No. 616,307. Patented Dec. 20, 1898.

J. H. FLEISCH.

UMBRELLA.

(Application filed Oct. 10, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

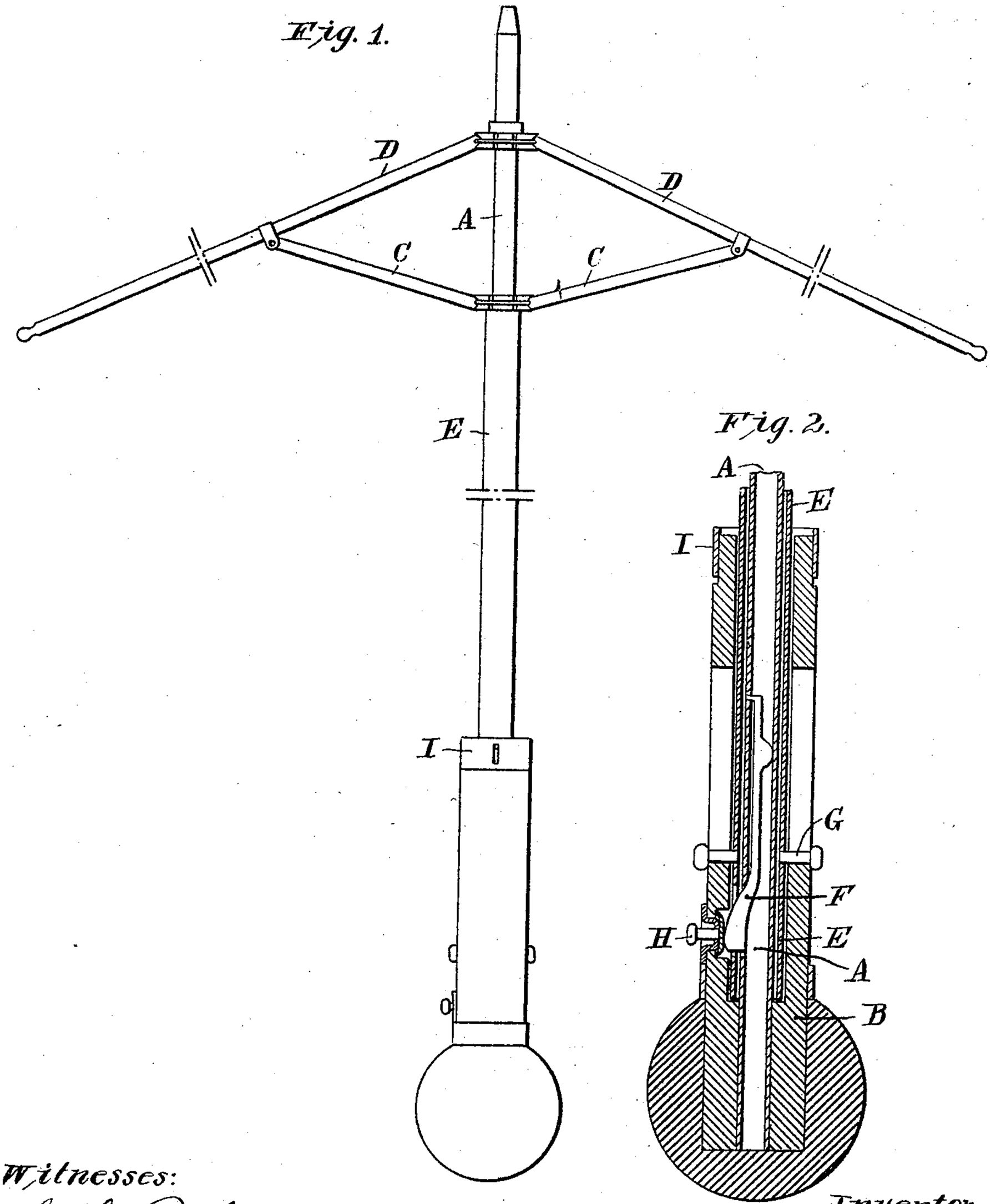

Fig. 2.

