

(No Model.)

2 Sheets—Sheet 1.

G. N. VANNAUKER.  
FOLDING UMBRELLA.

No. 488,341.

Patented Dec. 20, 1892.

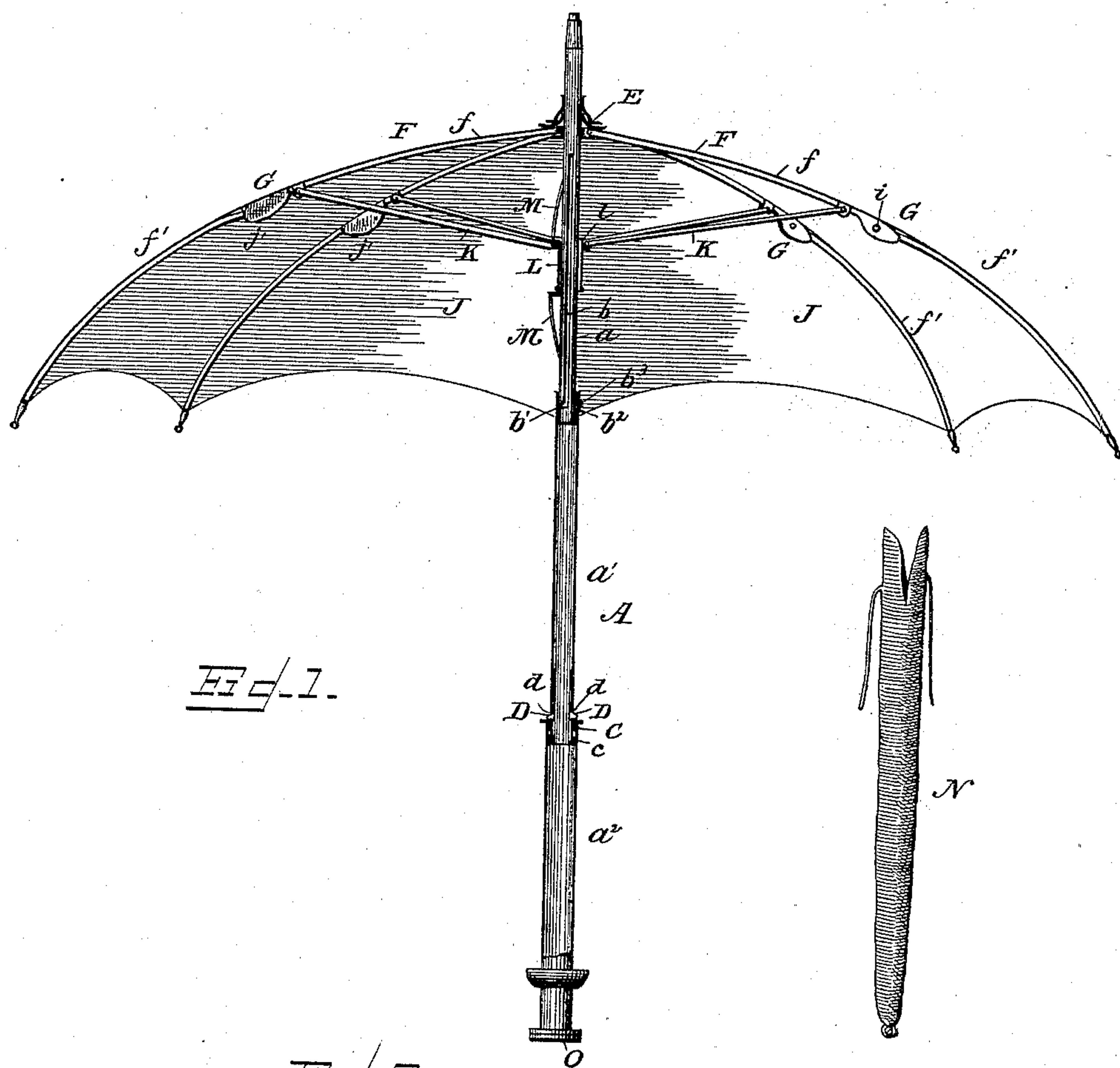
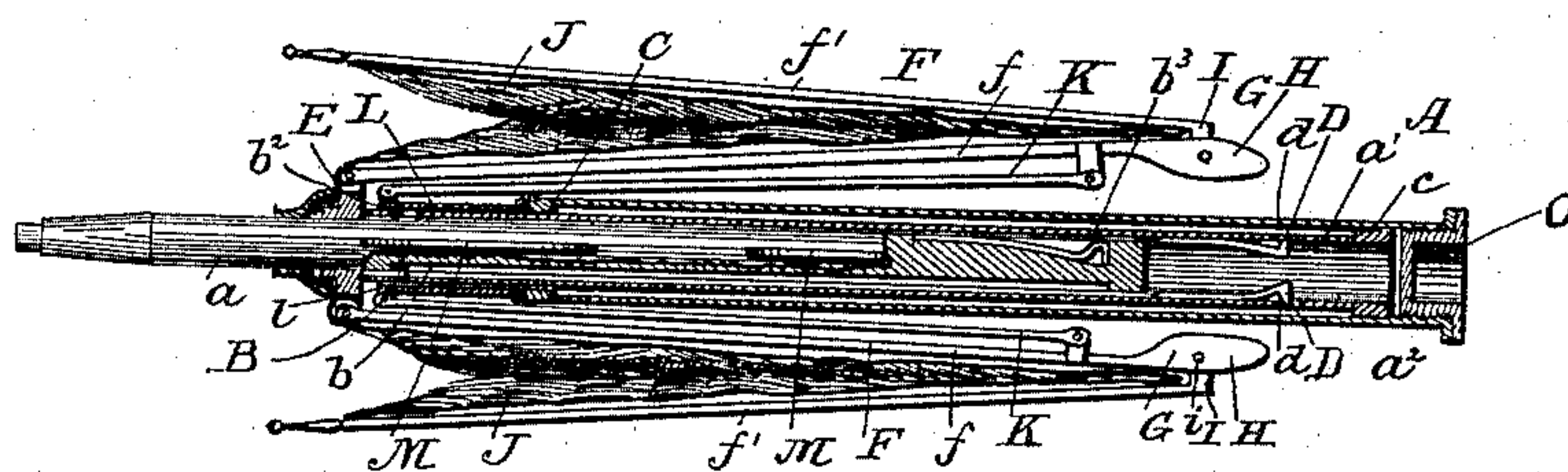


