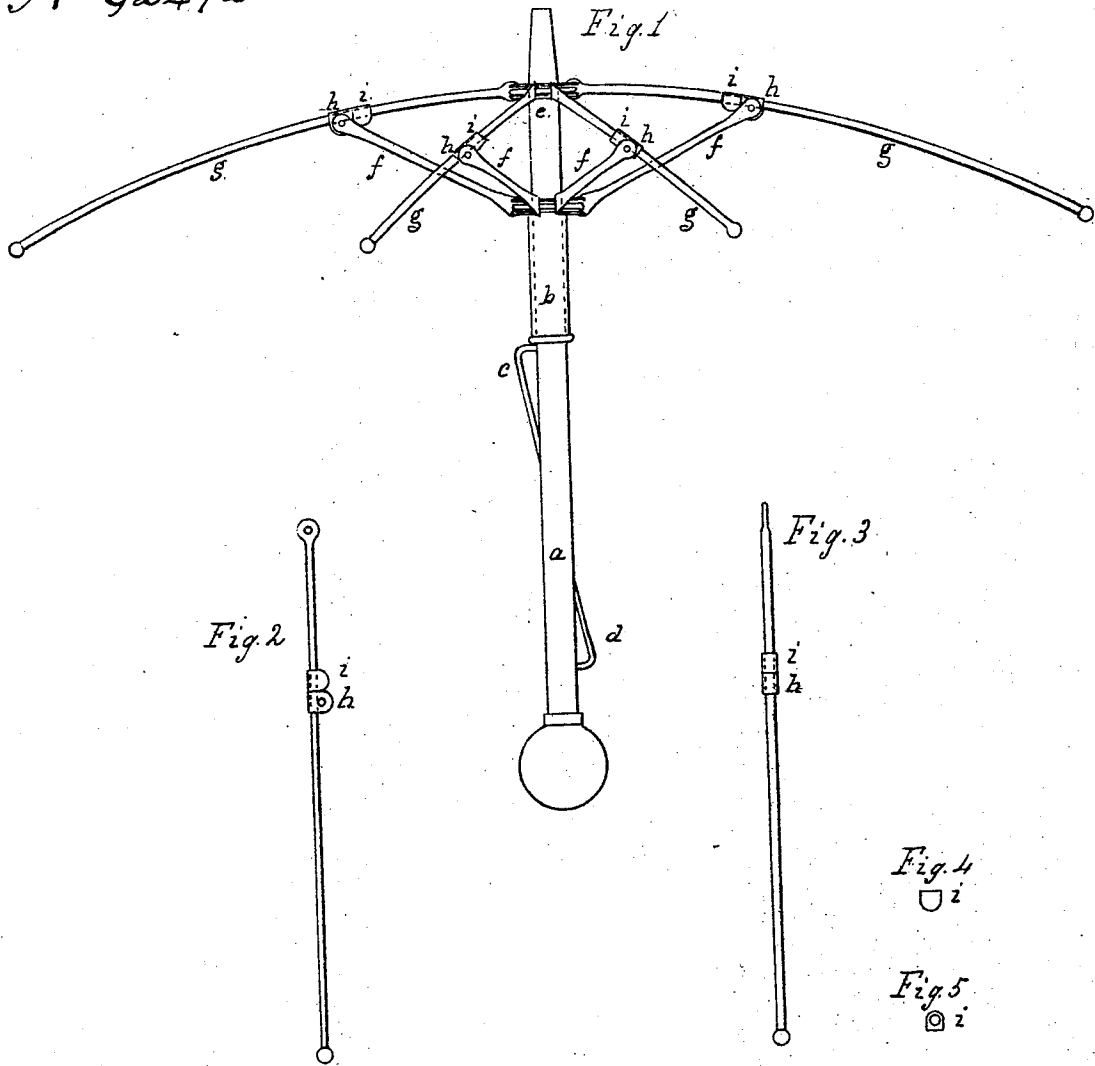


H. T. Robbins.

Umbrella.

N^o 92472.

Patented Jul. 13. 1869.



Witnesses
A. E. Robbins.
H. P. Robbins.

Inventor
Horace T. Robbins

United States Patent Office.

HORACE T. ROBBINS, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 92,472, dated July 13, 1869.

IMPROVEMENT IN UMBRELLA-FRAMES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HORACE T. ROBBINS, of Boston, county of Suffolk, and State of Massachusetts, have invented a new and useful Improvement in Umbrella-Frames; 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, making a part of this specification, in which—

Figure 1 is a side view of an umbrella-frame having my improvement applied to it.

Figure 2 is a view of one of the ribs detached from the frame.

Figure 3 is a view of the same taken at right angles to that of fig. 2.

Figure 4 is a side view of the support detached from the rib.

Figure 5 is an end view of the same.

Similar letters refer to like parts in the different drawings.

a is the handle.

b, the runner.

c, the spring, to hold the runner in place when the umbrella is open.

d, the spring, to hold the runner in place when the umbrella is closed.

e, the notch-plate.

f, the stretchers.

g, the ribs.

h, the rib-joint plates.

i, the supports.

The nature of my invention consists in strengthening the frames of umbrellas and parasols, by providing

the ribs with supports or stops, to rest against the stretchers when the umbrella is open, in addition to the joints which connect the stretchers to the ribs.

This addition greatly increases the rigidity of the ribs, and prevents them from bending down between the notch-plate and the rib-joint plate, when there is an upward pressure on the opposite end, or, which is the same thing, when the wind is blowing against the inside of the umbrella.

I construct my improved umbrella-frame in any of the usual forms, and in order to give greater rigidity to the ribs, I apply supports, *i*, to bear against the stretchers. Usually, I connect these supports to the ribs by pressure, in the same way as the rib-joint plate is attached. They may, however, be made so as to be turned round on the rib, out of the way when the umbrella is being repaired, or they may be made on the same piece with the rib-joint plate; or they may be attached to the stretchers, or the end of the stretchers, next the ribs, may be made in a form to lie back against the ribs, above the rib-joint plate.

The last two arrangements, however, are objectionable, as they do not allow the ribs to lie snugly against the handle when the umbrella is closed.

I claim the supports *i*, in combination with the ribs *g* and stretchers *f*, for the purpose of strengthening the frames of umbrellas and parasols, substantially as described.

HORACE T. ROBBINS.

Witnesses:

EDWIN ALDEN ALGER,
HENRY B. TERRY.