

(No Model.)

J. GOOD.
FLIER FOR SPINNING.

No. 500,062.

Patented June 20, 1893.

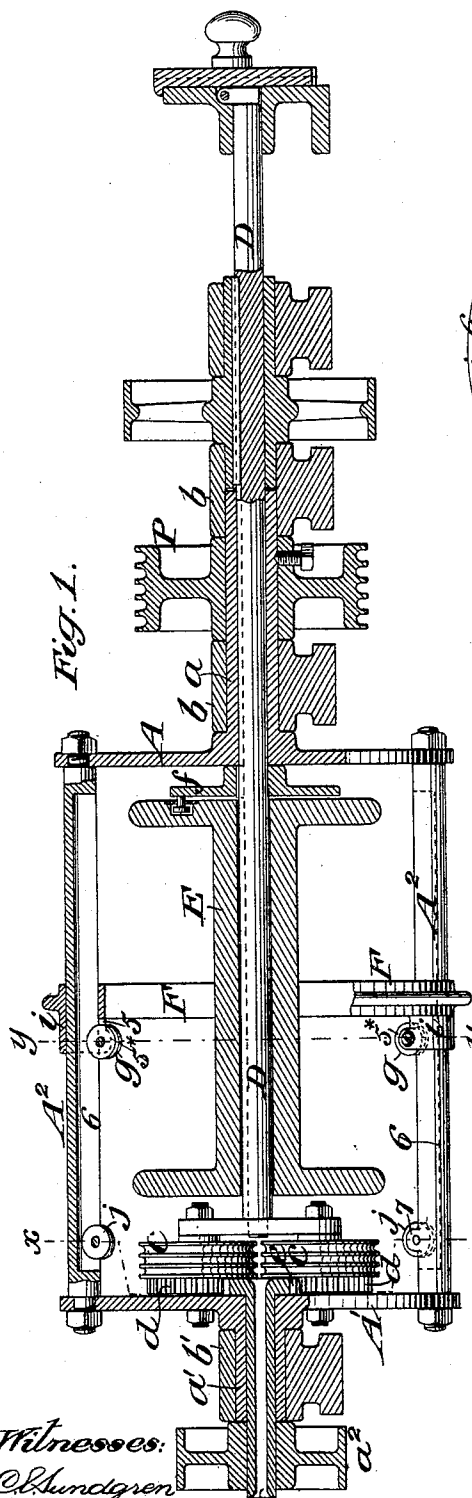


Fig. 1.

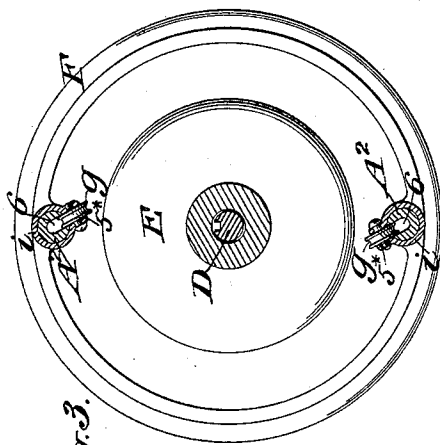


Fig. 3.

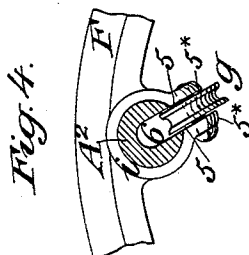


Fig. 4.

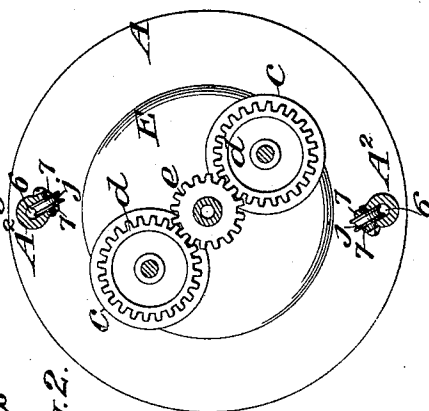


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN GOOD, OF FAR ROCKAWAY, NEW YORK, ASSIGNOR TO THE JOHN GOOD CORDAGE AND MACHINE COMPANY, OF NEW YORK, N. Y., AND JERSEY CITY, NEW JERSEY.

