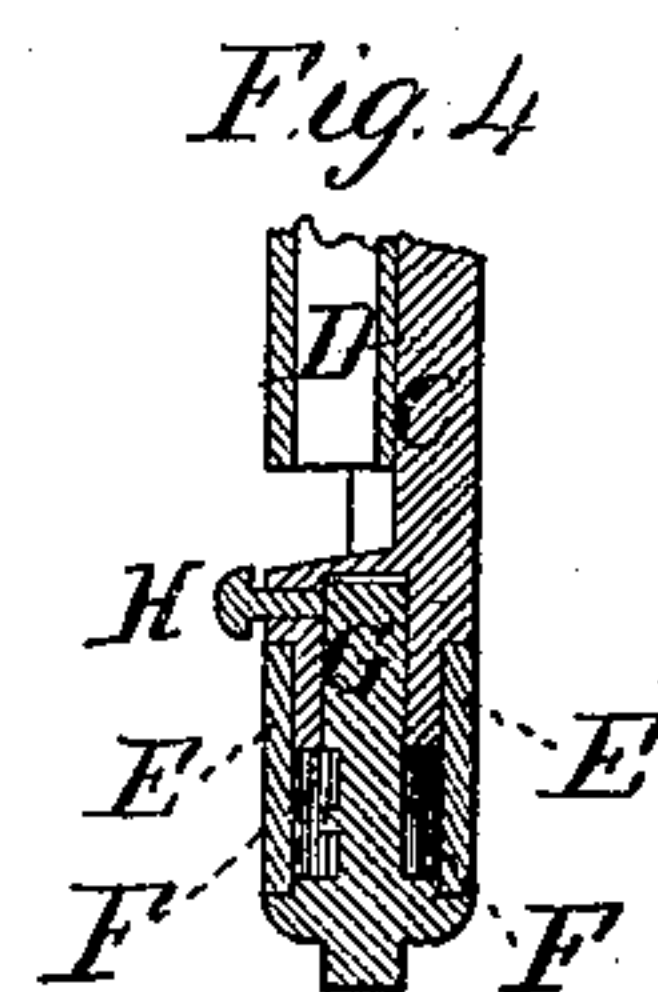
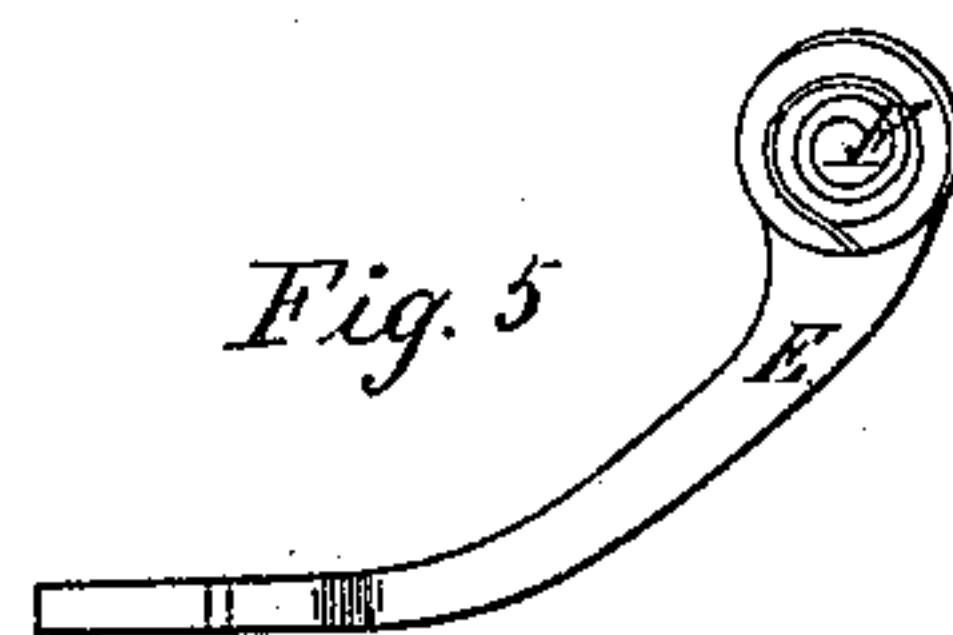
