

(No Model.)

2 Sheets—Sheet 1.

T. BREARLEY.

UMBRELLA, PARASOL, OR SUNSHADE.

No. 353,841.

Patented Dec. 7, 1886.

Fig. 1.

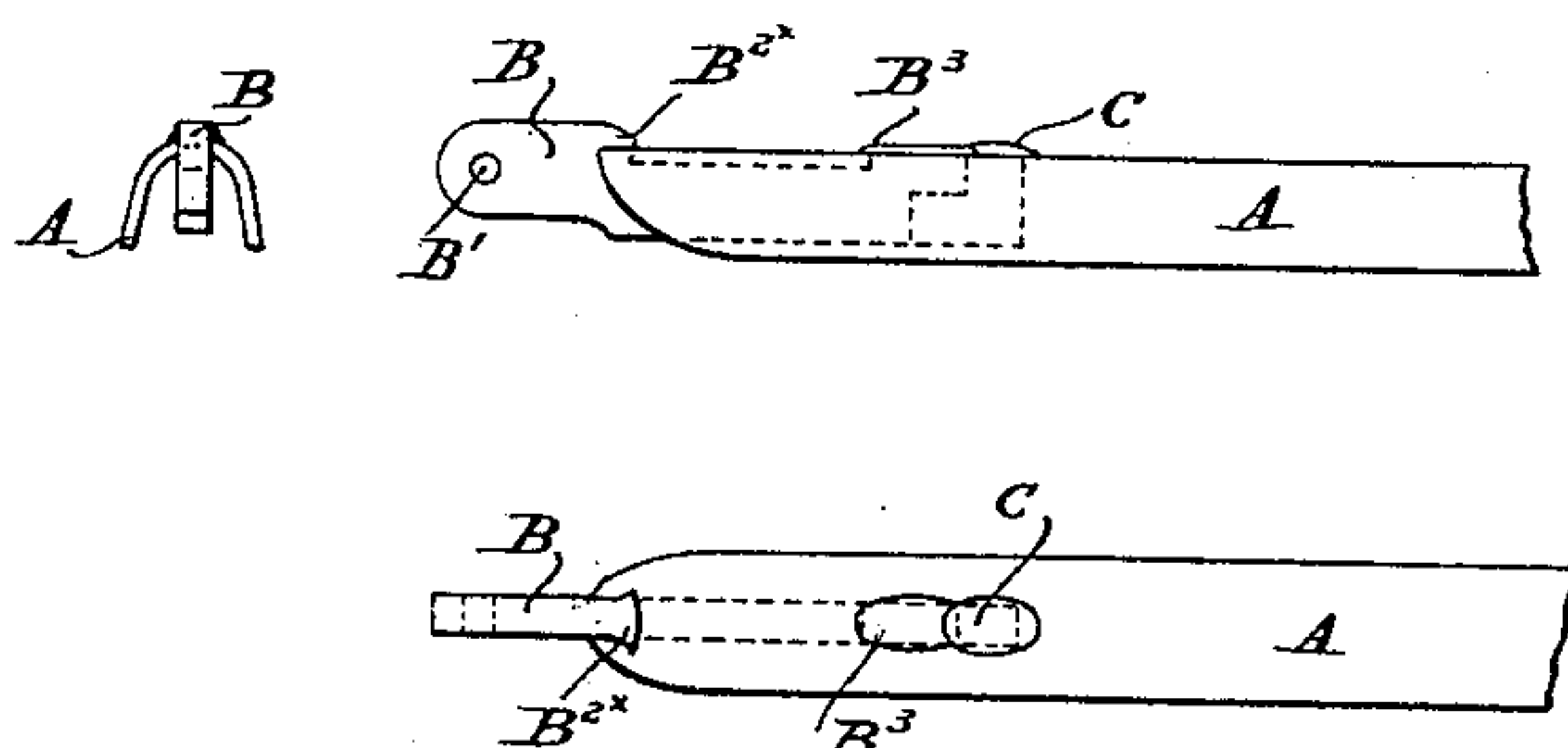


Fig. 2.

