J. BRYCE.

Spinning-Wheel.

No. 131,657. Patented Sep. 24, 1872.

Fig. 1.

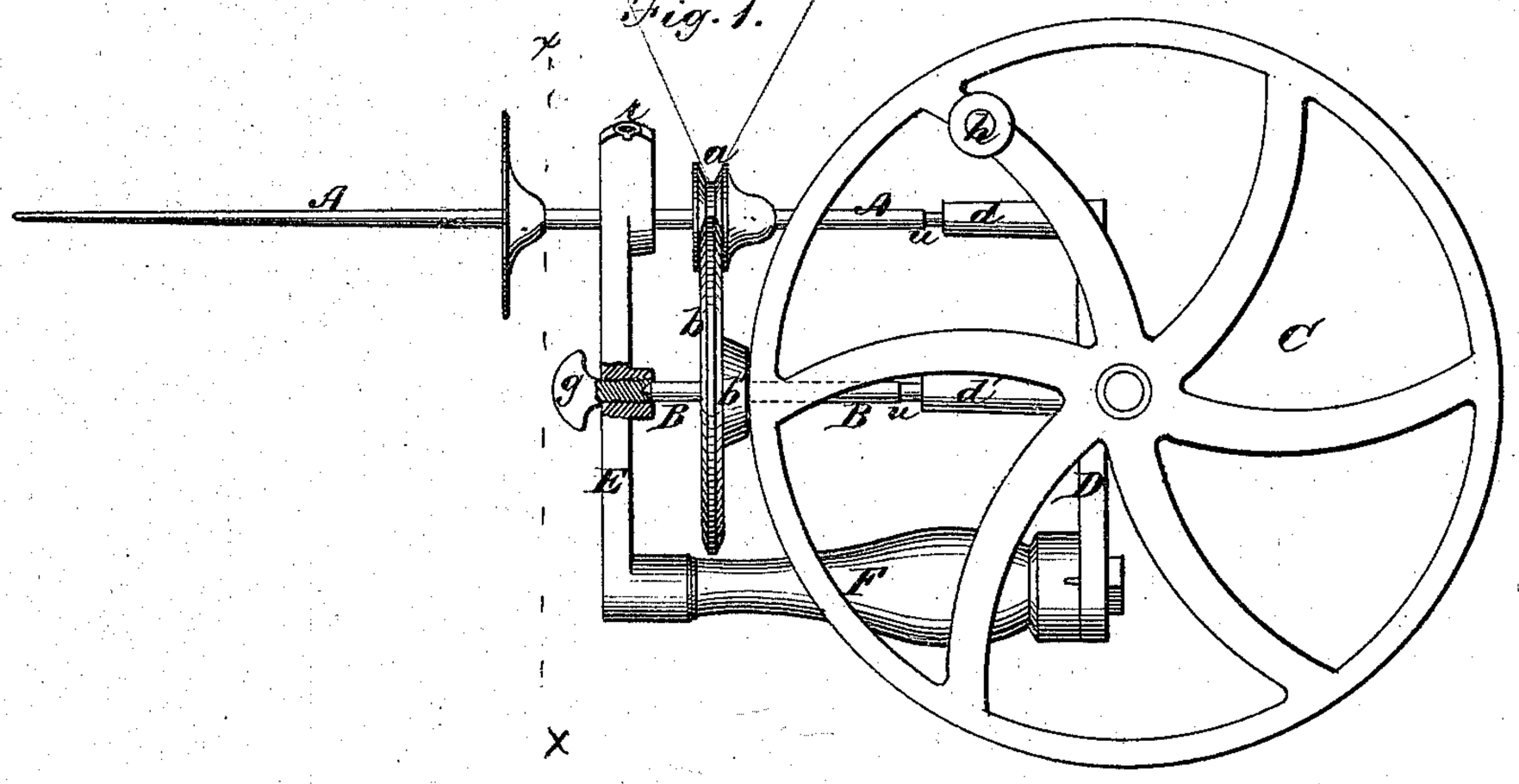

Fig. 2.

