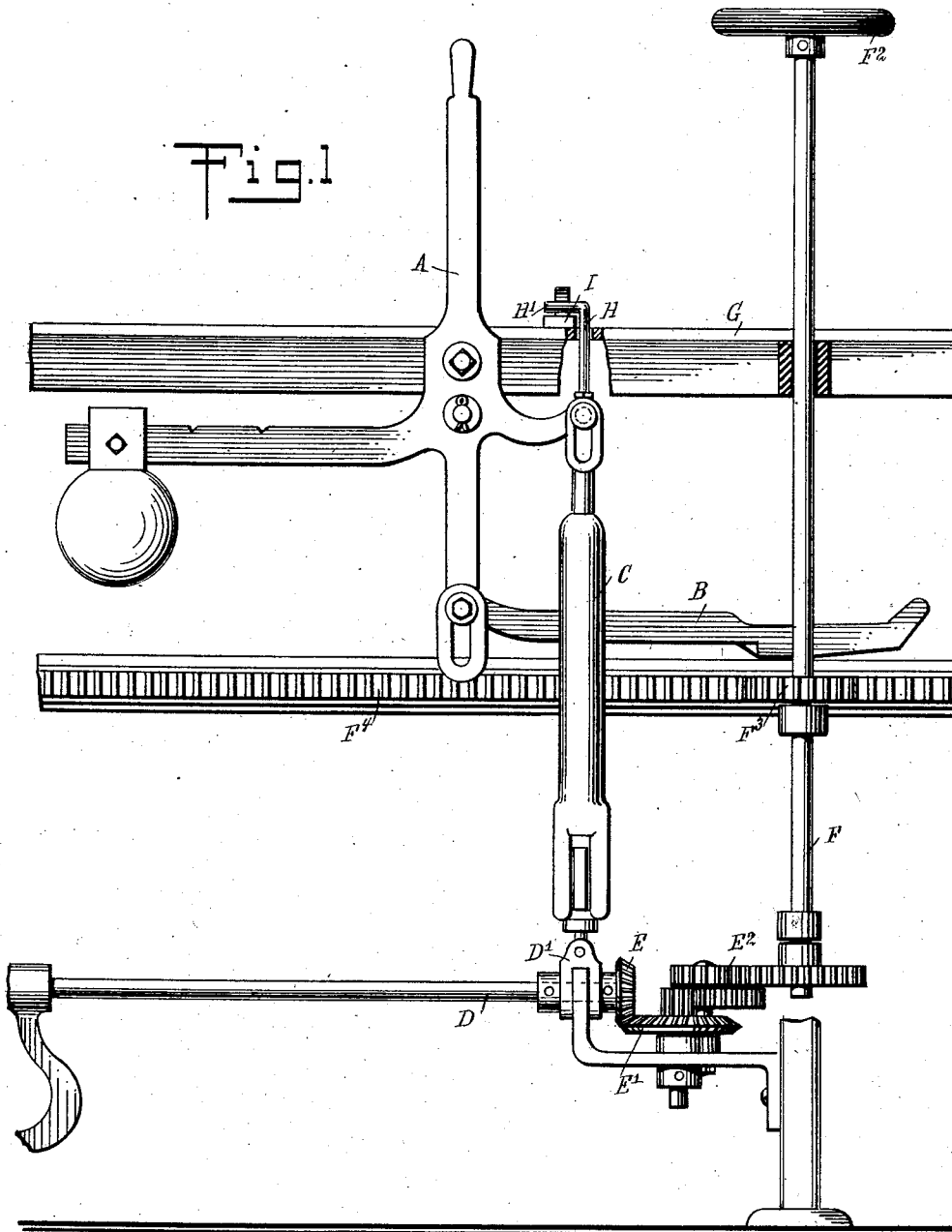


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SLUBBING OR ROVING FRAME.
APPLICATION FILED NOV. 1, 1910.

1,009,524.

Patented Nov. 21, 1911.

