No. 43,961.

PATENTED AUG. 30, 1864.

J. H. ALDRICH & S. L. PATTEE.

FLIER FOR SPINNING FRAMES.

Fig. 1.

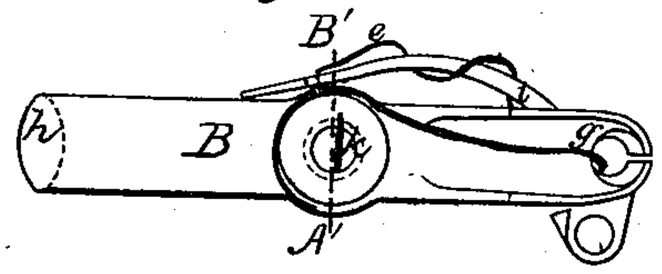


Fig. 2.

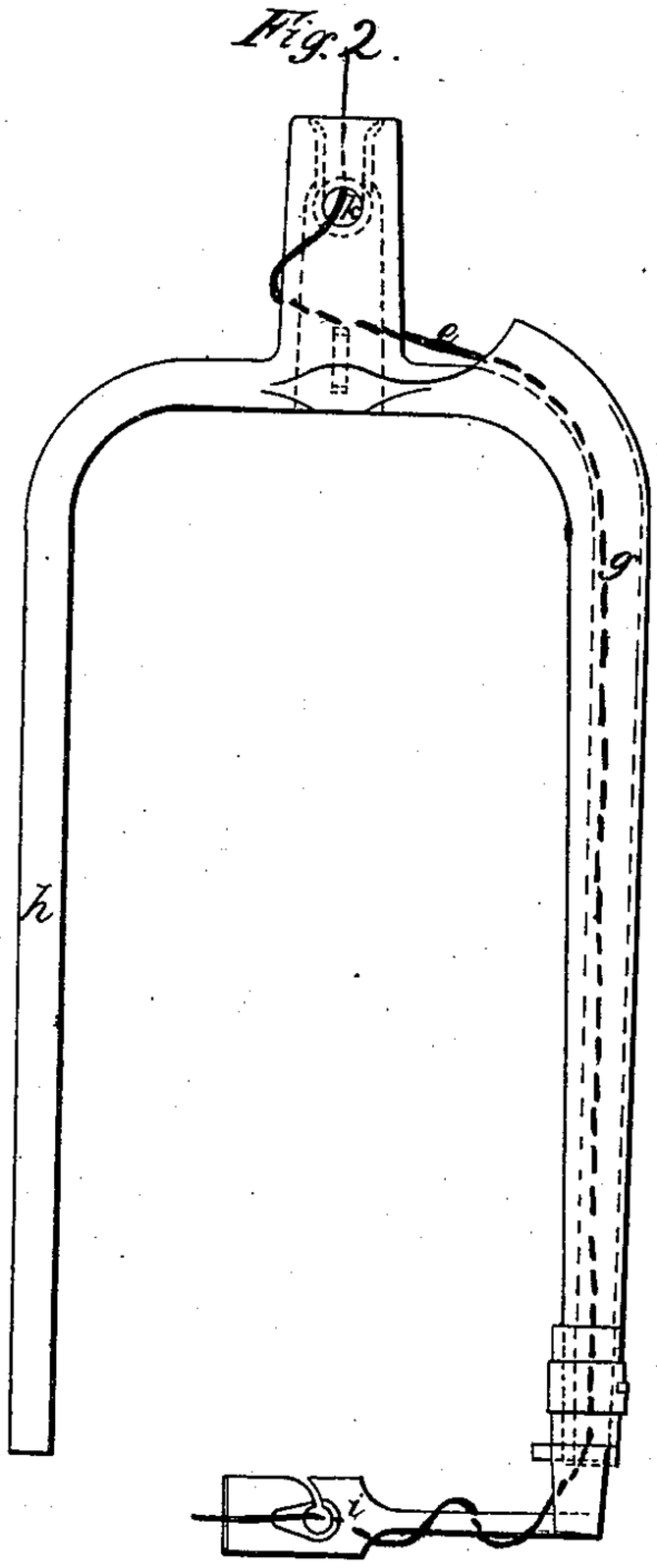


Fig. 3.