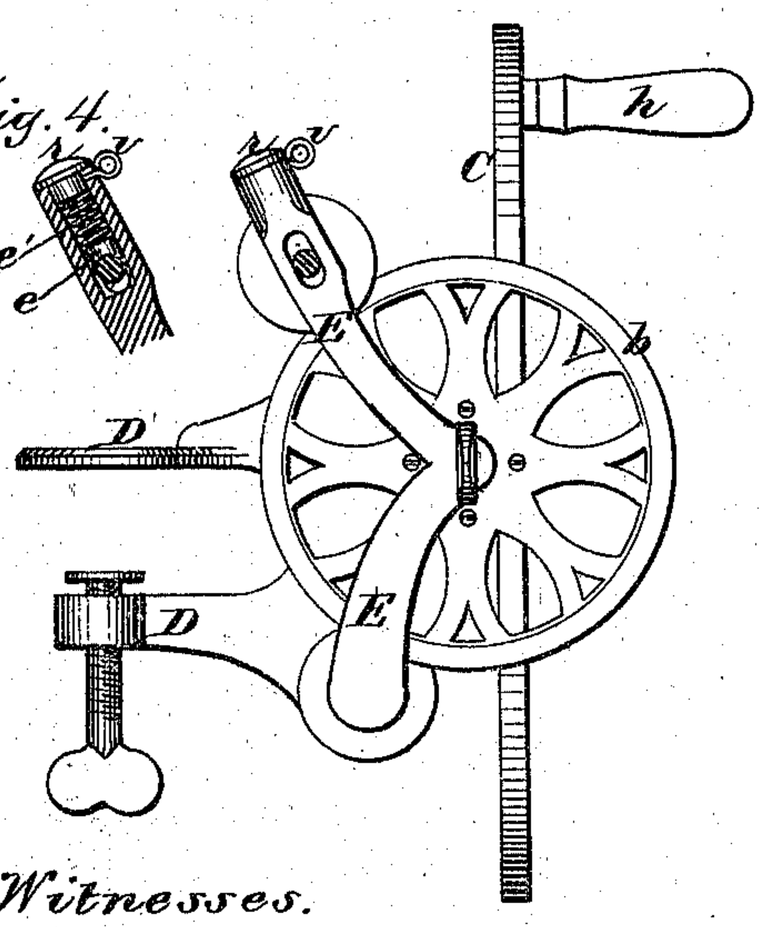

Fig. 3.

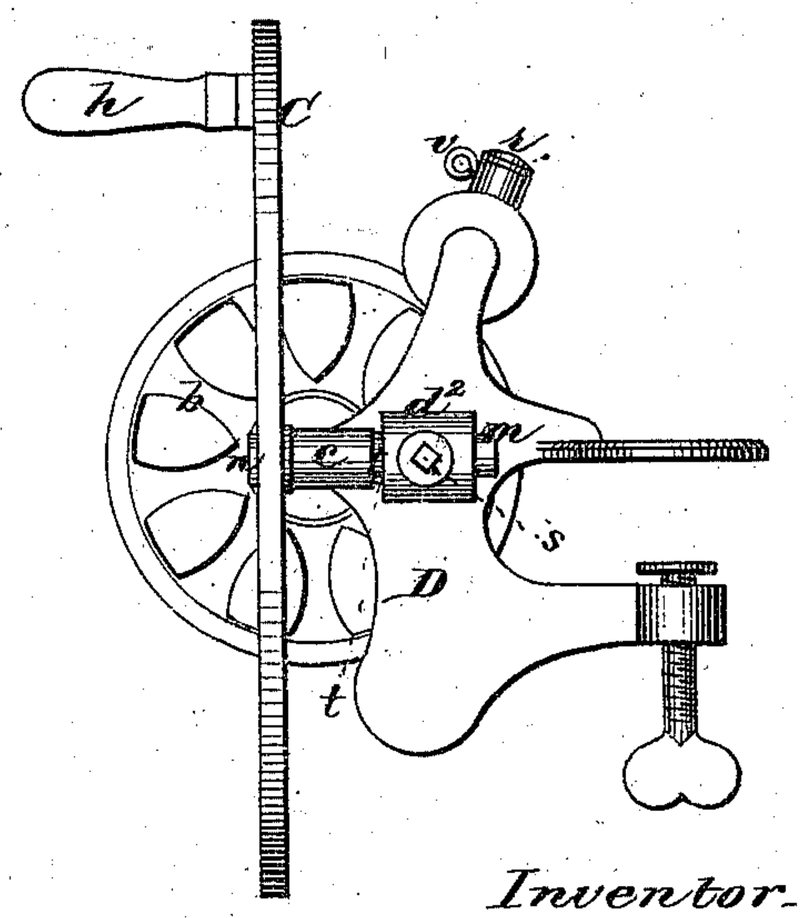

Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN BRYCE, OF GRAND HAVEN, MICHIGAN.

IMPROVEMENT IN SPINNING-WHEELS.

Specification forming part of Letters Patent No. **131,657**, dated September 24, 1872.