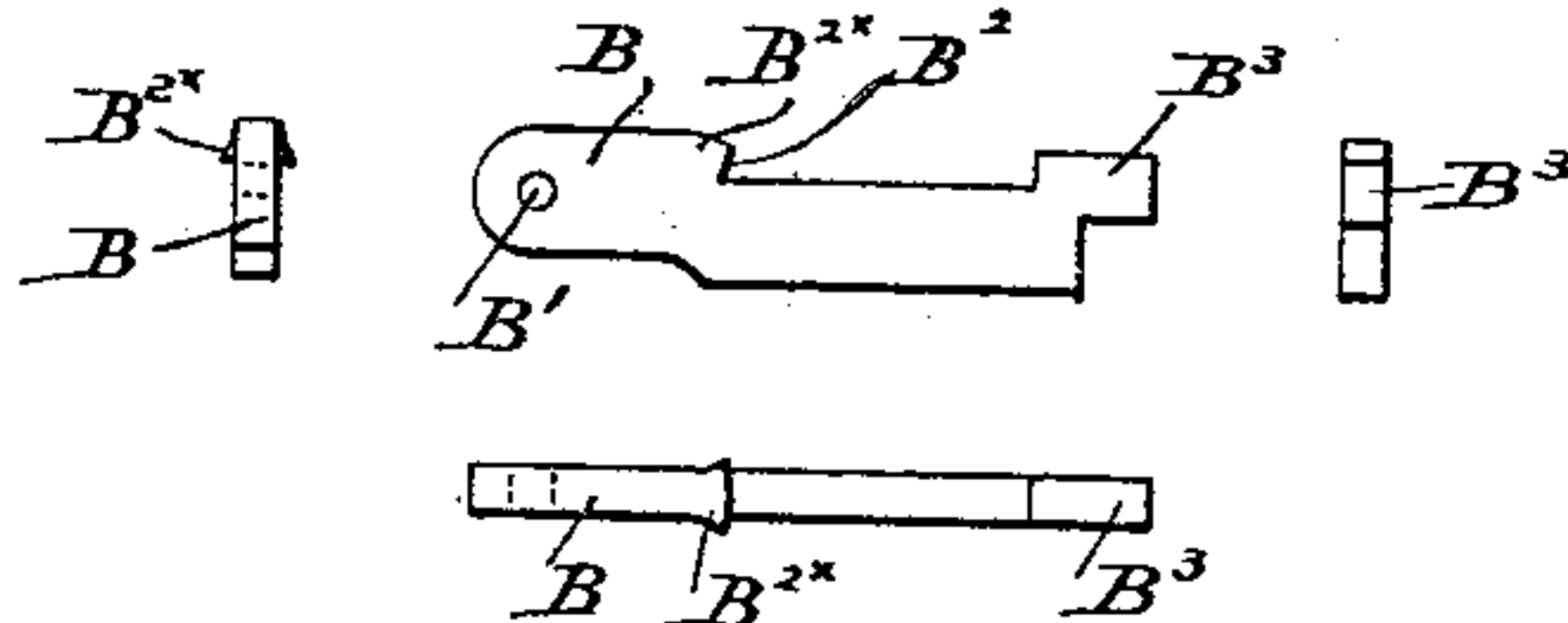


Fig. 3.

