W. C. MACOMBER.

Fliers for Speeders and Fly-Frames.

No. 200,321. Patented Feb. 12, 1878.

Fig. 1.

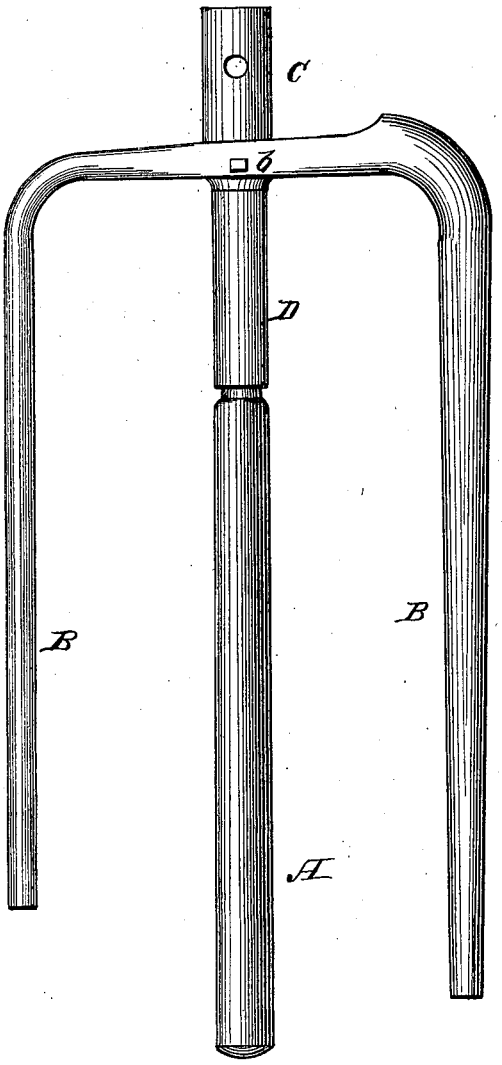
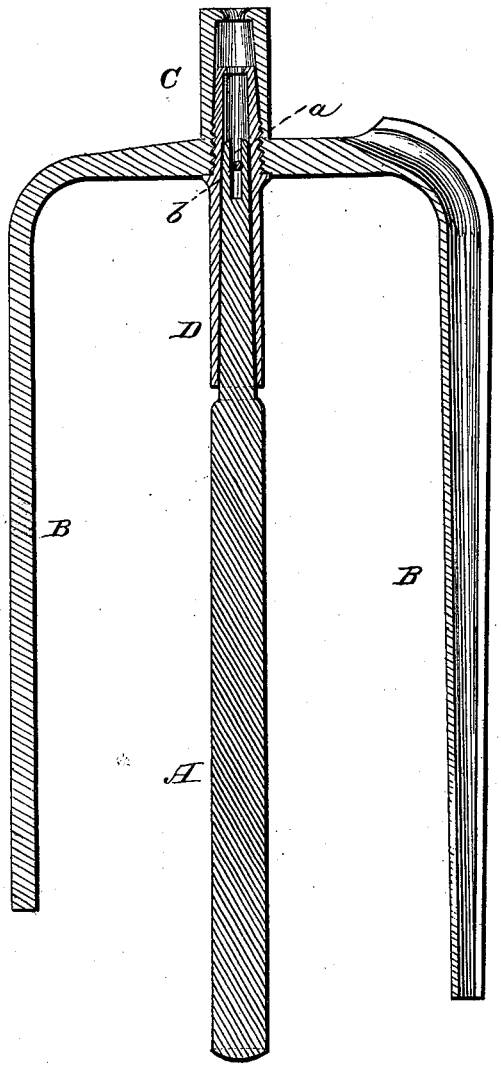


Fig. 2.



Witnesses:

P. Dieterich.

Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM C. MACOMBER, OF BALTIC, CONNECTICUT.

IMPROVEMENT IN FLIERS FOR SPEEDERS AND FLY-FRAMES.

Specification forming part of Letters Patent No. **200,321**, dated February 12, 1878; application filed January 2, 1878.

To all whom it may concern:

Be it known that I, WM. C. MACOMBER, of Baltic, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Fliers for Speeders and Fly-Frames; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to fliers for speeders and fly-frames; and it consists in providing the flier with a tube for the purpose of giving a longer bearing on the spindle, and thereby preventing the flier from flying off when running at moderate speed, and catching in the other fliers while running, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a side elevation of a flier and spindle, with the improvement applied thereto. Fig. 2 is a central vertical section of the same.

A represents the spindle, and B is the flier, with nose C. D is the tube, which constitutes the improvement.

The nose C of the flier is usually placed directly on the end of the spindle; but in the present case the nose is provided with interior screw-threads, and the tube D is at its upper end provided with exterior screw-threads and screwed into the nose C, so as to remain firmly therein. A pin, *b*, is then passed through the top of the flier and the tube D, and riveted fast, thereby preventing the tube from turning back.

The upper end of the spindle A has a fork or slot, *a*, which, when the flier is put on the top of the spindle, straddles the pin *b* and passes up on each side thereof, and thereby prevents the flier from turning on the spindle.

By the addition of the tube D a longer bearing is formed for the flier on the spindle, and the flier may be allowed to run at a greatly-increased rate of speed without any danger of flying off.

Having thus fully described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

The tube D, provided at one end with exterior screw-threads, in combination with the spindle A, having slot *a*, the flier B, with nose C, having interior screw-threads, and the pin *b*, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WM. C. MACOMBER.

Witnesses:

CHARLES MACOMBER,

WM. D. MACOMBER.