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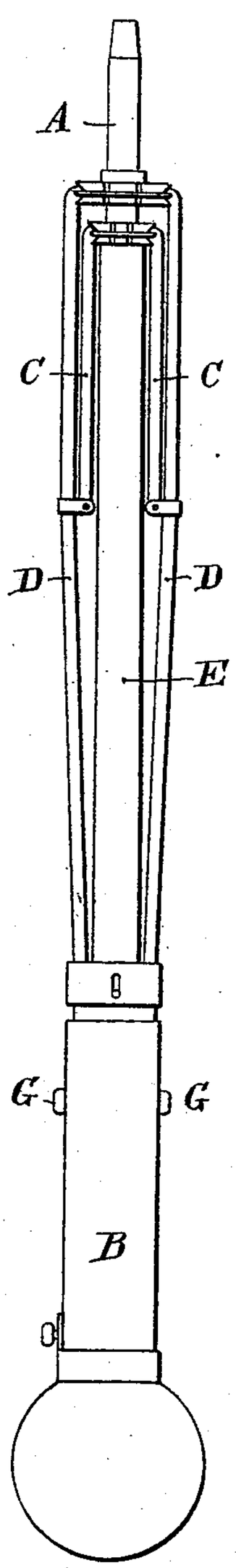
Fig. 3.



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UNITED STATES PATENT OFFICE.

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UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 616,307, dated December 20, 1898.

Application filed October 10, 1898. Serial No. 693,128. (No model.)

To all whom it may concern:

Be it known that I, JACOB H. FLEISCH, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Umbrellas, of which the following is a specification.

One object of my invention is to produce an umbrella-frame which shall be more convenient in operation than umbrellas heretofore made and used and which may be opened and closed with a much smaller movement at the handle end of the stick and outside the location of the tips of the ribs when the umbrella is closed.

Another object of my invention is to produce an umbrella-frame which when provided with the usual cloth or silk covering will be small and symmetrical in shape, since it has been the object of many manufacturers to produce a small and symmetrical umbrella.

A further object of this invention is to secure this desired result without materially increasing the cost of production and also to produce a more simple and durable umbrella-frame than any that have been heretofore produced.

In the improved umbrella-frame herein described and claimed the ribs are loosely or pivotally connected to the stick or staff by which the umbrella is held or carried, and the spreaders are loosely or pivotally connected to the ribs and to an operating-slide which when the umbrella-frame is closed extends nearer the tip end of the umbrella-frame than the point of connection of the ribs and spreaders, thus enabling the spreaders to lie in proximity to the tip end of the stick or staff when the umbrella-frame is closed, and the umbrella-frame is spread by a movement of the slide toward the handle end of the umbrella-frame. By this construction the umbrella may be spread or closed by a slight movement of the slide at or near the handle or butt-end of the stick without the necessity of running the hand down into the umbrella in either operation, as in umbrellas of the usual construction, and with much less extent of movement of the hand than is ordinarily required with umbrellas of other forms. At the same time the construction is cheap.

The end of the stick is permanently fixed in the butt-end of the handle, and the latter has formed within it for a portion of its length and surrounding the stick an annular space in which the sliding tube works. I am thus enabled to locate the means for operating the tube entirely in the handle and out of the way of the ribs when folded and to avoid the necessity for forming slots in the fixed member and moving the movable member by pins working in said slots.

A catch may be provided for the slide, which may be of any desired form and may be provided with an operating knob or button on the outside of the handle when the operating-slide extends down into the latter, as illustrated in the accompanying drawings. The slide may be guided in or on the stick in any desired manner.

The invention consists in the details of construction and combination of parts described and claimed.

In the drawings, Figure 1 shows the frame with the ribs spread or extended. Fig. 2 is a central longitudinal section through the handle end of the stick. Fig. 3 shows the frame closed.

A is the stick or staff, of any construction or material, preferably a metal tube, and having the ribs D loosely or pivotally connected with it near its tip, as shown.

B is the handle or butt of the stick, fastened or attached thereto in the ordinary way. Spreaders or stretchers C C connect the ribs with an operating slide or stem E, carrying at its upper end a ring or crown which encircles and slides upon a stick or rod and with which said spreaders are loosely or pivotally connected in any suitable way. The operating-slide E is guided by, upon, or in the stick or staff A and extends the handle or butt, as shown in the sectional view. It is preferably arranged to slide as a tube upon the stick, but, as shown, extends when the umbrella-frame is closed, as in Fig. 3, from a point of connection with the spreaders which is beyond or nearer the tip than the pivotal connection of the spreaders and ribs. Preferably it also extends down beyond the tips of the ribs for operation by the hand of the user in opening the umbrella, which is done by drawing said slide down into the position approximately indicated in Fig. 1, where it may be held by means of the usual or any suitable spring-catch, as F, secured in the stick in

any desired manner and adapted to automatically engage with said slide. To shut the umbrella-frame, the slide is pushed toward the tip of the stick after releasing the catch, if a catch be employed.