Fig. 2.



Witnesses

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By his Attorneys,

C. A. Snow & Co.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

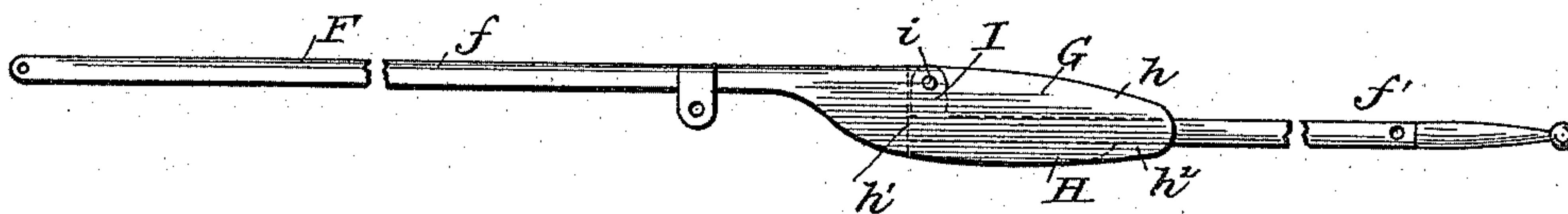


Fig. 4.

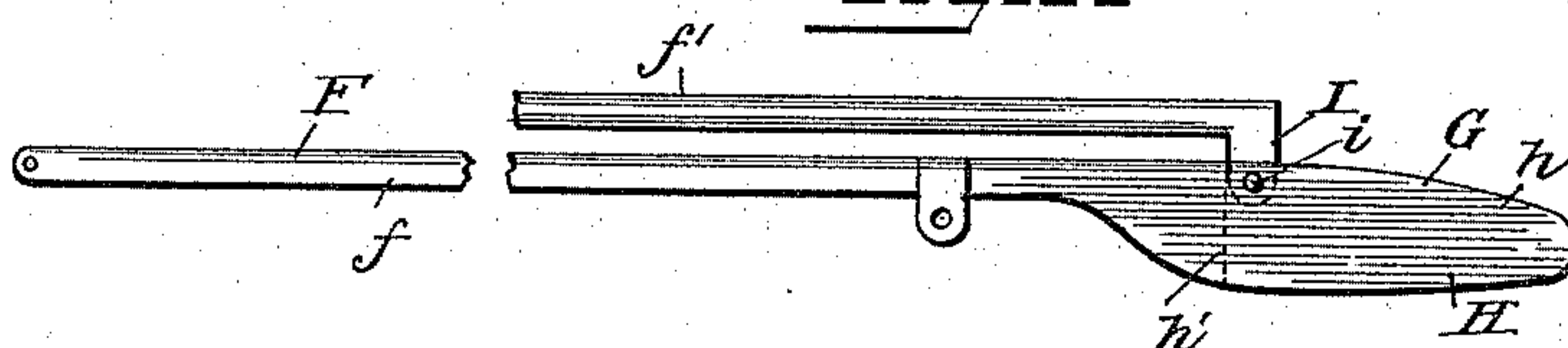
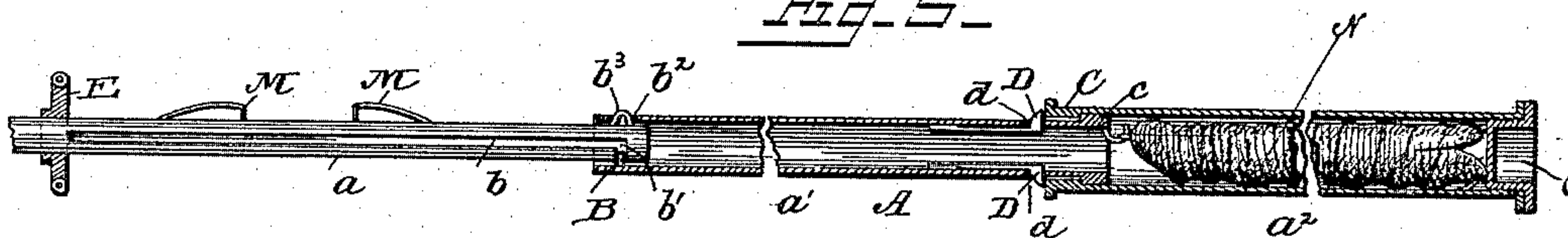


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

GEORGE N. VANNAUKER, OF SHICKSHINNY, PENNSYLVANIA.

## FOLDING UMBRELLA.

SPECIFICATION forming part of Letters Patent No. 488,341, dated December 20, 1892.

Application filed May 31, 1892. Serial No. 435,033. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE N. VANNAUKER, a citizen of the United States, residing at Shickshinny, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Folding Umbrella or Parasol, of which the following is a specification.

This invention relates to folding umbrellas; and it has for its object to provide improvements in this class of umbrellas or parasols which will provide for the easier folding and unfolding of the same, whereby such articles can be placed into a valise or trunk and out of the way, owing to the small space occupied after folding.

To this end the main object of the invention is to generally improve upon the construction of folding umbrellas and parasols.

