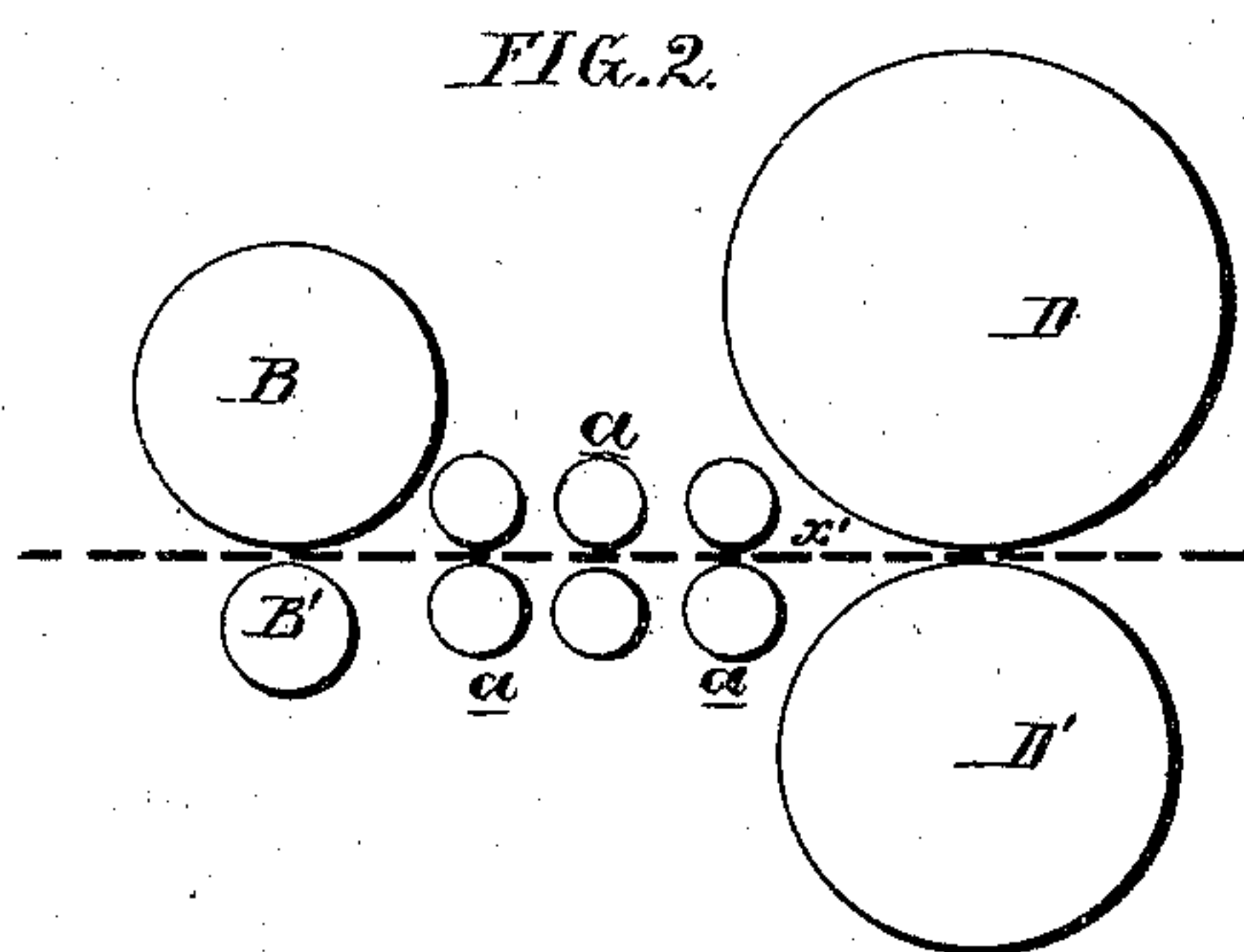
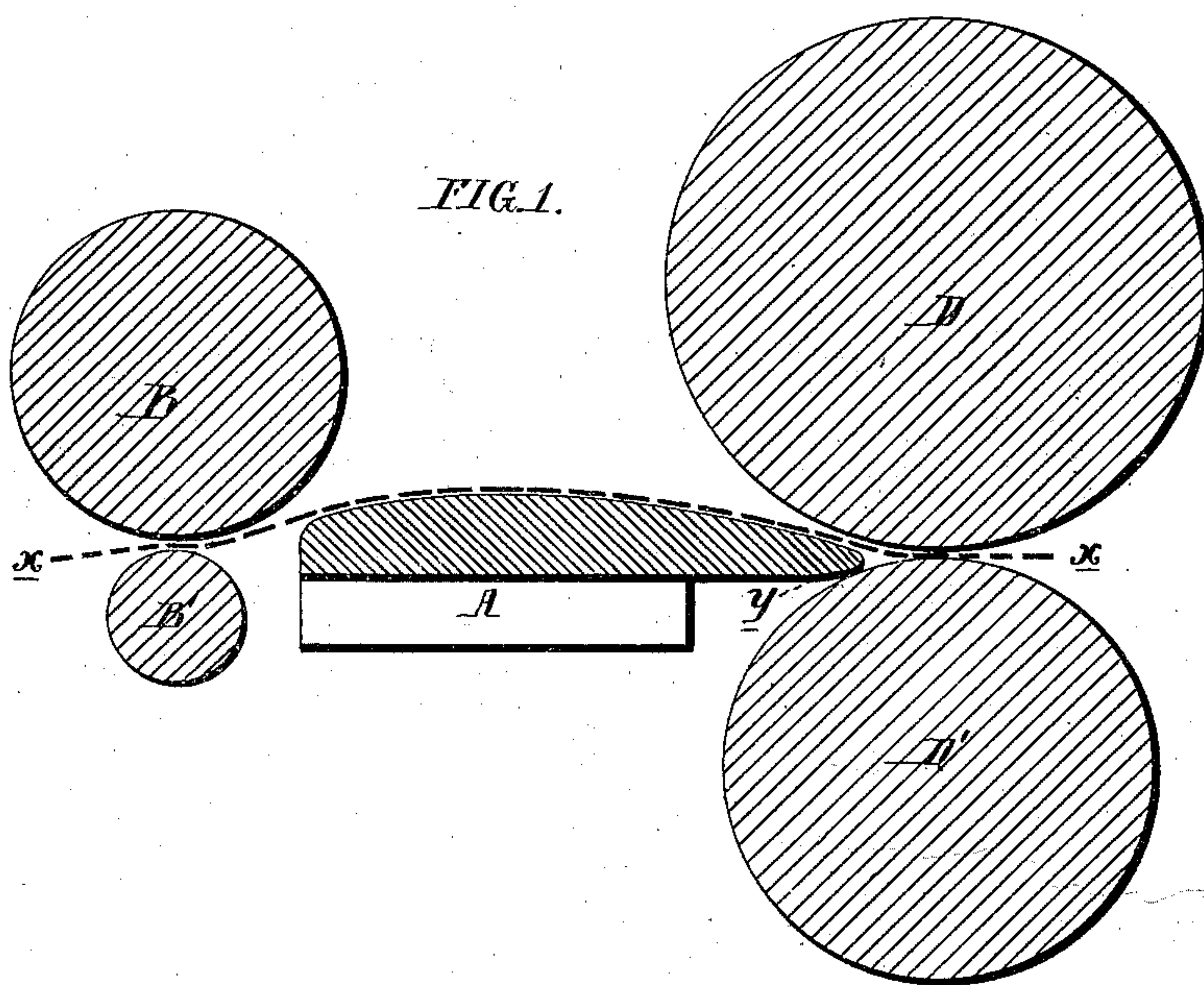


