No. 652,306. Patented June 26, 1900.

J. WEBER.

SPINNING FLIER.

(Application filed Nov. 17, 1899.)

(No Model.)

Fig. 1

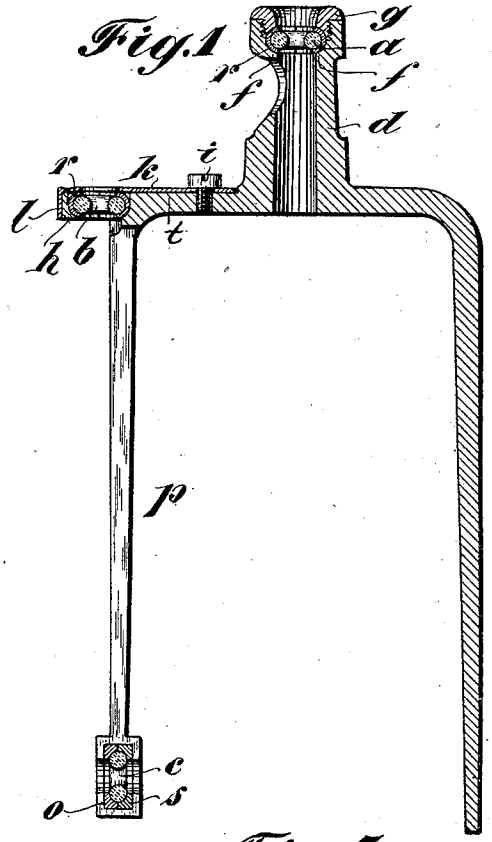


Fig. 2

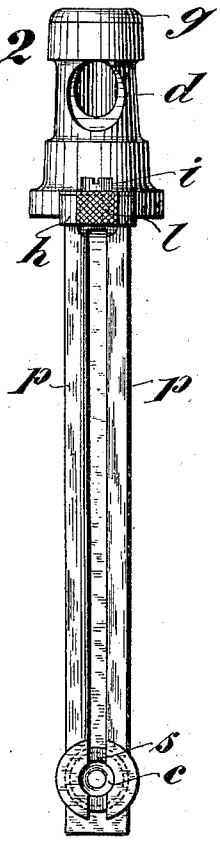
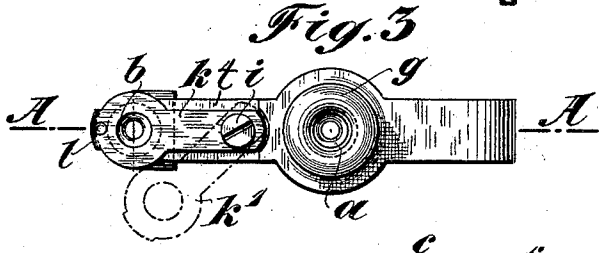


Fig. 3



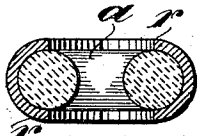
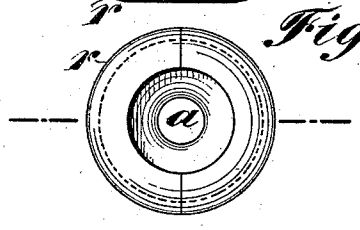


Fig. 4



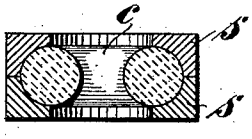
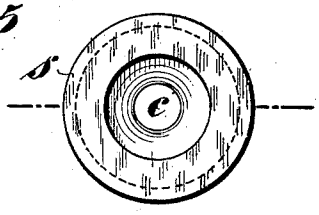


Fig. 5



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHANN WEBER, OF USTER, SWITZERLAND.

SPINNING-FLIER.

SPECIFICATION forming part of Letters Patent No. 652,306, dated June 26, 1900.

Application filed November 17, 1899. Serial No. 737,359. (No model.)

To all whom it may concern:

Be it known that I, JOHANN WEBER, a citizen of the Republic of Switzerland, residing at Uster, Switzerland, have invented new and useful Improvements in Spinning-Fliers, (for which I filed applications in Switzerland on the 21st of April, 1899, No. 20,981; in France on the 12th of May, 1899, No. 276,729; in Italy on the 12th of May, 1899, R. A. Vol. CXVI, No. 153; in Belgium on the 12th of May, 1899, No. 111,980; in Great Britain on the 17th of May, 1899, No. 10,377; in Austria on the 19th of May 1899, and in Hungary on the 20th of May, 1899, No. 7,666,) of which the following is a specification.

The present invention has reference to certain new and useful improvements in fliers for spindles for textile purposes; and it relates more especially to means for securing in their seats the rings which guide the thread while being wound upon the spindle.