With these and many other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the accompanying drawings;—Figure 1 is a vertical sectional view of a folding umbrella constructed in accordance with this invention, unfolded. Fig. 2 is a similar view, folded. Fig. 3 is an enlarged detail elevation of one of the sectional ribs unfolded. Fig. 4 is a similar view of the same folded. Fig. 5 is an enlarged detail sectional view of the sectional stick, extended.

Referring to the accompanying drawings;—A represents the sectional stick comprising the inner solid or tube section  $a$  and the intermediate and outer telescopic tube sections  $a'$  and  $a^2$ , respectively, sliding within each other and over the inner solid member  $a$  so as to reduce the stick to a small compass when necessary, and which may also be easily extended when the umbrella is in use. The intermediate tube section  $a'$ , is adapted to slide over the inner solid section  $a$ , and is provided with an inwardly projecting pin B traveling in the longitudinally disposed guide groove  $b$ , formed in one side of said solid or tube section  $a$ , so as to guide said intermediate tube section sliding thereover, and said groove terminates at one end in a short right angularly disposed portion  $b'$ . When the stick is extended and the projecting pin of said inter-

mediate tube section has reached one end of said longitudinal slot, by a slight turn of said tube section to one side, the pin passes into the short end groove  $b'$ , and brings the securing notch or slot  $b^2$ , in one end of the intermediate tube section over the spring-catch  $b^3$ , secured to the inner solid section and inclosed or covered by the intermediate tube section until the same has been extended and brought into the position just described. The outer telescopic tube member  $a^2$  slides over said intermediate section and when extended is slid to the outer end of said intermediate tube and is stopped at such end by the inner shoulder C, thereof, engaging the shouldered end  $c$  of said intermediate tube, and is held in such position by means of the opposite spring catches D, secured within the tube  $a'$  and projecting through openings  $d$ , near the outer end of said section, so that when the outer or handle section  $a^2$ , has passed over said catches, the same spring out and against the inner end of the handle section. To reduce the length of the stick the several sections are released from the spring catches described and telescoped as will be readily apparent.

Fixedly secured to the solid stick section is the fixed notched rib collar E, to which are pivotally secured at their inner ends the sectional umbrella ribs F. The said ribs F comprise the inner and outer rib sections  $f$  and  $f'$  respectively, which are hinged together by the lock hinges G, providing for the folding of the outer rib sections back and over the inner rib sections, and also for holding the said outer rib sections in their extended position. To the outer ends of the inner rib sections are secured the bifurcated hinge members H forming pockets for the reception of the right angularly disposed pivot lugs I, secured to the inner ends of the outer rib sections, and pivotally mounted within the hinge members H upon the pivot pins or stud  $i$ , so that the outer sections can be readily folded and extended at pleasure. The said hinge pockets or members H are provided with the upper curved edges  $h$  conforming to the curvature of the inner rib sections when extended, so as to preserve the continuity of the ribs and prevent the cover J stretched thereover, from being caught in the hinge. The said hinge members H are also provided with the



inner solid stop walls  $h'$ , against which the inner ends of the outer rib sections strike when extended so as to prevent the same from moving down, and when in such extended position the pivot lugs I project above the outer rib sections and therefore form a lock joint or hinge which holds the outer rib sections extended. The outer ends of the bifurcated hinge pockets or members H, inclosing the hinged ends of the outer rib sections, are connected by the stop rests  $h^2$ , upon which the said outer rib sections rest and are further prevented from downward displacement. The hinges just described may be inclosed in cloth covers  $j'$ , secured thereover and to the main cover J, to conceal the same from view if so desired, as illustrated upon one of the hinges in the drawings. Rib stretchers or braces K, shorter than the inner rib sections, are pivotally secured to said rib sections back of the outer ends thereof, while the other ends of said braces are pivotally connected to the sliding runner L. The said runner L has a notched brace head  $l$ , to which said braces are directly connected, and which is of a smaller diameter than the fixed notched head of the umbrella, so as to allow the runner when the umbrella is folded to be slid directly against said fixed head so as to fold the stretches or braces under the inner rib sections, while allowing the outer rib sections and a portion of the cover thereover to be folded over and upon the said inner rib sections. Spring runner-catches M, are secured to the inner solid or tube stick section  $a$ , and are designed to hold the runner in position when slid into engagement therewith after the outer rib sections have been extended, and which when the umbrella is folded are inclosed by the telescoping tube sections to allow the runner to be slid against the fixed collar to complete the folding in a manner described.