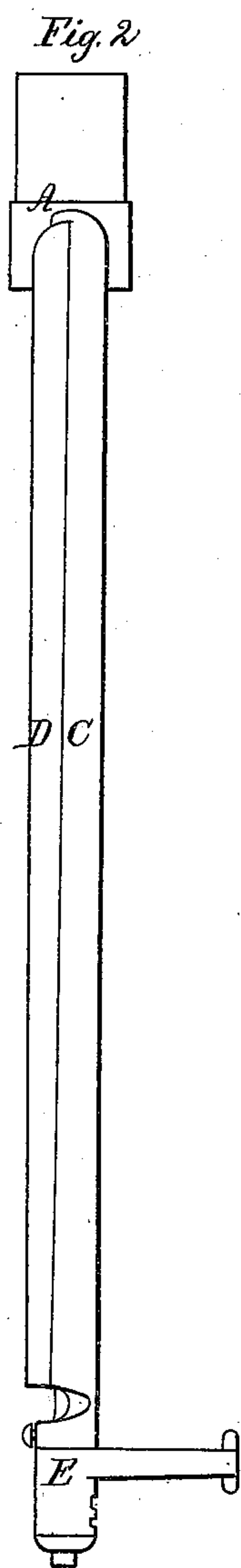
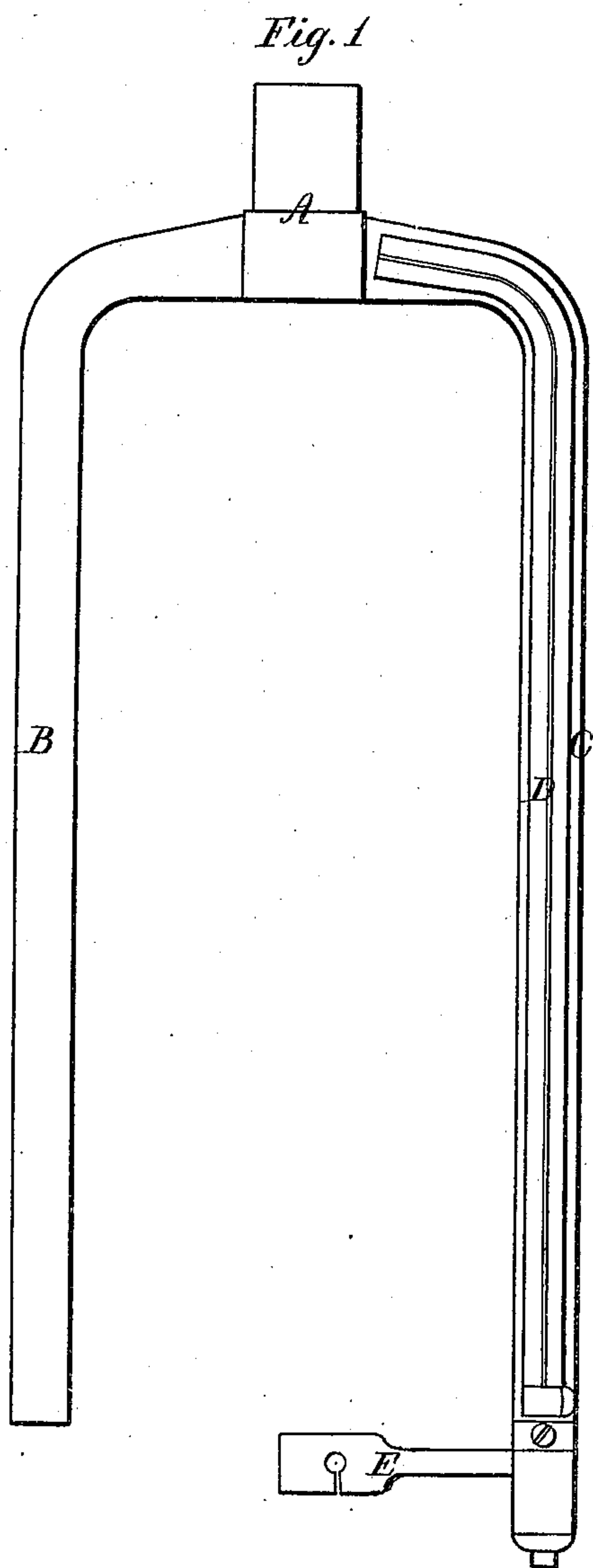


