

(No Model.)

H. B. FROST.

FLIER FOR SPINNING FRAMES.

No. 277,262.

Patented May 8, 1883.

Fig 1

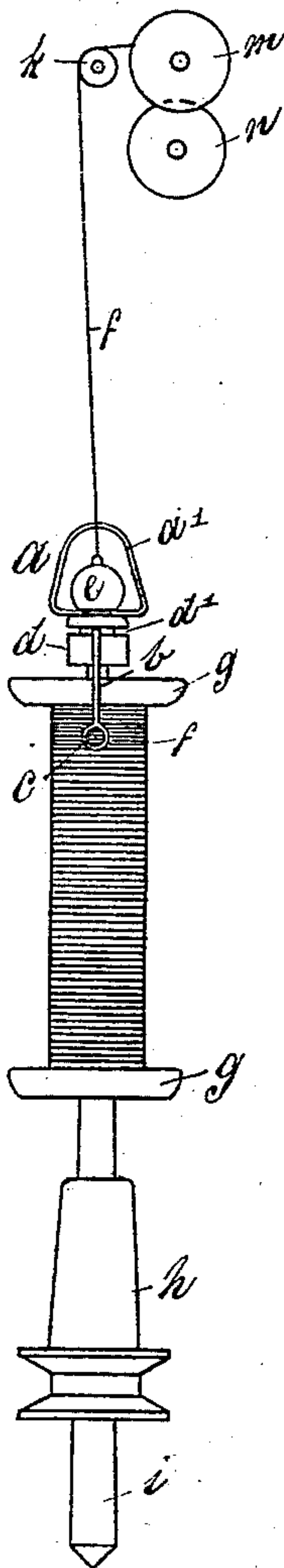


Fig 2

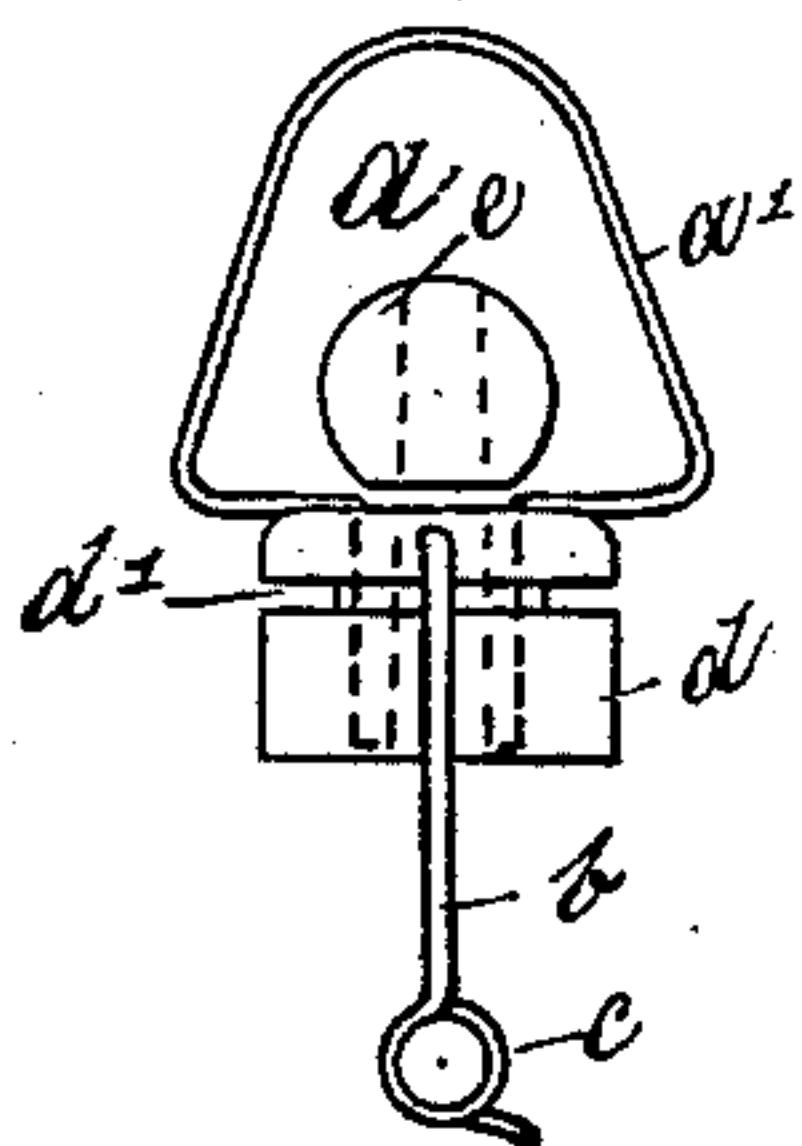


Fig 3

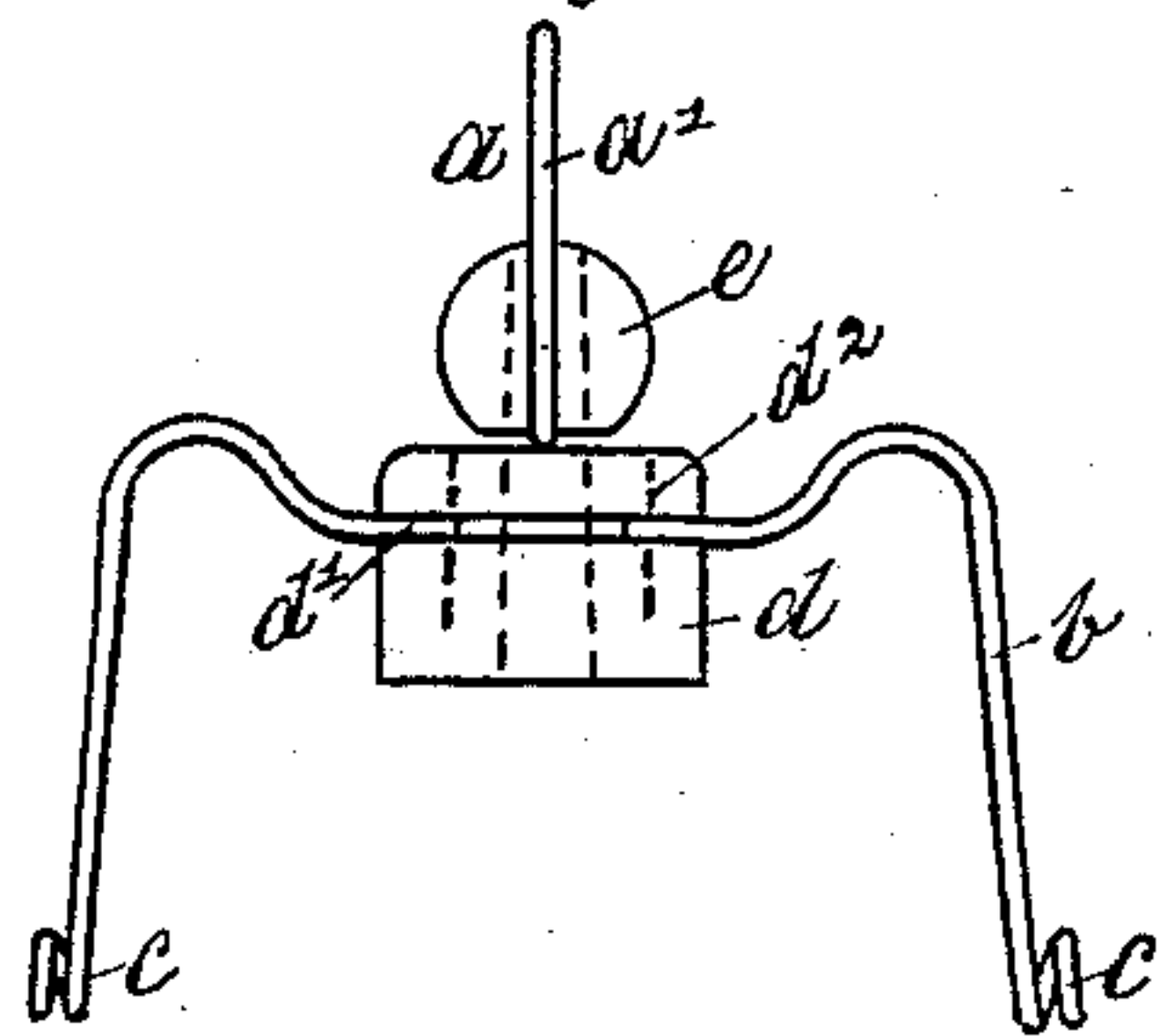