FLIER FOR SPINNING.

SPECIFICATION forming part of Letters Patent No. 500,062, dated June 20, 1893.

Application filed March 23, 1893. Serial No. 467,271. (No model.)

To all whom it may concern:

Be it known that I, JOHN GOOD, of Far Rockaway, in the county of Queens and State of New York, have invented a new and useful Improvement in Fliers for Spinning, of which the following is a specification.

This invention relates to that class of fliers known as closed fliers which are used for spinning rope yarns and twine but it relates particularly to fliers of that class which are so organized that the bobbin which is locked to and turns with the spindle has no movement lengthwise of the flier, the necessary traverse for winding the spun yarn or twine upon the bobbin being obtained by a ring which is fitted to slide on the parallel rods or side bars of the flier and carries upon it a yarn guide over which the yarn or twine passes to the bobbin.

The present improvement consists in the novel combination hereinafter described and claimed in such a flier.

Figure 1 is a longitudinal view partly in section of a flier and spindle embodying my invention. Fig. 2 represents a transverse section in the line *x x* of Fig. 1 viewed from the left. Fig. 3 represents a transverse section in the line *y y* of Fig. 1 viewed from the left. Fig. 4 represents a transverse section on a larger scale of one of the side bars of the flier and a face view of one side of the traversing ring.

Similar letters and numbers of reference designate corresponding parts in all the figures.

A A' are the heads of the flier and A² the parallel rods or side bars connecting the heads. The heads A A' are constructed with journals *a a'* to be supported in suitable bearings *b b'* and the head A is furnished with a driving pulley P. The head A' is represented as furnished with capstans *c c* and capstan gearing *d d e* driven by a pulley *a²* but the capstans, so far as my invention is considered, may be omitted.

D is the spindle which may be fitted to the flier in any suitable manner providing for its independent rotation while locked lengthwise

therein and providing also for the change of the bobbin E which is so locked to the spindle as to turn with it by a dog *f* or fastening of any suitable kind.

F is the traversing ring which surrounds the flier and carries the sheaves *g* which serve as the yarn guides for guiding the yarn or twine on to the bobbin. The said ring is constructed with parallel sockets *i* which are fitted to slide freely on the parallel rods or side bars A² of the flier; and the said sheaves *g* are pivoted into portions of these sockets which project beyond one face of the ring as shown in Fig. 1. The said projecting portions of the sockets are slotted as indicated at 5 in Figs. 1 and 4 to permit the yarn to pass through them on its way over the sheave toward the bobbin, lugs 5* being provided on the said slotted portions to receive the pivots of the sheaves *g*; and the side bars A² of the flier are hollowed out as shown at 6 in Figs. 1 and 4 through the greater part of their length so that the sheaves *g* may be partly received within them. The sheaves *j* which serve the purpose of guiding the yarn or twine from the capstan head or the eye *k* of the flier to one of the traversing guides *g* in the ring F, are partly received within the cavities 6 of the side bars, lugs being provided at the sides of the said cavities as shown at 7 to receive the pivots of said sheaves.

It will be understood that the yarn or twine in passing from the capstan or the eye of the flier over the guide sheaves *j* and *g* passes within the side bars of the flier, and is therein confined and protected so as to be prevented from flying outward and throwing off so much fluff and so far scattering the fluff blown off in running a flier with the yarn exposed along its sides at the very high speed at which I run this flier.

The movement of the traverse ring to and fro along the flier may be produced by any convenient means as for instance by those which are described for that purpose in my Letters Patent Nos. 317,115, 317,116, and 317,117, dated May 5, 1885.

It is obvious that except for the balancing

of the flier the traverse ring F need have but one of its sockets *i* prolonged and need have the sheaves *g* and *j* on one side bar only.

I do not claim a flier with hollow arms but

5 What I claim as my invention is—

The combination with a closed flier having hollow side bars, of a traverse ring with sockets to slide upon said bars and a yarn guide

sheave pivoted within a slot in one of said sockets and entering the cavity in one of said bars, substantially as herein set forth.

JOHN GOOD.

Witnesses:

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