When the various parts of the umbrella are folded, to unfold the same the first step is to extend the sectional stick in the manner described. The runner is slid past the runner catches and down upon the stick as if closing an ordinary umbrella, so as to allow the rib sections to be straightened out. After the rib sections have been straightened out the runner is raised into engagement with the runner-catches, and the umbrella is open. To fold the same the operation is reversed, the runner slid down, raised, and the stick telescoped.

A suitable pocket or umbrella case N may be employed to receive the folded umbrella in order to place the same in a valise, or trunk.

The construction, and many advantages of the herein described folded umbrella are now thought to be apparent without further description.

With respect to the umbrella case or covering N just referred to, it is well to observe at this point that the particular construction of the sectional stick provides means for forming a convenient receptacle for said case when

the umbrella is not folded and serves to conceal the same from view. The outer telescopic tube section  $a^2$  is inclosed by the removable screw cap O, which can be easily secured in place and again removed at the proper moment. When it is desired to open the umbrella for use and to dispense with the case N, the screw cap O is removed before extending the stick. One end of the case is secured to the outer end of the intermediate tube section  $a'$ , at the shouldered end  $c$ , thereof, so that when the sections are extended the case will be drawn within the outer section  $a^2$  as illustrated in Fig. 5 of the drawings, and after being thus withdrawn from view the cap O is replaced and the case or covering is conveniently stored away.

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

1. In a folding umbrella, the sectional stick, having the fixed notched collar at one end, the sectional ribs connected to said collar and comprising inner and outer rib sections which latter are adapted to be folded over the inner rib sections, lock hinges connecting said sections and comprising bifurcated hinge members connected to the ends of the inner rib sections and provided with upper curved edges, inner stop walls and outer stop rests connecting the outer ends thereof, and angularly disposed pivot lugs connected to the inner ends of the outer rib sections and pivotally mounted between the walls of said bifurcated members adjacent to the stop walls thereof, and raising and lowering devices, substantially as set forth.

2. A sectional umbrella stick comprising an inner stick member having a longitudinally disposed guide groove and a right angularly disposed short end groove at the outer end of the longitudinal groove, an outwardly pressing spring catch secured to said inner stick member near its inner end and in a line with and opposite to said short end groove, telescoping tube sections sliding within each other and over said stick, the outer tube section having an inner shoulder at one end, and the inner or intermediate tube section, sliding within the outer section, being provided with a shoulder at one end adapted to strike the shoulder of the outer section to limit the extension of the same, an inner projecting pin at its other end adapted to travel in said longitudinal guide groove and short end groove, and a locking notch or opening opposite said pin and adapted to receive the outwardly pressing spring catch at the moment the pin has been thrown to the end of the short end groove by a turn of the innermost tube section, and opposite catches arranged within the intermediate tube section and adapted to take over the inner end of the outer tube section, substantially as set forth.

3. In a folding umbrella, the combination, of a sectional stick comprising a series of telescoping tube sections, a removable screw



cap inclosing the outer open end of the outer  
tube section, and the umbrella case or cover-  
ing adapted to be attached to the outer end  
of the intermediate tube section when the  
5 stick is collapsed, and be drawn within the  
outer tube section and inclosed thereby when  
the stick is extended, substantially as set  
forth.

In testimony that I claim the foregoing as  
my own I have hereto affixed my signature in 10  
the presence of two witnesses.

GEORGE N. VANNAUKER.

Witnesses:

R. M. TUBBS,  
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