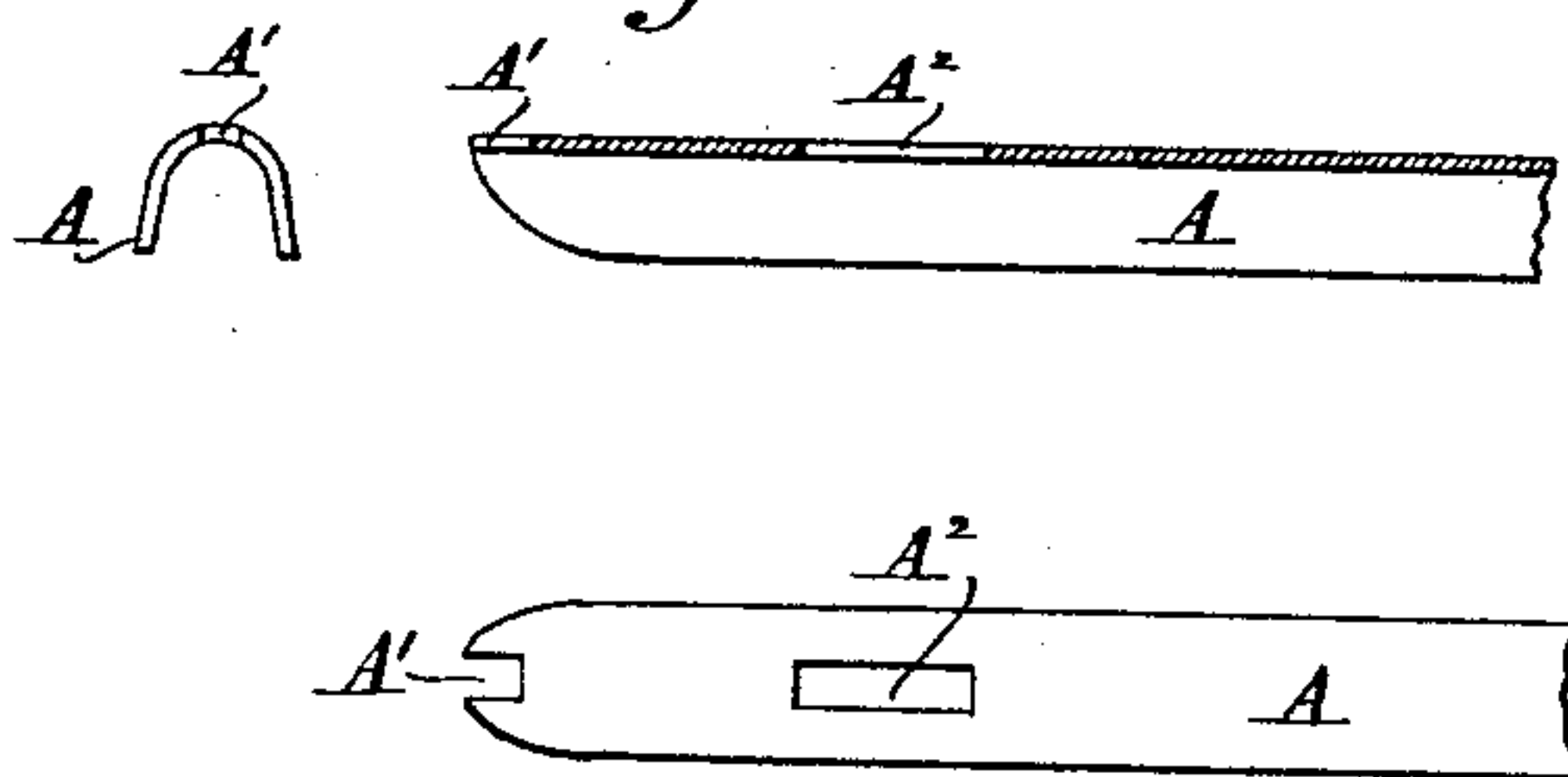
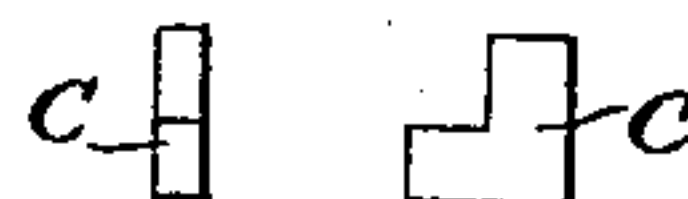


Fig. 4.



Witnesses.

Allan M Lane Abert
Lloyd B. Wright

Inventor.

Thomas Brearley
By Atty -
Goddard, Stephens & Co.

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Fig. 5.



Fig. 6.