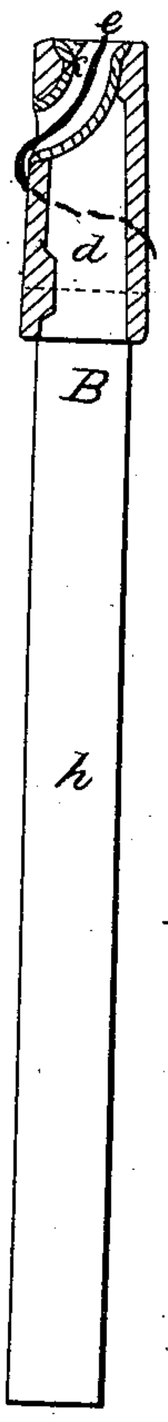
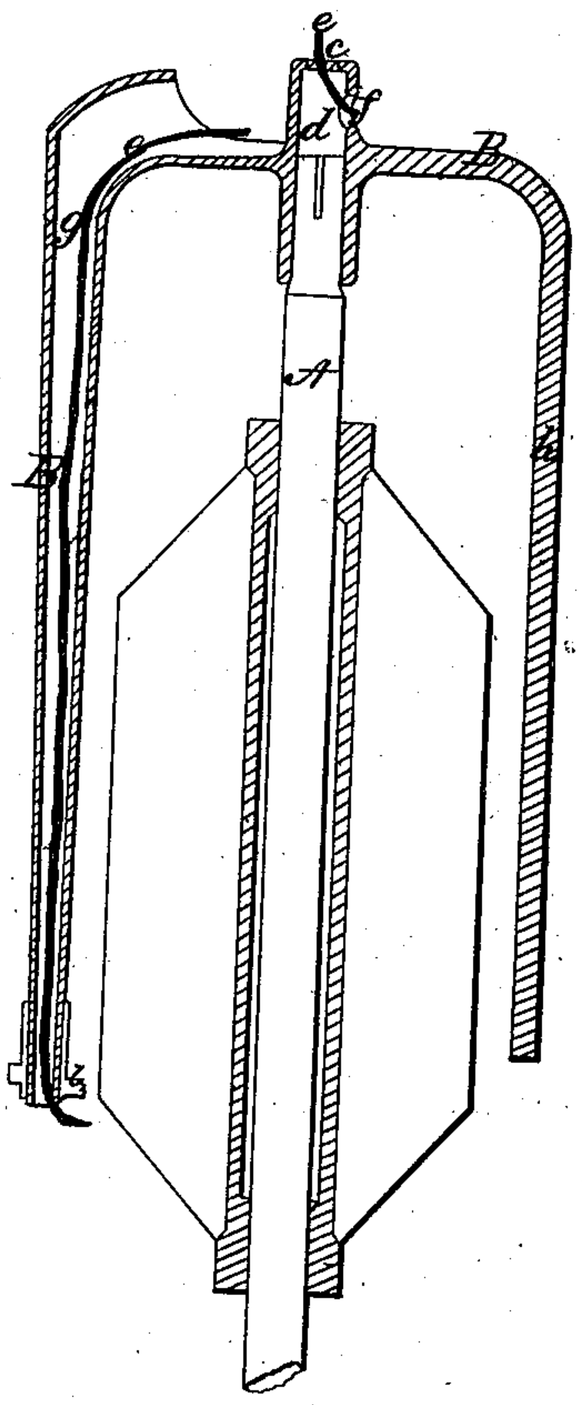


Fig. 4.



Witnesses.
Henry B. Osgood
F.W. Dudley

Inventor.
John H. Aldrich
Samuel L. Pattee

UNITED STATES PATENT OFFICE.

JOHN H. ALDRICH AND S. L. PATTEE, OF NORTHBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN FLIERS FOR SPINNING-FRAMES.

Specification forming part of Letters Patent No. **43,961**, dated August 30, 1864.

To all whom it may concern:

Be it known that we, JOHN H. ALDRICH and S. L. PATTEE, both of Northbridge, in the county of Worcester and State of Massachusetts, have invented an improvement in fliers for fly-frames, or any frames where the fliers are removed for doffing; and we hereby declare that the following is a correct description of the same, reference being had to the annexed drawings, making part of this specification, and to the letters of reference thereon.

Figure 1 is a plan of our improved flier. Fig. 2 is an elevation of the same. Fig. 3 is a section at line A′ B′. Fig. 4 is a section of a spindle and flier as commonly used for fly-f ames, one-half size.

The nature of our invention consists in providing a curved tube or passage for the roving through the upper part of the flier distinct from the socket by which the flier is fitted to the upper part of the spindle. The ordinary way is as shown by Fig. 4. The socket fits the spindle so as to leave a vacancy in the socket over the top of the spindle. A central hole, *c*, is made in the top of the flier leading into the socket *d* for the roving *e* to enter, and another hole, *f*, for its exit, from which it is passed around the head of the flier, through the tubular arm *g*, around the the presser-arm to the bobbin. A serious trouble arises in this from the lint or dirt which is left in the socket by the passage of the roving through it. It accumulates there sometimes, causing the flier to fly off when running at high speeds, and often getting between the spindle and socket, preventing the flier from being placed in the position which it was made to occupy, so that time must be lost in cleaning the sockets, or the flier is liable to run out of balance. Another objection is in piecing up, the difficulty of passing the roving down through the top hole and out the side hole of the flier. There being nothing to guide the roving, it requires skill in the operator and is often attended with delay. Our object is to obviate, at small expense, this liability of the accumulation of dirt in the socket of the flier, and at same time provide a smooth passage to guide the roving through the upper part of the flier.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation by explaining the accompanying drawings:

In Fig. 4, is the spindle A; B, the flier; *d*, the socket; *g*, the tubular arm; *k*, the other arm of the flier; *i*, the presser; *e*, the roving; *c* and *f*, the holes to the socket as usually made for the passage of the roving.

In Figs. 1, 2, and 3, *k* represents our continuous passage for the roving, and which is constructed as follows: A piece of brass tubing is bent to the required form, and after being placed in the desired position is secured firmly at the ends; but the curved passage may be obtained by casting in composition or other metal, or, where malleable iron fliers are used, the curved passage can be cored out in casting.

Having thus described its construction and operation, what we claim as our invention, and desire to secure by Letters Patent, is—

A flier for fly-frames or other frames in which the flier is removed in dofling, having a curved passage for the roving distinct from the socket, essentially as above described.

JOHN H. ALDRICH.
SAMUEL L. PATTEE.

Witnesses:
HENRY B. OSGOOD,
P. W. DUDLEY.