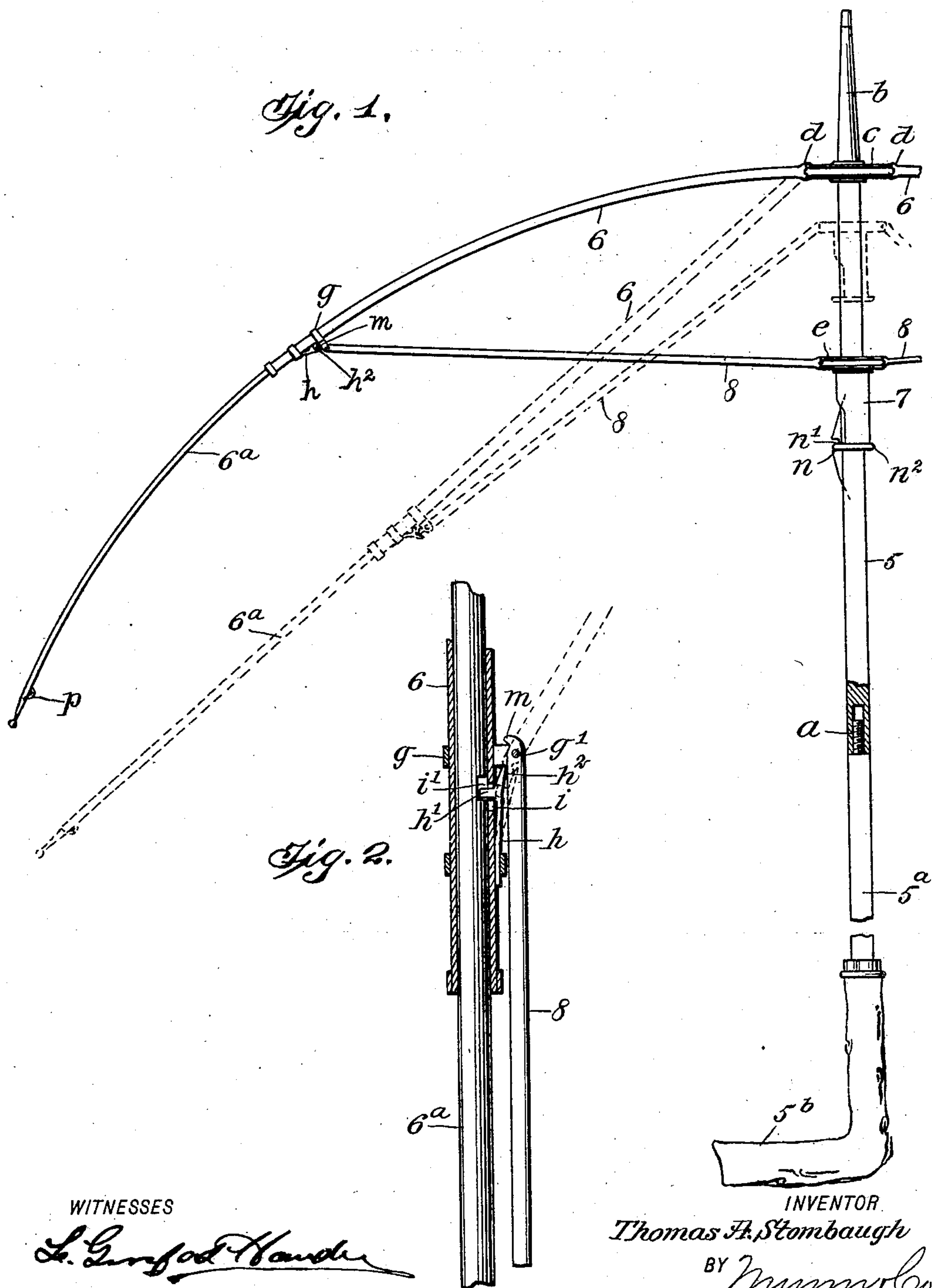
No. 886,890.

PATENTED MAY 5, 1908.

T. A. STOMBAUGH.

UMBRELLA.

APPLICATION FILED MAY 10, 1907.



WITNESSES

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THOMAS A. STOMBAUGH, OF ST. MARYS, OHIO.

UMBRELLA.

No. 886,890.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed May 10, 1907. Serial No. 372,933.

To all whom it may concern:

Be it known that I, THOMAS A. STOMBAUGH, a citizen of the United States, and a resident of St. Marys, in the county of Auglaize and State of Ohio, have invented a new and Improved Umbrella, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide novel details of construction for the frame of an umbrella, which permit the outer half portions of the bows of the frame to telescope within the remaining portions thereof, and also provide simple and effective novel means for holding the bows extended full length, under stress of a distended covering when the umbrella is raised; furthermore, that will automatically fold or close all the bows when the cover is collapsed, and also fold the stretcher rods by the same movement, permit the outer or male sections of the bows to be telescoped within the other sections thereof, and permit the umbrella frame stick to be bisected, whereby the length of the folded umbrella is reduced one half, and a neat, compact package is provided.

The invention consists in the novel construction and combination of parts, as is hereinafter described and defined in the appended claims.

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 all the views.

Figure 1 is a partly sectional and broken half portion of an umbrella frame having features of the improvement thereon; and Fig. 2 is an enlarged partly sectional view of a portion of a rib and of an adjacent end portion of a stretcher rod, the rib portion comprising two parts thereof telescoped together, and secured by an adjustable spring catch that is a feature of the improvement.

In the drawings which illustrate the construction of the improved umbrella frame, the stick of the frame is preferably in two sections of nearly equal length, as indicated at 5, 5^a. The sections of the stick are normally connected and held in axial alinement with each other by a threaded socket and tenon coupling, as is indicated at *a* in Fig. 1. As usual in umbrella sticks, a tip end *b* is formed or secured upon the outer end of the stick section 5, and a handle piece is provided on the opposite end of the other stick section 5^a, as shown at 5^b.