R. ACKROYD & W. COCKCROFT,

Drawing Mechanism for Spinning-Frames.

No. 135,616.

Patented Feb. 11, 1873.



Witnesses, Harry Smith
Thomas McFlorian

R. Ackroyd
W. Cockcroft
By their Attys
Harrison & Co

UNITED STATES PATENT OFFICE

REUBEN ACKROYD, OF PHILADELPHIA, AND WILLIAM COCKCROFT, OF
CHESTER, PENNSYLVANIA.

IMPROVEMENT IN DRAWING MECHANISMS FOR SPINNING-FRAMES.

Specification forming part of Letters Patent No. 135,616, dated February 11, 1873.

To all whom it may concern:

Be it known that we, REUBEN ACKROYD, formerly of Bradford, Yorkshire, England, but now residing in Philadelphia, and WILLIAM COCKCROFT, of Chester, Delaware county, Pennsylvania, have invented an Improvement in Spinning-Machinery, of which the following is a specification:

The object of our invention is to overcome the objections to the usual carrying-rollers, situated between the delivering and drawing rolls of a worsted-spinning machine, and this object we attain by dispensing with the said carrying-rollers altogether, and by substituting in place of the same a friction-plate or plates, A, (shown in the sectional view, Fig. 1, of the accompanying drawing,) across and in contact with the curved surface of which the sliver x is drawn in its passage from the delivering-rolls B B' to the drawing-rolls D D'. The main duty of the usual carrying-rolls a (see reduced view, Fig. 2) is to convey the loosely-twisted sliver from the delivering to the drawing rolls, and, by their pressure or friction upon the said sliver, to prevent the untwisting and consequent parting of the same during such passage and drawing:

The principal objections to the use of these rolls are that they cannot be brought sufficiently close to the drawing-rolls to prevent the untwisting and parting of the unsustained portion x' of the sliver, and that loose fibers projecting from the latter are apt to be caught by and wound around the carrying-rolls, which also tends to disrupt the said sliver. Power is also required to drive the said carrying-rolls, and their journals require to be lubricated, and the slivers passing between the

rolls adjacent to the journals are frequently soiled by the lubricating material.

These objections are entirely overcome by substituting the friction-plate A for the carrying-rolls. The contact of the slivers with the slightly-rounded surface of the friction-plate throughout nearly the whole of the space between the delivering and drawing rolls effectually prevents the untwisting and parting of the said slivers without interfering with the drawing operation. The end y of the friction-plate can, moreover, be introduced directly between the drawing-rolls, as shown, thus sustaining the slivers quite up to the said drawing-rolls and at the point where they are most likely to part.

Another advantage possessed by the friction-plate is that its cost is considerably less than that of the rolls.

It is not absolutely necessary in carrying out our invention that the plate should be made in one piece, as shown, as it might consist of two or more parallel sections with narrow intervening spaces.

We claim as our invention—

The combination, substantially as described, of a friction-plate or plates, A, with the delivering and drawing rolls of a spinning-machine.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

REUBEN ACKROYD.
WILLIAM COCKCROFT.

Witnesses:

WM. A. STEEL,
HUBERT HOWSON.