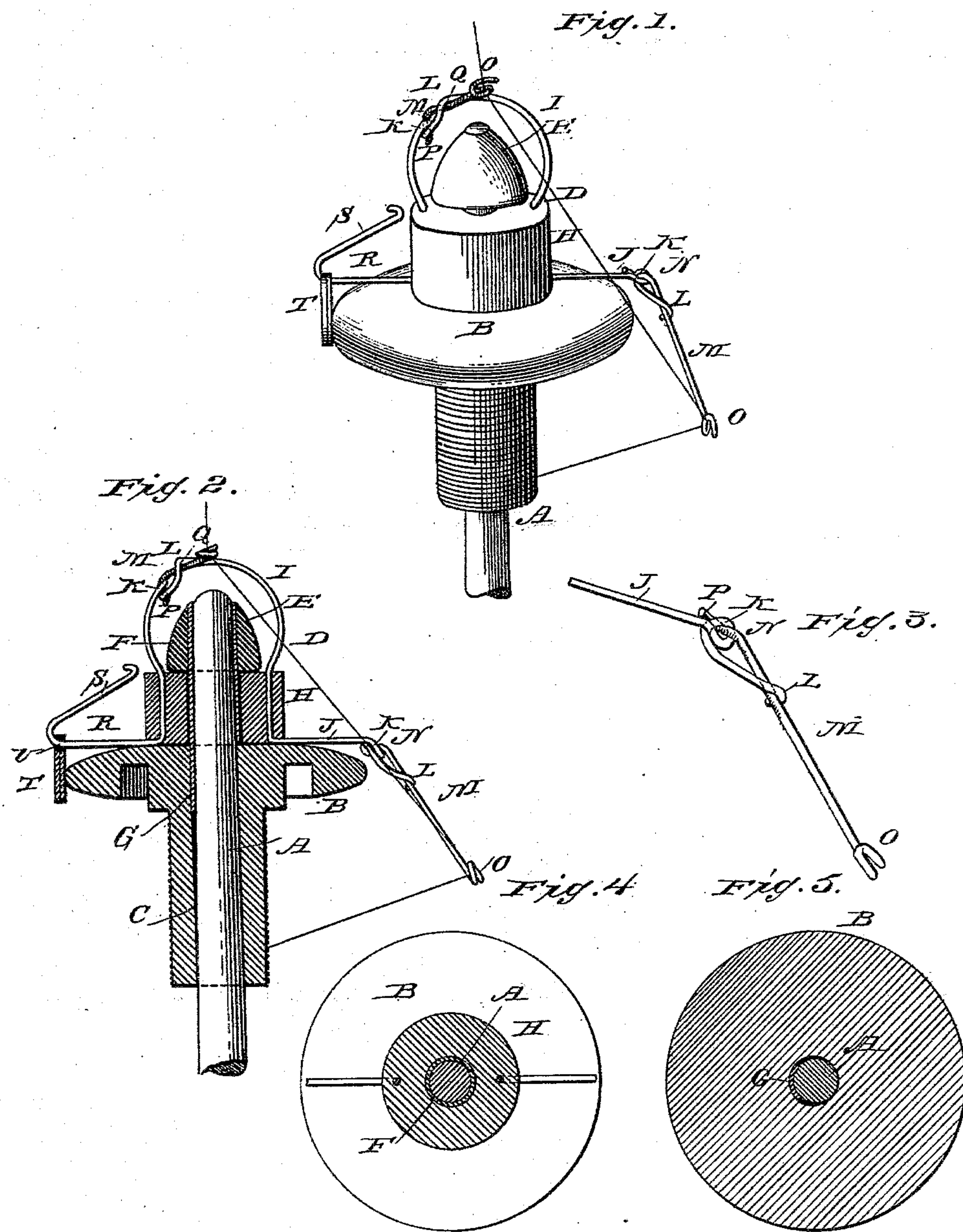


(No Model.)

C. E. GLEASON.  
FLIER FOR SPINNING MACHINES.

No. 288,052.

Patented Nov. 6, 1883.



Attest:  
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Attys:



# UNITED STATES PATENT OFFICE.

CHARLES EVERET GLEASON, OF WILLIMANTIC, CONNECTICUT.