Fig 4

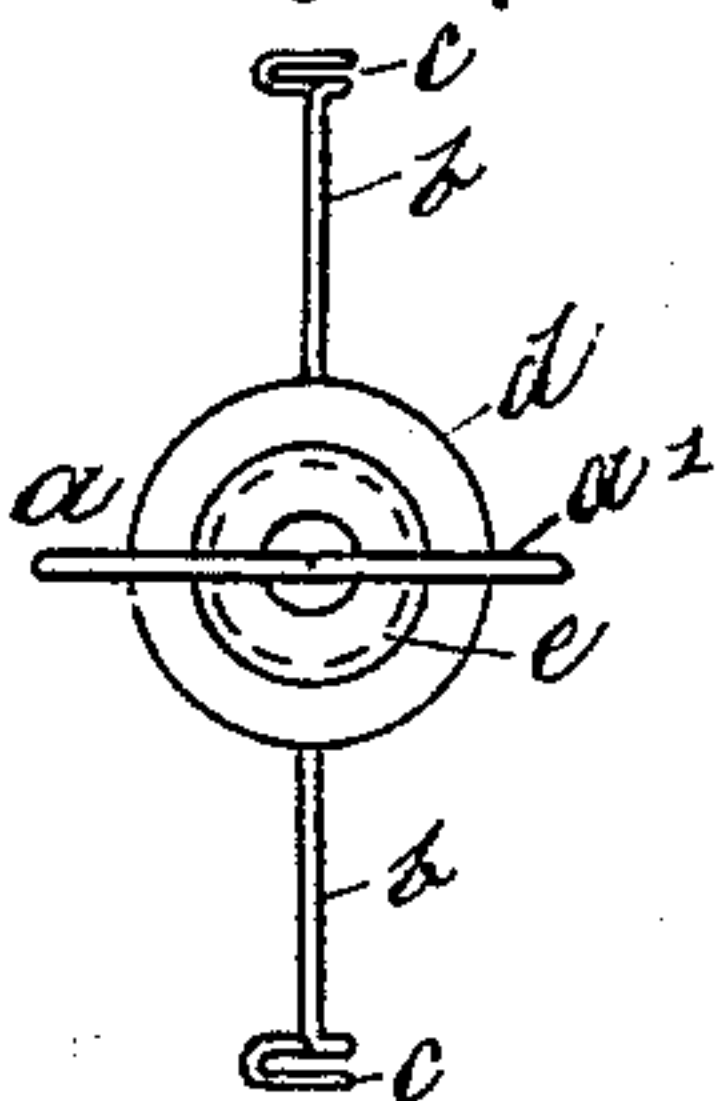
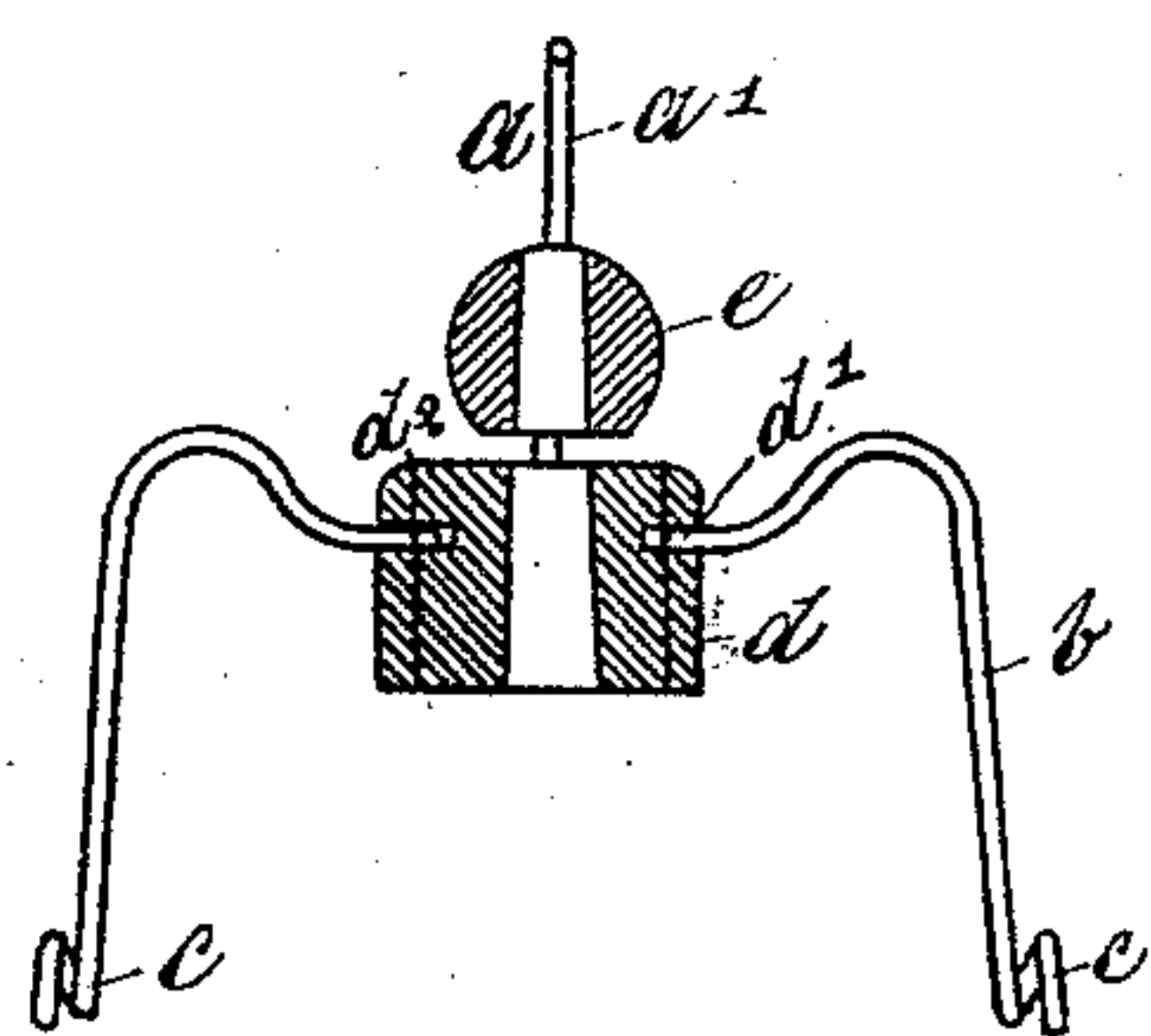