In the flier now in use the rings are secured in their seats by means of sealing-wax or a like unyielding securing medium. If such a guide-frame is accidentally dropped, the rings, which are generally made of glass, are sure to break and must be removed and exchanged for new ones, an operation which takes up considerable time. Another disadvantage connected with the old-style guides is that the thread always running over the same portion of the ring soon cuts a groove into the ring and makes it unfit for further use.

The object of the present invention now is to do away with these disadvantages and to provide means whereby the rings are secured in their seats in the frame in such a manner that they are not likely to break upon the frame being dropped, that they readily can be replaced by new ones in case of accident, and that they can easily be shifted around in their seats for offering a new running-surface to the thread.

According to my invention the rings, which may be of glass, hardened steel, or other desirable material, are placed in suitably-worked-out recesses in the flier-frame and are retained therein by means of easily-unlocked securing devices. I also surround the rings with a mantle of soft or resilient or even unelastic material, which mantle greatly facilitates the handling of the rings in altering their position in the seats or in removing them. The rings must necessarily have a smooth surface, so as to offer the least resistance to the thread, and it is not easy to handle them unless they are provided with the referred-to mantle.

In order to make my invention more readily understood, I have illustrated it on the accompanying sheet of drawings, of which—

Figure 1 shows a sectional elevation of such an improved flier on line A A of Fig. 3. Fig. 2 is a side elevation, and Fig. 3 a plan view, of the flier. Figs. 4 and 5 are sectional elevations and side views of two modifications of mantles with the guide-rings.

The flier is provided with three rings *a b c*, through which the thread is passed in the usual manner. The guide-ring *a*, through which the thread is introduced into the frame, is arranged within the neck *d* of the frame and rests upon a constricted part or annular shoulder *f*. A nut *g*, screwing into the neck-opening, serves to retain the ring in its position. By unscrewing this nut the ring may be shifted in its seat or may readily be removed to be replaced by a new one. At the junction of one of the arms, extending parallel to the axis of the spindle and the bridge *t*, connecting this arm with the neck *d*, a lug or extension *h* is provided, within which is arranged the guide-ring *b*. A swing-plate *k'*, pivotally secured to the said bridge by means of the screw *i*, serves to ordinarily retain the ring *b* in its seat. If the ring has to be shifted or removed, this plate *k'* is swung sidewise, the screw *i* serving as pivot, and the ring is free to be handled. This opened position of the swing-plate is shown by dotted lines in Fig. 3. The seat for the third guide-ring *c* is provided at the free end of the same frame-arm, which carries the lug *h* and consists of a circular groove *o*, worked out in the enlarged circular end of the frame-arm. In order to facilitate the introduction of the ring *c* into this groove *o*, the frame-arm is split over its entire length, whereby the two halves *p p'* are given elastic properties, so that they can be drawn apart far enough to permit of the ring *c* being inserted.

The guide-rings *a* and *b* are provided with annular mantles *r*, Fig. 4, which are diametrically divided into halves. The guide-ring

c, seated in the groove *o*, is provided with an annular mantle *s*, which is divided into halves rectangularly to the axis of the ring. These mantles are fitted to the seats and only surround the outer part of the respective guide-rings, while the inner surface of the latter, serving as a running-surface for the thread, is of course left uncovered.

What I claim, and desire to secure by Letters Patent, is—

1. In a flier the combination with the frame, of guide-rings, of sectional mantles surrounding said rings, the frame having recesses, the walls of said recesses adapted to engage said mantles, and means for removably retaining said rings in said recesses, substantially as set forth.

2. In a flier, the combination with the frame, of guide-rings, sectional detachable mantles surrounding said rings, the frame having recesses, the walls of said recesses adapted to engage said mantles, and means for removably retaining the guide-rings in said recesses, substantially as set forth.

3. In a flier the combination with the frame and a guiding-ring, of a plate pivoted to the yoke member of the frame and adapted to swing over and project beyond the shoulder of said yoke member, a lug secured to the free end of said swinging plate, said lug having a channel in its side opposite to the said shoulder, said shoulder having a channel opposite to the channel in said lug, the walls of said channels being adapted to securely retain said guide-ring when the said swinging plate is in line with said shoulder, substantially as set forth.

4. In a flier, the combination of a guiding-ring, a sectional mantle surrounding said ring, a frame having one of its arms bifurcated for the greater portion of its length, the sections of said arm having a pair of oppositely-disposed channels, the walls of said channels being arranged to inclose and removably retain said mantle-surrounded ring.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHANN WEBER.

Witnesses:
A. LIEBERKNECHT,
E. BLUM.