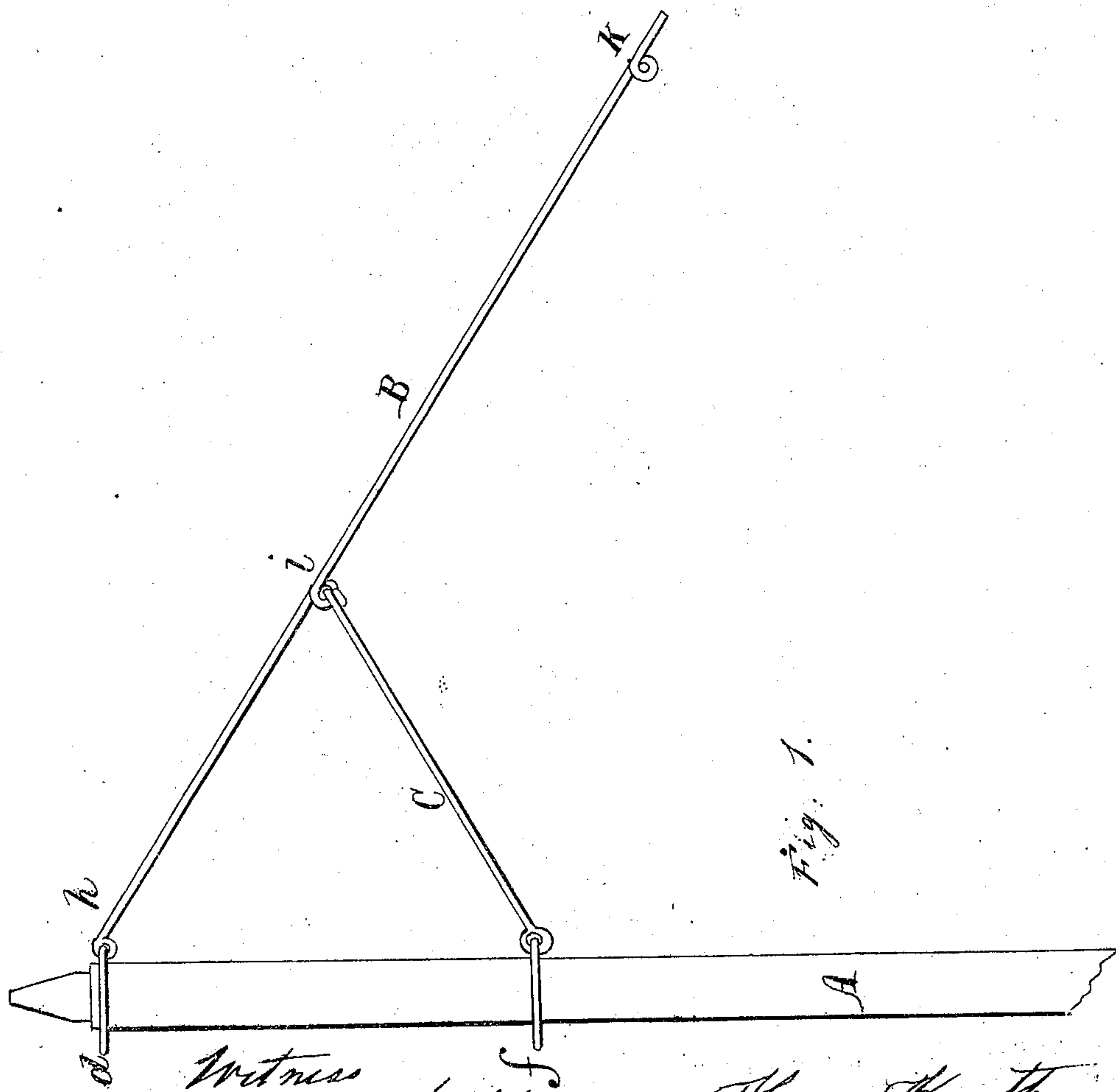
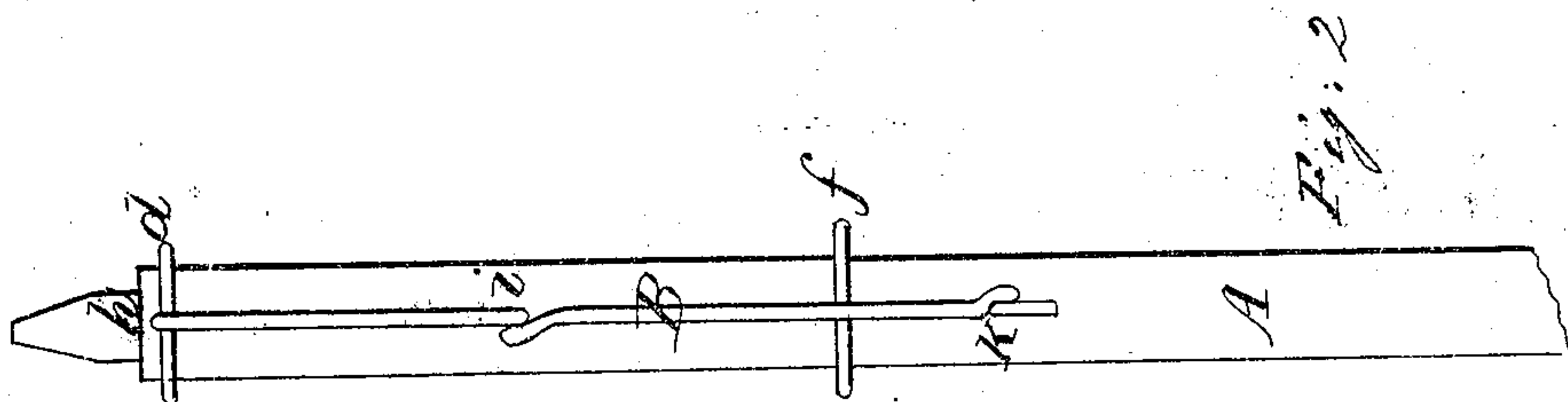