For lightness parts of the tubular slide may be cut away to make a skeleton structure. Suitable operating-pins G, attached to the slide, project through slots in the handle, as shown, and may have knobs upon their outer ends for convenience of operation or may be provided with any other attachment or attachments.

To release the catch, a button H is provided. This button is preferably rounded at its inner end, where it engages the catch, so as to permit the slide to pass it readily in locking and unlocking. The catch acts as the returning-spring for the button; but a separate spring may be provided for this purpose, if desired. The tips of the ribs when closed may be retained by a cup I, which is slid down over them after closing.

It is evident of course that my invention is equally applicable to a frame for parasols as it is to a frame for umbrellas.

It is seen from the foregoing that my new umbrella-frame has many advantages in construction and in use over any that have heretofore been made or used, among which may be mentioned the following, although others are obvious to those skilled in the art:

In my new umbrella-frame it is not necessary for the user to put his hand inside the umbrella to open the same or to close it, a disagreeable thing to do when the umbrella is wet or damp; nor is it necessary to manipulate the stem so far in opening or closing the umbrella-frame, as is necessary in prior structures; nor can the wind reverse the umbrella-frame, because the stem may be locked against movement when the umbrella-frame is opened.

In appearance my umbrella-frame is when closed more symmetrical, due to the fact that the spreaders lie at the tip end of the umbrella-frame, where there is the least amount of cloth or silk covering, while in prior structures the spreaders when the umbrella-frame is closed lie near the handle end of the umbrella-frame, where there is the greatest amount of cloth or silk covering.

While I have herein shown and described several structures embodying my invention, yet I do not desire to be understood as confining myself to said forms, as obviously modifications thereof may be made by persons skilled in the art, it being clear that the essential feature of my invention consists in a non-extensible rod or stick carrying fixedly upon its respective ends a handle and pivotal bearings for the ribs and mounted upon said rod or stick, a sliding tube which carries at one end pivotal bearings for the spreaders and has its other end operatively mounted in or upon the fixed handle and there provided with means coöperating with the handle for controlling longitudinal movement of the tube upon the rod, the tube moving toward the outer end of the rod to close the umbrella, and vice versa. The umbrella is thus controlled by means outside the ends of the ribs, and the umbrella can be opened without introducing the hand into the umbrella. To accommodate the end of the tube in or upon the handle, the latter is preferably provided with an annular recess into which the tube projects.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an umbrella the combination of a rod or stick carrying at one end pivotally-connected ribs and at its other end a handle provided for a portion of the length of the handle with an annular space or chamber surrounding the rod or stick; a tube sliding upon the rod or stick, carrying at one end pivotally-connected spreaders and having its other end working in the annular space or chamber of the handle and there provided with means coöperating with the handle for controlling the movement of the tube on the rod or stick, and suitable connections between the ribs and spreaders whereby the ribs may be spread and folded by relative movement between the tube and the rod or stick; substantially as and for the purpose set forth.

2. The combination of a non-extensible umbrella rod or stick, having ribs pivotally mounted on its outer end and with a handle fixedly mounted upon its inner end; a tube sliding upon the rod or stick, having spreaders pivotally mounted on its outer end, and having its inner end operatively mounted in or upon the fixed handle of the rod or stick, and there provided with means for controlling the movement of the tube, and suitable connections between the spreaders and ribs, substantially as herein set forth.

3. In an umbrella, the combination of a rod or stick carrying at one end pivotally-connected ribs and having a hollow handle at its opposite end, a tubular operating-slide carrying at one end a ring or crown which encircles and slides upon the stick, said slide having its other end extending down within the annular space in the handle portion of the stick and there provided with means cooperating with the handle of the stick for controlling the movement of the ring or crown on the stick, and suitable spreaders, one for each rib, pivoted directly at one end to the ribs and directly at the other end to said ring or crown and moving upward to close the umbrella by relative movement between the slide and the rod or stick, as and for the purpose described.

Signed at New York, in the county of New York and State of New York, this 6th day of October, A. D. 1898.

JACOB H. FLEISCH.

Witnesses:
WM. H. CAPEL,
SAMUEL FLEISCH.