To all whom it may concern:

Be it known that I, JOHN BRYCE, of Grand Haven, in the county of Ottawa, State of Michigan, have invented a new and Improved Spinning-Wheel; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a front elevation with a partial section of device for adjusting the friction-wheel; Fig. 2 is a section in line *x x* of Fig. 1; Fig. 3 is an end elevation; and Fig. 4 is a section of the device for adjusting the bearing of the spindle.

Similar letters of reference in the accompanying drawing indicate the same parts.

This invention relates to that class of hand-spinning wheels having a small light frame adapted to be clamped to a table, shelf, or other support, so as to bring the machine at the proper elevation for the operator; and the object of the invention is to improve the construction of such spinning-wheels by making them run with less noise, by rendering the working parts more perfectly adjustable, and by diminishing the cost of construction, while at the same time making the machine more durable and neater in appearance than heretofore. To this end the invention consists in the use of the several devices, which I will now proceed to describe, for the purposes set forth.

In the drawing, A is the spindle, provided with a pulley or friction-wheel, *a*, preferably of the grooved form represented. B is a shaft supporting a large friction-wheel, *b*, which drives the spindle by contact with the pulley *a*. C is the driving-wheel, provided with a handle, *h*, and arranged to drive the wheel B at right angles to its own plane of motion by frictional contact with the disk *b′* attached to the side of the wheel B, as shown; and D E F is the frame, consisting of the stout iron casting D, adapted to be clamped to any convenient support; the smaller casting E and the connecting-piece F all constructed and arranged substantially as shown. The frame piece D is provided with an elongated step, *d*, for the spindle, a similar step, d^1, for the shaft B, and a socket, d^2, that supports the journal *m*, upon which runs the wheel C. This journal is of a cylindrical form, with a head, *n*, on the outside of the wheel, and is secured in the socket by a set-screw, *s*. The wheel is formed with an elongated hub, *c*, which covers the major portion of the journal, and causes the wheel to run smoothly and steadily. If preferred, a washer, *t*, may be introduced between the hub and the socket d^2. The wheel turns freely on the journal, and whenever necessary both wheel and journal may be removed by simply unscrewing the set-screw *s* and drawing the wheel off. The spindle A and shaft B are each constructed to slide longitudinally, to a certain extent, in their respective steps *a b*, and are each provided with a shoulder, *u*, to limit such sliding movement. My object in having the shaft B slide is to enable the friction-disk *b′* to be adjusted more closely against the driving-wheel C should it wear away, and in general to control the position of said wheel and disk relatively to each other, which adjustment is effected by means of the screw *g* that centers the journal-box of said shaft directly at the end of the shaft and in line therewith, as shown in Fig. 1. By screwing the part *g* in the friction of the parts *b′*, C can be regulated as desired. The spindle is made to slide to enable it to accommodate itself to the position of the wheel *b*, which is liable to be moved by the adjustment of its shaft, as described. The spindle, with its pulley *a*, is held down in contact with the friction-wheel *b* by means of a sliding bearing, *e*, pressed down by a spring, *e′*, the tension of the spring being regulated by a block, *r*, which holds it in place, and a set-screw, *v*, which secures the block, the whole being arranged in a suitable recess or mortise in the upper end of the frame-piece E, as represented in Figs. 2 and 4. The parts D E may be made of cast or malleable iron. Preferably the part F, the handle *h*, and the friction-wheel *a* are constructed of wood. The friction-disk *b′* may be made of any suitable material that will run without noise—as, for example, leather, wood, or rubber, preferably the former.

I do not limit myself to the precise form and construction of the frame herein shown, for it may be varied at will so long as it answers the purpose of supporting and permitting the proper adjustment of the several operative parts; but

What I do claim is—

1. The spindle A and its friction-pulley *a* held in contact with the wheel *b* by means of

a sliding-spring bearing, substantially as and for the purposes specified.

2. The sliding shaft B, with its wheel *b* and disk *b'*, combined with the wheel C, and made adjustable by means of the screw *g*, substantially as described, for the purposes specified.

3. The sliding spindle A and sliding shaft B combined with each other by means of the grooved wheel *a* and wheel *b* working in the groove of the wheel *a*, substantially as and for the purposes specified.

4. The combination of the hand-wheel C, the adjustable shaft B, and the spindle A, held in contact with its driving-wheel by the spring *e'*, all supported on a suitable frame, and constructed and operating substantially in the manner and for the purposes set forth.

JOHN BRYCE.

Witnesses:
LEVI SCOFIELD,
JOHN M. LOCKIE.