## FLIER FOR SPINNING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 288,052, dated November 6, 1883.

Application filed March 22, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. GLEASON, a citizen of the United States, residing at Willimantic, in the county of Windham and State of Connecticut, have invented a new and useful Flier for Spinning-Machines, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to fliers for spinning-machines; and it has for its object to provide a simple, durable, inexpensive, and efficient device that can be arranged in position on the spindle with superior convenience, and in which the draft of the flier can be easily regulated.

In the drawings, Figure 1 is a perspective view, showing my improved flier in position on the spindle. Fig. 2 is a vertical sectional view of the same, the spindle and wire arms or frame being in elevation. Fig. 3 is a detail perspective view, illustrating the manner of securing the eyelets to the arm J. Fig. 4 is a detail horizontal sectional view taken through the hub of the flier and its bearing. Fig. 5 is a detail horizontal sectional view taken through the extension of the bearing of the hub of the flier, by which the latter is secured in position on the spindle.

Referring to the drawings, A designates the spindle; B, the bobbin, which is provided with the usual central perforation, C, to receive the spindle; and D is the flier. The latter comprises a head portion, E, having a tubular cylindrical extension, F, that is provided with a projecting flange, G, at its end, which flange corresponds in curvature to the said cylindrical extension F. H is the hub of the flier, which has its bearing on the cylindrical extension F, and is retained in position by the head E. In adjusting the flier on the spindle the flange G is inserted in the end of the bobbin B, and the latter is then placed on the spindle, which will project through the central perforation of the bobbin and through the tubular projection or extension F, and serve to retain the flier in position by clamping the flange G in the perforation of the bobbin. The flier is thus secured in position, and can be readily and conveniently removed when desired.

From the hub H a wire eyelet-frame, I, is arched over the head portion E, and another

wire arm or frame, J, for holding the lower eyelet, projects laterally from the said hub. These frames I and J are preferably formed of a single piece of wire, as shown. A simple eye, K, is formed at the proper place, in the wire of which the frame is constructed, and at some distance from the eye a shoulder, L, is formed by bending the said wire. A separable and detachable eyelet-piece, M, comprising a stem, N, and an eyelet on the end O thereof, is then secured to the said permanent frames by passing its shank or stem N through the eye K and turning up its end P, to obviate accidental disengagement of the said stem with the eye, while the stem also engages the shoulder L, as shown at Q, to brace the eyelet-piece M in position. When the latter becomes worn at the eyelet end, it can be readily disengaged from the eye of the frame and a new piece be substituted.

R designates an arm, that projects laterally from the hub H at its side opposite from the frame J, and is preferably provided with an upturned or hook end, S. On this arm weights T are adapted to be slipped by means of their eyes or perforations U, which weights will overbalance the weight of the frame J on the opposite side of the hub, to equalize the draft of the flier. When these weights are removed, the weight of the frame J will make the draft of the flier harder on that side, so that its motion will be slower, and the draft can be regulated and made as hard as desired or required by slipping the requisite number of weights on the arm R. By means of this regulating arrangement but one flier is necessary, where, under ordinary circumstances, different sizes would have to be used to secure the same end.

The operation and advantages of my invention are obvious, and its convenient adjustment of parts and regulation of draft will be appreciated by those skilled in the art to which it appertains.

I claim as my invention—

1. The combination of a bobbin having a central perforation, a bearing-piece for the flier, having a head and a tubular cylindrical portion, provided with a flange arranged at its end, and of a corresponding curvature, said flange being adapted to be received into the end of the perforation of the bobbin, a flier



journaled on the said cylindrical portion, and  
 a spindle arranged to pass through the bobbin  
 and into the tubular portion of the bearing-  
 piece, as set forth.

- 5 2. The combination of a flier-hub, having an  
 eyelet-frame extending from its side, an arm  
 or projection extending laterally from the hub  
 at the side opposite to the eyelet-frame, and  
 provided with a turned-up end, and the re-

movable weights, having perforations arranged to  
 on the said arm, as set forth.

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

CHARLES EVERET GLEASON.

Witnesses:

HUBER CLARK,

CHARLES N. ANDREW.