*E. C. Johnson.*  
*Spinning Flyer.*

*N<sup>o</sup> 12,063.*

*Patented Dec. 12, 1854.*



# UNITED STATES PATENT OFFICE.

EDWARD C. JOHNSON, OF LOWELL, MASSACHUSETTS.

## FLIER.

Specification of Letters Patent No. 12,063, dated December 12, 1854.

*To all whom it may concern:*

Be it known that I, EDWARD C. JOHNSON, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in the Fliers used on Fly-Frames or Slubbers; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a front view of the flier with my improvements attached. Fig. 2, is a side view of the same. Fig. 3, is a cross section of the tubular arm of the flier. Fig. 4, is a longitudinal section through the lower part of the tubular arm of the flier. Fig. 5, is a plan of the presser showing how the spiral spring coiled up inside is attached to its barrel. Figs. 6, 7, and 8, are different views of the pin inserted in the bottom of the tubular arm of the flier and to which one end of the spiral spring is attached.

Similar letters of reference indicate corresponding parts in each of the several figures.

A, represents a short tube or nose, by which the flier is fastened to the top of the spindle to a fly frame intended to receive it. There are two arms, B and C extending from this tube A, one of which (B) is solid, the other of which (C) is tubular or hollow. These three parts of the flier—viz: the nose A and the two arms B and C—have heretofore been made of one solid piece of metal, and the arm C, being made tubular throughout its whole length involved the necessity of passing the roving from the nose down through the arm and so out at its bottom, and up again upon the presser arm—thus causing a very indirect draught.

E, Figs. 1, 2, 4 and 5 is the presser, and its use is to press the roving upon the bobbin as it is being wound up. As it is now universally constructed, the presser is attached upon the outside of the tubular arm C, near

its end, and the spring acting upon it is attached to and coiled about the outside of the barrel of the presser. My improvement in this respect is to have one end of a pin G, Fig. 4, inserted in the bottom of the arm C, and to have the spiral spring F coiled about it, and to have both inclosed in the barrel of the presser E, which (E) shall be fitted so as to turn freely upon the end of the arm C.

The pin G, is held in its place by the set screw H. The lower end of the pin is finished with a square head so as to be turned with a wrench, or it may have a round head with a hole in its side, so as to be turned with a pin. The object is to tighten or loosen the spring as may be needed, and when the pin is turned as much as is requisite, it is held in its place by the set screw H. Fig. 7, shows a projection on the side of the pin G, which is received in a slot made in the end of the spiral spring F, thus confining one end of the spring to the pin. The other end is confined to the barrel of the presser in manner shown in Fig. 5. A slot is sawed obliquely in the barrel of the presser and the end of the spring passed through and hooked upon a projection on the outside of the barrel, or, the end of the spring may be pinned to the side of the barrel by a pin passing through both.

Having thus fully described my improvement what I claim as new and desire to secure by Letters Patent is—

I claim the arrangement and combination of the pin G, (fastened in the end of the arm C, of the flier by the set screw H,) in connection with the spiral spring F, in such a manner as to render the presser easily adjustable and so that both the spring and pin shall be contained within the barrel of the presser E, substantially as herein described.

EDWARD C. JOHNSON.

Witnesses:

O. E. CUSHING,  
MILTON BRADLEY.