W. E. ENGELHARDT.

Cane-Umbrella.

No. 168,628. Patented Oct. 11, 1875.

Fig. 1.

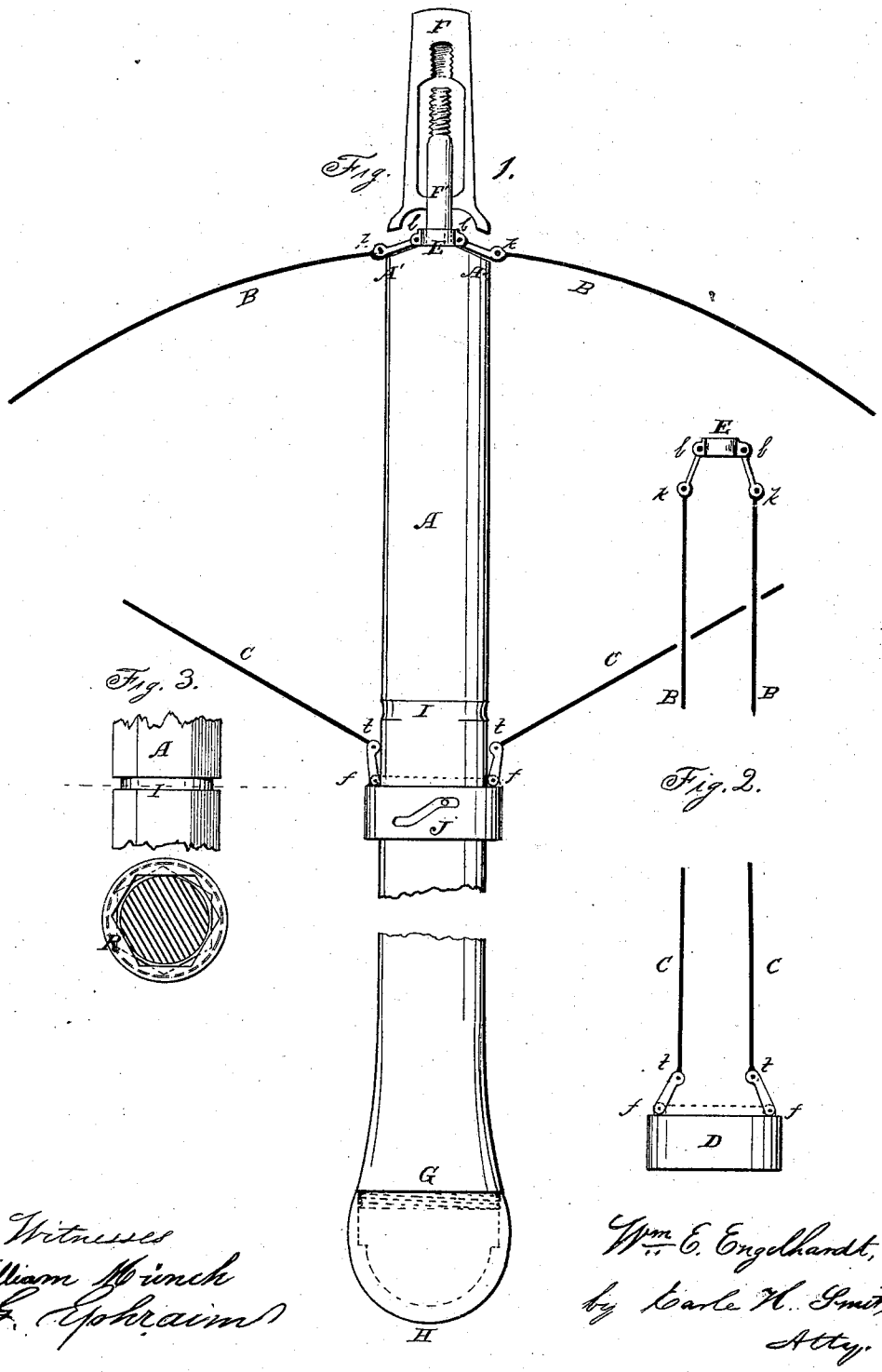

Fig. 3.