H. Kurth,  
Umbrella.

No. 19,998.

Patented April 20, 1858.



Witness  
Chas. Wehle  
Julius Wehle

Henry Kurth.

# UNITED STATES PATENT OFFICE.

HENRY KURTH, OF BROOKLYN, NEW YORK.

## UMBRELLA.

Specification of Letters Patent No. 19,998, dated April 20, 1858.

*To all whom it may concern:*

Be it known that I, HENRY KURTH, of the city of Brooklyn, in the State of New York, have invented a new and useful Improvement on Umbrellas; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, in which—

10 Figure 1, is a side view, and Fig. 2, a front view of my improvement.

Similar letters of reference indicate corresponding parts in these figures.

15 A, represents the stick B, the rib C the stretcher of the runner and *d*, the notcher of my umbrella frame.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation. In 20 order to do this effectually it is proper to state that in the metallic wire frames for umbrellas at present in use, the ribs are flattened at both ends and holes are drilled or punched into these places, in order to connect the ribs with the notcher and the covering. The middle holes are formed by having 25 separate pieces of tin attached to the rib by soldering. I construct the ribs of my wire frames in the following manner. I 30 commence by coiling the wire in such a manner as to form a top loop or hole *h*. I then continue the wire straight coiling it again on or near the center so as to form the middle hole *i*. I then continue the wire again 35 straight to the tip hole *k*, which is also formed by a coil of the wire. The whole rib consists of one piece of wire and all the openings of the same are formed without being under necessity of flattening drilling or 40 punching any part thereof. The stretcher on the point *i* is turned in double coil so as to prevent the bending of the rib when the umbrella is closed.

The advantage of my construction over that of the existing wire frames for umbrellas consists in the following points: 45 1st. All the openings or holes in my frame are smooth on the inside and therefore not liable to cut the thread passing through the same for the purpose of attaching the covering to the frame, or case, which frequently happens in the present styles of wire frame umbrellas as the holes produced by punching or drilling leave sharp edges on the inside. 2d. My ribs not being flattened are 50 stronger than those of the old style. 3d. I am enabled to form the notch loops or holes of a larger size than those of the old style, thereby I am also enabled to use a larger size of notcher wire and runner wire 60 thus strengthening the whole frame. 4th. The rib according to my construction forms a coiled spring and the elasticity thus imparted to the same facilitates the opening of the umbrella by preventing the catching 65 of the ribs. 5th. My umbrellas require less repairing and the construction of their frames is cheaper than those of the present style of wire frame umbrellas.

My improvement is as applicable to parasols as to umbrellas. 70

What I claim as new and desire to secure by Letters Patent of the United States is:

Making the rib by coiling the wire into loops, which serve like ordinary holes in the 75 rib for the joints, and attaching the stretcher to the middle loop without the interposition of intermediate links substantially in the manner and for the purpose as described.

New York February 10, 1858.

HENRY KURTH.

Witnesses:

CHS. WEHLE,  
JULIUS WEHLE.