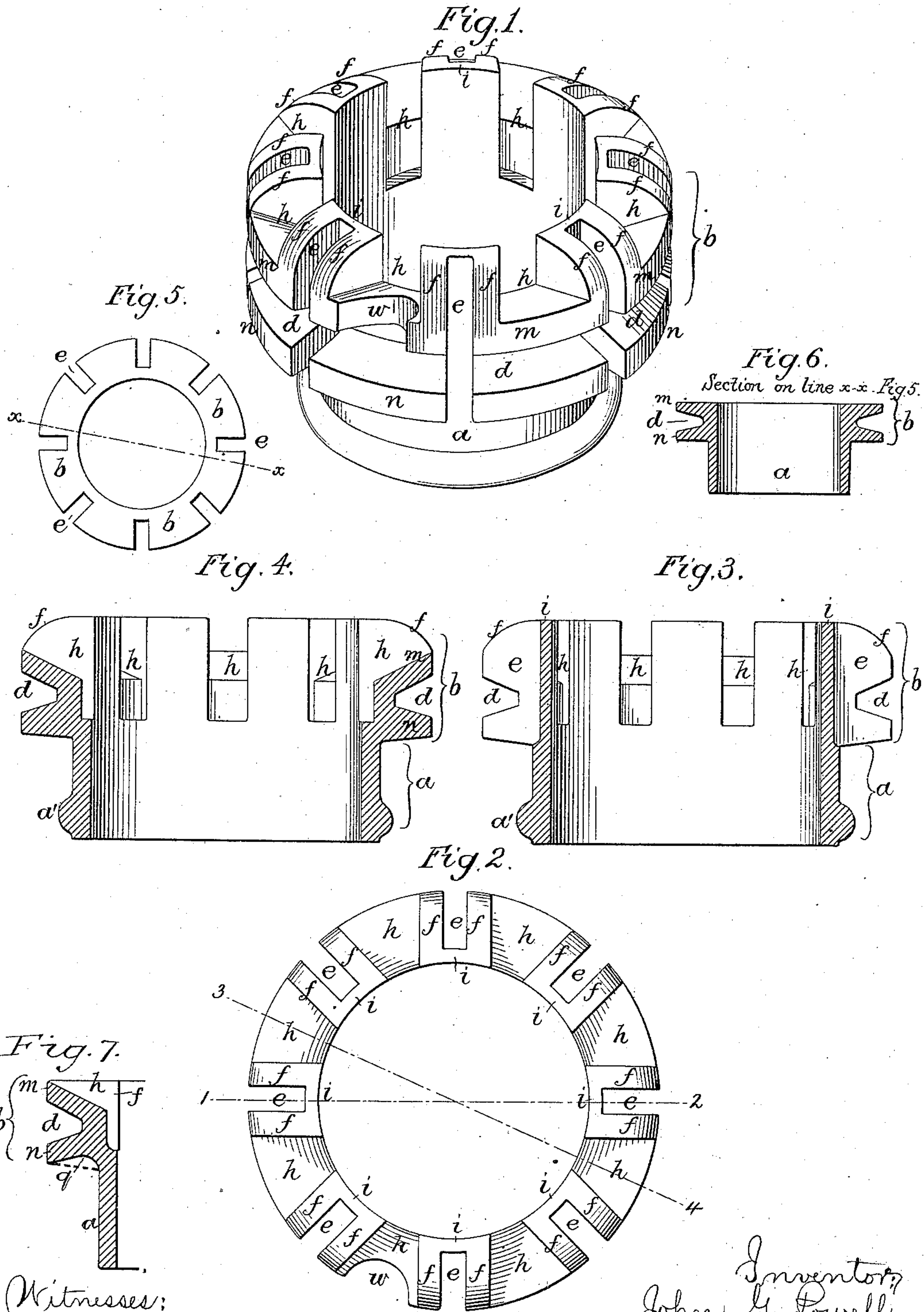


(No Model.)

J. G. POWELL.
UMBRELLA NOTCH AND RUNNER.

No. 314,394.