Fig 5



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY B. FROST, OF PATERSON, NEW JERSEY.

FLIER FOR SPINNING-FRAMES.

SPECIFICATION forming part of Letters Patent No. 277,262, dated May 8, 1883.

Application filed January 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, HARRY B. FROST, a subject of Great Britain, residing at Paterson, Passaic county, State of New Jersey, have invented a new and useful Improvement in Fliers for Spinning-Machines, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which—

Figure 1 is an elevation showing a spindle with a bobbin thereon, also a flier, drawing-roller, receiving-spool, and friction-roller. Fig. 2 is an elevation of the flier and conical guide detached. Fig. 3 is a similar view of the same parts, taken at right angles to that shown in Fig. 2. Fig. 4 is a plan of the parts shown in Fig. 2, and Fig. 5 is a sectional view of the flier.

The flier has a guard, *a'*, the upper part of which is curved in a conical form, the ends being turned horizontally inward, so as to rest on the top of a wooden body, *d*, and then bent downward at right angles, passing through vertical holes in the body *d*, and clinched on the under side of said body. The body *d* is a cylindrical block of wood having a central vertical perforation for the reception of the upper end of the spinning-spindle *i*, and has a circumferential groove or channel, *d'*, in which the upper ends of the arms *b* are inserted and pressed against the recesses formed in the body by the groove and held firmly in position by the pins *d²*. These arms have eyes *c* formed on their free ends, which receive and guide the strands in the operation of spinning. A ball, *e*, perforated vertically for the reception of the spindle, is placed above the body *d*, and serves to keep the body down on the spindle *i*. The guard *a'* and the arms *b* are

made of polished steel wire, friction being thereby reduced to a minimum, and the danger of cutting the strand removed. The flier, when in use, is applied to the spindle *i*, which is rotated by means of a suitable band passing over the whirl *h*. The bobbin *g*, containing the material to be spun, is placed upon said spindle and the flier adjusted thereon. The free end of the strand *f* is passed through one of the eyes *c*, thence carried upward through the guide *a'* to a receiving-spool, *m*, which is rotated by a friction-roller, *n*. The operation of spinning may now be commenced. The spindle having been put in motion by means of the driving mechanism, the strand as it is unwound and carried upward is prevented (by means of the guide *a'*) from remaining long enough in one place to be cut. The sides of the guide *a'*, being equally distant from the spindle, are equally balanced, and as the guide, the arms *b*, and the body *d* are securely held in position the flier may be run at a high rate of speed. The strand *f*, while passing through the guide *a'*, plays loosely over the sides of the guide, creates little or no friction thereon, and the strand is therefore able to bear the increased speed of the flier.

Having thus described my invention, what I claim is—

The combination, with the spindle *i* and body *d*, provided with the groove *d'* and perforations described, of the conical guide *a'*, arms *b*, and ball *e*, the said conical guide *a'* and arms *b* secured to said body, as set forth.

HARRY BELL FROST.

Witnesses:

FRANK FROST,
JOHN INGLIS.