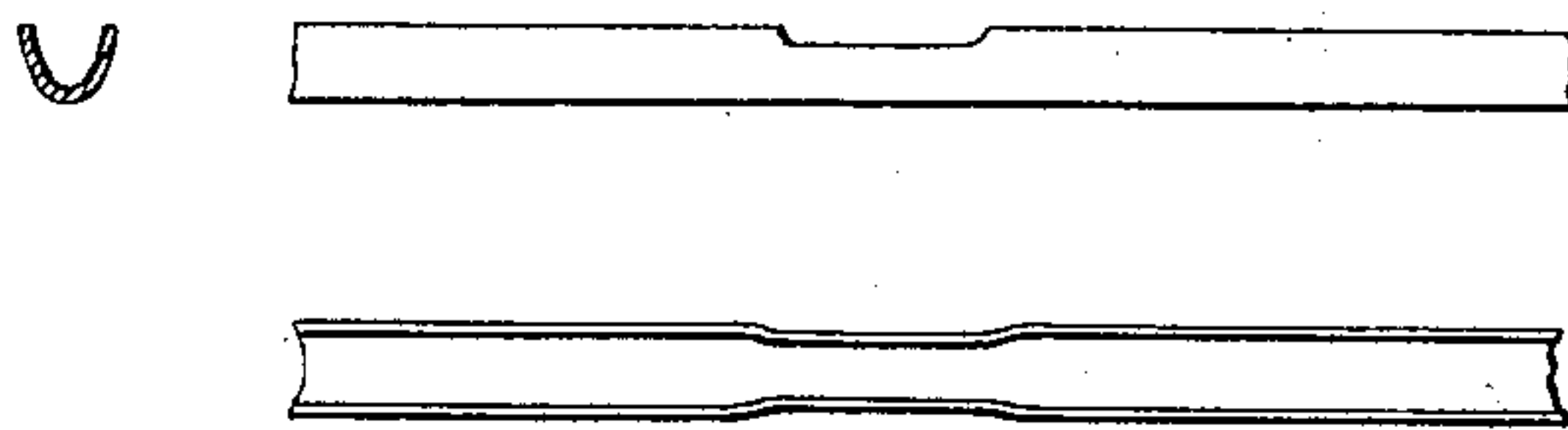
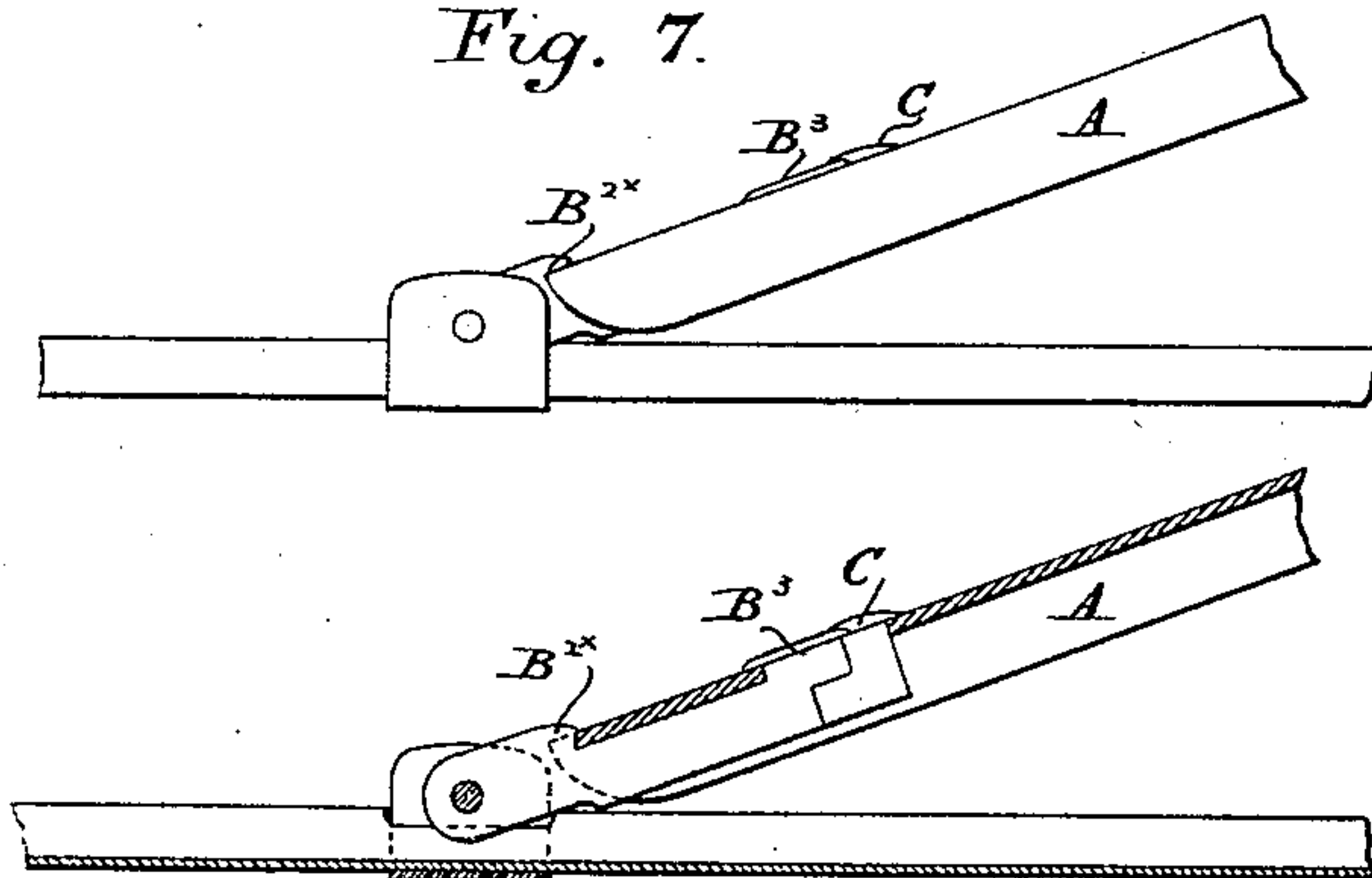