The ribs are alike, of any suitable number,

and each is in two sections having different diameters, so that the section 6, of greatest diameter, receives the section 6^a, which works freely but neatly within the receiving section. The section 6^a may be solid or hollow; the one shown is solid.

Upon the normally upper end of the stick section 5, at the tip *b*, a notch *c* is mounted and secured, said notch of ordinary form having a plurality of radial spaced slots therein, for the reception of the ends *d* of the rib members 6, and in which the said members are pivoted.

A runner 7 of mainly cylindrical form is loosely fitted upon the frame stick, and is furnished with a radial flanged head *e* that is usual with such adjuncts of an umbrella frame, has a plurality of spaced radial slots formed therein for the reception of the ends of the stretchers 8. The stretchers 8 may be tubular or solid, and in the ordinary manner are hinged to rock upon the head *e* of the runner sleeve 7, occupying with their flattened ends the radial slots in the head wherein said ends are pivoted.

Upon the remaining end portion of the rib sections 6 or those ends furthest from the notch *c*, a clip band *g* is secured upon each, these clip bands having ears, between which respective outer ends of the stretcher rods 8 are pivoted, as shown for one stretcher at *g'* in Fig. 2.

Near the extremity of each receiving rib section 6, a spring catch *h* is secured by one end, the resilient body thereof projecting toward the clip band *g* and also close to the pivoted end of a corresponding stretcher 8.

An opening *i* is formed in the wall of each rib section 6, below and near the ears on the clip band *g*, and in an adjacent portion of the corresponding rib section 6^a a mating opening *i'* is formed, these openings being brought opposite each other, when the two sections of each rib are fully extended, that is to say, when the umbrella frame is expanded and the covering thereon is fully distended for service.

As shown in Fig. 2, a locking finger *h'* is formed upon the resilient body of the spring catch *h* which will enter the opposite openings *i*, *i'* when the spring catch is free to spring toward the side of the rib section 6, this occurring when the frame of the umbrella is expanded a normal degree. Each spring catch *h* has a toe *h*² on its free end, which projects above and away from the

finger h' , so as to be in the path of a curved lip m formed on the end of an adjacent stretcher 8.

At a suitable point on the stick section 5, a preferably double catch n is located, which has a central notch n' interlocked with the lower edge on the runner 7, that is furnished with a bead n^2 to stiffen it, and permit an engagement of said edge with the notch in the double catch, the latter working in a longitudinal slot in the runner when this engagement is effected, as is shown in Fig. 1.

The position of the double catch n on the section 5 of the stick is such that a locked engagement of the bead n^2 will occur only when the ribs 6, 6^a have been spread and the stretchers 8 are disposed nearly horizontal, as indicated for one rib and stretcher in Fig. 1.

It will be seen that when the ribs and stretchers are raised from a folded position, the lip m on a respective stretcher 8, will be rocked into proximity to the toe h^2 of the catch h , but the locking finger h' thereon remains in the opposite openings i, i' , thus stiffening the connection between the two sections of each rib, which is increased by the tension of the stretched fibrous cover, not shown.

As represented in Fig. 1, when the ribs are spaced apart so as to bend them, due to stress of the cover thereon, the lips m on the stretchers will be engaged by the toes h^2 and pressed thereupon, so that the entire structure is rendered very stiff and substantial.

When the umbrella is to be closed, the first step is to depress the double spring pressed catch n and at the same time push the stretchers and runner upward on the stick section 5, as indicated by dotted lines in Fig. 1. This movement will slacken the tension of the umbrella cover, by folding the stretchers 8 toward the ribs, and obviously the toes h^2 will press upon the lips m , due to rocking of the stretchers on their pivots g' , which pressure will rock the spring catches h outwardly and remove the fingers h' from the openings i, i' . The ribs of the frame may now be folded to close the umbrella, and the runner 7 that has been slid down upon the stick section 5^a , will interlock its bead n' with a catch on said stick section. As the folding downward of the ribs 6, 6^a has released the spring catch h from the rib sections 6^a , it will be seen that said rib sections

may be slid into the sections 6 thereof, and thus reduce the length of the ribs one-half.

The covering of the frame for the umbrella may be secured detachably upon projections p , on the lower ends of the rib sections 6^a , and thus permit it to be wrapped around the collapsed ribs, that along with the detached stick section 5^a may be arranged in a compact bundle that can be readily stowed in a trunk or suit case to be conveniently carried therein.

The provision of the double catch n is advantageous, as it will hold the stretchers from being forced toward the crown of the umbrella during a gale, and thus prevent the inversion of the cover and frame that frequently occurs with ordinary umbrellas, which when inverted by a wind storm are ruined.

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

1. In an umbrella, a stick, a runner thereon, a rib formed of telescoping sections and pivoted to the stick, the sections being provided with openings adapted to register, when the sections are extended, a spring catch pivoted to the inner section and adapted to enter the openings of the sections of the ribs to hold them extended, and a stretcher pivoted to the runner and to inner rib section and adapted to engage the spring catch to release it when the ribs and stretcher are folded toward the stick.

2. In an umbrella, a stick, a runner thereon, a rib formed of telescoping sections and pivoted to the stick, the sections being provided with openings adapted to register when the sections are extended, a spring catch pivoted to the inner section and provided with a pin adapted to enter the openings in the said sections and with a toe, and a stretcher pivoted to the runner and to the inner rib section and provided with a lip at its outer end for engaging the toe of the catch when the parts are folded toward the stick.

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

THOMAS A. STOMBAUGH.

Witnesses:

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