Fig. 2.

Witnesses
William Minch
L. Ephraim

Wm. E. Engelhardt,
by Earle M. Smith
Atty.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM E. ENGELHARDT, OF COLLEGE POINT, NEW YORK.

IMPROVEMENT IN CANE-UMBRELLAS.

Specification forming part of Letters Patent No. **168,628**, dated October 11, 1875; application filed September 1, 1875.

To all whom it may concern:

Be it known that I, WILLIAM E. ENGELHARDT, of College Point, county of Queens and State of New York, have invented, made, and applied to use certain new and useful Improvements in Cane-Umbrellas, whereof the following is a specification:

My said invention relates to a cane-umbrella, the staff of which is hollow to receive the webbing and frame when not in use, and embraces the following novel features: The ribs, in addition to being jointed to the staff, have an extra joint to allow the frame to be collapsed for insertion in the staff. For the same purpose the braces also have an extra joint near their point of attachment to the runner. The end ferrule is removable, and exposes a shoulder affording support to the "wheel" and that part of the ribs between the collapsible and working joints, which wheel and attached parts are held to said shoulder by said ferrule when replaced. The mouth of the cavity in the staff is enlarged to give room for the runner and the extra joint of the braces. The staff has an annular depression for engaging a suitable catch on the runner.

Referring to the annexed drawing, Figure 1 shows position of parts of frame when open or expanded. Fig. 2 shows said parts when the frame is collapsed. Fig. 3 is a modification of catch for the runner.

A is the staff; B, the ribs of the frame; C, the braces; D or J, the runner; E, the wheel to which the ribs are jointed; F, the end ferrule; F′, the stem receiving it. Two ribs and two braces are shown, which serve to illustrate the construction of all, be the number more or less. G is the mouth of the cavity within the staff. The position of the runner and jointed ribs, when the frame is inserted in the staff, is shown in Fig. 2. H is a cap for covering the mouth G to complete the staff for use as a cane.

To form the umbrella, the frame is withdrawn from the staff, the end ferrule is unscrewed, the runner is slipped on the staff, and the wheel placed over the stem F′ of the staff, and the end ferrule F replaced and screwed down, when the lower edge clamps the wheel and attached parts fast to the shoulder A′, between the joints *l* and *k*, leaving the main part of the ribs—*i. e.*, beyond the joints—free to vibrate in opening and closing the umbrella.

When opened, by pushing up the runner in the usual way, a suitable catch on the runner should engage in the depression I in the staff and hold it up. For the purposes of such a catch, the runner in Fig. 1 has a loose oversleeve, J, with a cam-slot working on a pin made fast in the runner. When the oversleeve is turned or rotated the cam-slot will force it against the short sections of the braces between the joints *f* and *t*, and press the joint *t* into the depression I. A contrary movement of the oversleeve releases the runner.

In the modified form of catch in Fig. 3, the staff immediately below the depression I is made polygonal, and the runner has an oversleeve, R, with a rim polygonal inside to correspond, and when this rim reaches, and is even with, the depression I, the ring R is slightly rotated in the depression I, so as to bring the sides of the polygonal rim across the corners of the polygonal staff, when said corners will support the runner.

The above construction may be varied within the scope of the invention.

I claim as my invention—

1. In combination with the staff A, having the stem F′ and shoulders A′ A′, the ribs having short sections between the collapsing-joints *k l*, substantially as described and shown.

2. In combination with the staff A, constructed, substantially as described, with stem F′ and shoulders A′ A′, the removable end ferrule F.

3. The oversleeve R, having a polygonal rim, in combination with a polygonal staff having a depression, I, substantially as and for the purpose set forth.

WM. E. ENGELHARDT.

Witnesses:
JAKOB KOERBER,
CHARLES SCHULTZ.