Fig. 7.



Witnesses.

Allan M Lane Abert.
Lloyd B. Wright

Inventor.

Thomas Brearley
By Atty -
Goldwin, Cupples & Co.

UNITED STATES PATENT OFFICE.

THOMAS BREARLEY, OF BOLSTERSTONE, COUNTY OF YORK, ASSIGNOR TO S. FOX & COMPANY, (LIMITED,) OF STOCKSBRIDGE WORKS, DEEPCAR, NEAR SHEFFIELD, ENGLAND.

UMBRELLA, PARASOL, OR SUNSHADE.

SPECIFICATION forming part of Letters Patent No. 353,841, dated December 7, 1886.

Application filed February 23, 1886. Serial No. 192,890. (No model.) Patented in England December 3, 1885, No. 14,863, and in France February 17, 1886, No. 174,230.

To all whom it may concern:

Be it known that I, THOMAS BREARLEY, a subject of the Queen of Great Britain, residing at Bolsterstone, in the county of York, England, mechanic, have invented certain new and useful Improvements in Umbrellas, Parasols, or Sunshades, (for which I have secured Letters Patent No. 14,863, dated December 3, 1885, in Great Britain, and in France, in the name of Fox & Co., (Limited,) No. 174,230, dated February 17, 1886,) of which the following is a specification.

This invention has for its object improvements in umbrellas, parasols, or sunshades.

I make a one fork stretcher by firmly fixing a strong middle bit or prong within the end of the trough-like stretcher-wire, and I employ with this stretcher a git, which does not overlap, so as to enter within the interior of the paragon rib as the thickness of the middle bit or prong is such as to require the whole width of the rib to receive it. The best way in which to fix the middle piece is to form its end immediately behind the eye with a notch, into which the end of the trough-wire is received. The middle piece also has a stud upon it, which enters an oblong hole in the bottom of the trough-wire when the edge at the extremity of the trough has been pushed home into the notch in the middle piece. A small L-shaped rivet is then inserted into the oblong hole, behind the stud on the middle piece. It is riveted on the outer side of the trough-stretcher, and its head, overlapping the end of the middle piece, keeps it in place. The stud also is riveted. The git which I provide on the paragon rib is a U-form piece of metal, embracing it externally and with thickened ends to receive the joint-pin. These thickened ends rest on the edges of the rib, which are indented to receive them, so that the git, when fixed by the insertion of the joint-pin, may not slide longitudinally upon the rib. I also set in the sides of the rib slightly at the part where the git is received. I make the end of the stretcher, which is received into the runner, in the same way as that which is jointed to the rib.

In order that my said invention may be most fully understood and readily carried into

effect, I will proceed to describe the drawings 50 hereunto annexed.