Patented Mar. 24, 1885.



Witnesses:
John E. Parker
James F. Jobins

Inventor:
John G. Powell
by his Attorneys
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UNITED STATES PATENT OFFICE.

JOHN G. POWELL, OF PHILADELPHIA, PENNSYLVANIA.

UMBRELLA NOTCH AND RUNNER.

SPECIFICATION forming part of Letters Patent No. 314,394, dated March 24, 1885.

Application filed November 28, 1883. Renewed January 19, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. POWELL, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Umbrella Notches and Runners, of which the following is a specification.

My invention consists of the cheap cast-metal-finished notches and runners described hereinafter, as economical substitutes for the more costly notches and runners now used in manufacturing umbrellas and parasols.

In the accompanying drawings, Figure 1 is an exaggerated perspective view of my improved notch for umbrellas and parasols; Fig. 2, a plan view; Fig. 3, a section on the line 1 2, Fig. 2; Fig. 4, a section on the line 3 4, Fig. 2; Figs. 5 and 6, a plan view and vertical section of an ordinary notch, and Fig. 7 a modification.

In manufacturing ordinary notches for umbrellas and parasols the plan has been to first make crude castings of brass, each casting comprising a cylindrical portion, *a*, and a rim, *b*, (shown in Fig. 6,) then to turn the circumferential groove *d* in the rim, and finally to cut the radial slots *e* in the same by a milling-tool.

I have found that a completely-finished and cheap notch can be made by casting in a metal mold an alloy which will melt at a comparatively low temperature, but which is as hard or nearly as hard as brass when cool.

It should be here understood that I do not desire to claim, broadly, in this application a pressure-cast umbrella notch or runner having the usual circumferential groove and radial slots and a mold-finished surface and skin, as this is described and claimed in an application filed by me November 30, 1883, Serial No. 113,168, this application having now been divided, and a separate application for a patent having been forwarded for the said notch or runner.

My present application is restricted to a notch or runner of this class constructed in the peculiar manner which I will proceed to describe, the main object being to economize material without any loss of strength. The notch has the hollow cylindrical portion *a*, which is comparatively thin and light, as it is strengthened by the annular rib *a'*. There are radial slots *e* in the rim *b*, as usual, for

receiving the ends of the umbrella-ribs; but each slot is bounded laterally by ribs or cheek-pieces *f f'*, and there are as many recesses or cavities *h* as there are radial slots, a saving of metal being due to these cavities, and this saving is effected without any reduction of effective strength, for the cheek-pieces are sufficiently strong to resist any lateral strain to which they may be subjected. The two cheek-pieces of each slot are preferably connected together by a web, *i*; but this may be so light as to contribute but little to the weight of the notch. In the rim of the notch there is the usual circumferential groove, *d*, for receiving the wire by which the ribs of the umbrella are pivoted to the notch, and there is the recess *w*, Fig. 1, which receives the twisted ends of the wire, as in common notches. The circumferential groove is bounded above by the slotted flange *m* and below by the slotted flange *n*, the upper flange being light, but strengthened by the cheek-pieces. Economy of metal, however, is due mainly to the cavities *h*. While this economy may appear to be trifling when viewed in connection with a single notch, it becomes an important matter when we bear in mind the large number of notches demanded by the umbrella trade. A still lighter notch is shown in Fig. 7, the cheek-pieces *f* being less prominent in this instance than in the notches described above. The flange *n* of the rim, moreover, is recessed on the under side at *q*, cheek-pieces or ribs extending, if desired, across this recess.

It will be understood that wherever I have introduced the word "notch" in this specification it is intended to include a "runner," which differs from a notch only in the length of the cylindrical portion *a*.

I claim as my invention—

A cast-metal notch in which each radial slot in the upper portion is bounded laterally by cheek-pieces *f f'*, and in which there are as many cavities *h* as there are radial slots, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN G. POWELL.

Witnesses:

JOHN E. PARKER,
HARRY SMITH.