In the drawings, Figure 1 represents a portion of a one-fork trough-like stretcher constructed in accordance with my invention. Fig. 2 shows separately the middle piece or 55 prong. Fig. 3 shows the extremity of the trough-like stretcher-wire prepared to receive the middle piece. Fig. 4 shows the L-shaped locking-piece by which the parts are secured. Fig. 5 shows the git. Fig. 6 shows the rib 60 prepared to receive the git. Fig. 7 shows the completed joint between the rib and stretcher.

A A is the stretcher-wire. A' is a notch at its end to engage with a shoulder, B², at one end of a notch in the single prong formed by the 65 middle piece, B. A² is an elongated hole in the bottom of the trough-like wire to receive a stud or projection, B³, on the middle piece. The middle piece, forming the single prong, is made of metal, which is as stout as the interior 70 dimensions of a paragon rib will admit, and when the stretcher is connected with the rib the extremity of this middle piece occupies the whole width of the rib.

B' is the eye in the middle piece to receive 75 the joint pin or wire.

B² is a notch in the middle piece to receive the extremity of the stretcher, and at the shoulder B² the metal is somewhat spread laterally, so that it may overlap the sides of the notch 80 A' in the piece A. This spreading is effected by striking a light blow upon the metal.

C is the locking-piece, which is inserted through the hole A². Its end then overlaps the extremity of the stud B³. The locking-piece 85 C, and also the stud B³, are riveted over on the exterior of the trough-like piece A, and are so securely fixed, as is clearly shown in the sectional view in Fig. 7. At each of the ends of the stretcher the fork is made in a similar 90 manner. In the one case, however, it enters between the jaws of the git upon the rib and is fastened by a rivet, and in the other case it enters into the notch of the runner and is secured by the runner-wire.

Fig. 5 shows the git which I prefer to employ, but which, however, I do not claim as my invention. It is a curved piece of steel, 95

thicker at its extremities than in the middle. When in its place, the git embraces the paragon rib, the shoulders of the thickened ends resting upon the sides or edges of the rib. I

5 fix this git in a novel manner. I indent the rib either on the sides or edges, but preferably on both, in the manner clearly shown by Fig. 6.

It will be seen that in the place where the git is to come the edges of the rib are forced
10 inward, so as slightly to decrease the depth of the rib, and the sides also are brought somewhat closer together, so that the shoulders are formed both on the edges and sides. When the joint-pin is inserted, the git is effectually
15 secured in its position, and it cannot slide along the rib. The small shoulders on the edges and sides of the rib prevent it doing so.

Fig. 7 shows in elevation and section the complete joint connecting the rib and stretcher.

20 The heads or ends of the joint pin or rivet, although they project slightly from the sides of the git, cannot meet and catch together when the umbrella is closed—a great defect in many joints as at present made. This locking is
25 rendered impossible by the length of the joint-pin being less than the width of the trough-like stretcher.

In consequence of the end of the stretcher-wire being cut so as to stop short of the git,
30 plenty of room is left for the heads of the rivets or joint-pins.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed,
35 I declare that what I claim is—

1. The combination of the trough-like stretcher, its single strong prong formed by the middle piece secured to and projecting beyond its end, the paragon or trough rib, and the git secured externally upon the rib and
40 leaving the interior thereof clear to receive the middle piece or prong of the stretcher, substantially as and for the purpose set forth.

2. The combination of the trough-like stretcher and its single prong formed by the
45 separately made middle piece fixed within the trough of the stretcher and projecting beyond its end, as and for the purpose set forth.

3. The combination of the trough-like stretcher formed with the end notch and the
50 hole A², the single prong formed by the middle piece having the notch, the shoulder, and the stud, and the locking-piece, said shoulder and locking-piece being riveted to secure the parts together, substantially as and for the
55 purpose set forth.

4. The combination of the trough-rib, indented as described, and the git secured by embracing the indented portion of the rib and by the joint pin or rivet, substantially as and
60 for the purpose set forth.

THOMAS BREARLEY.

Witnesses:

C. B. HOBBS,

HENRY F. H. MARSDEN.

*Clerks to Messrs. Bindekin & Co., Solicitors,
Sheffield.*