2 SHEETS—SHEET 1.



WITNESSES
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Rev. G. H. Hester

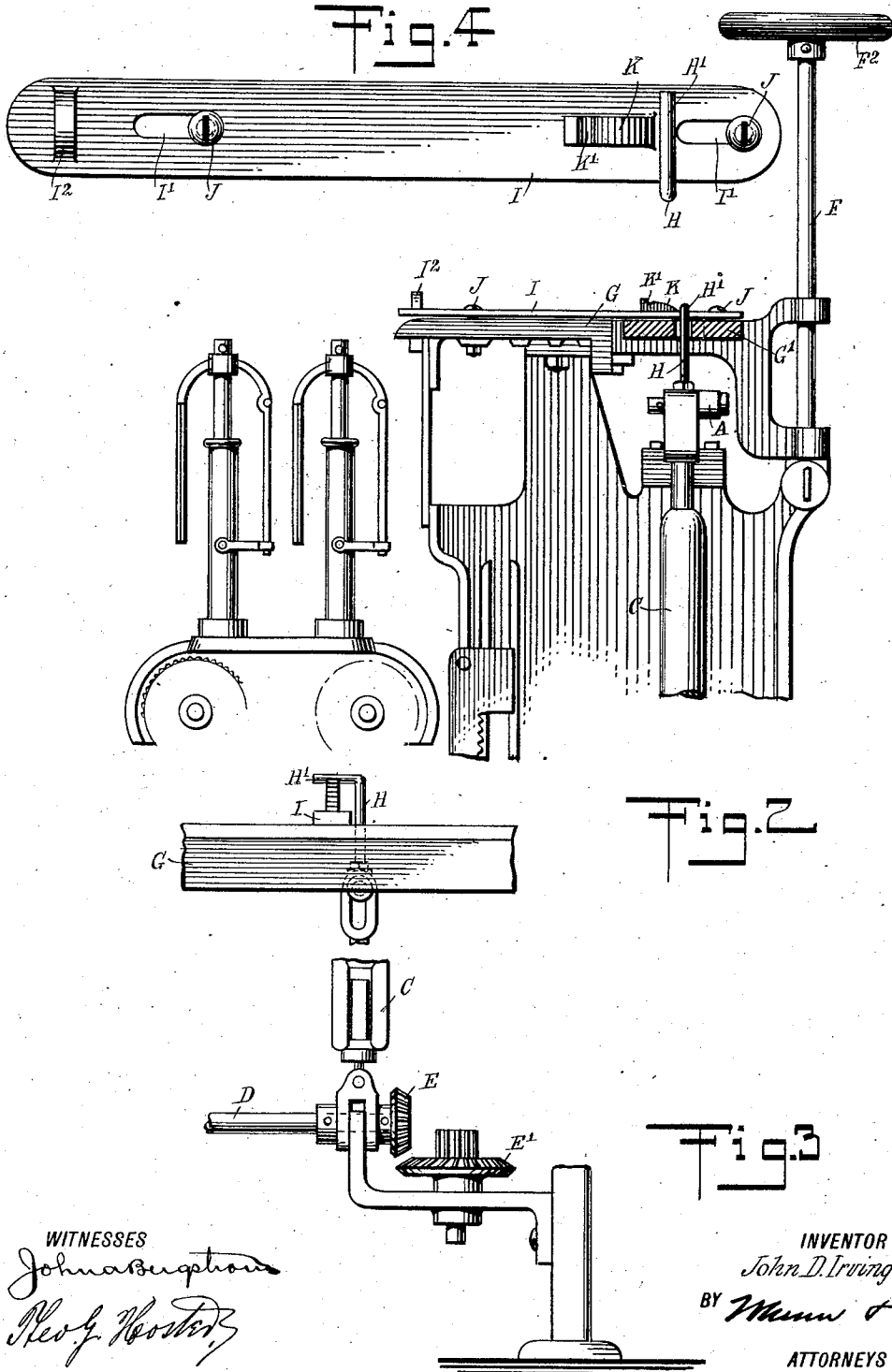
INVENTOR
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ATTORNEYS

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WITNESSES
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UNITED STATES PATENT OFFICE.

JOHN D. IRVING, OF CHESTER, PENNSYLVANIA.

SLUBBING OR ROVING FRAME.

1,009,524.

Specification of Letters Patent. Patented Nov. 21, 1911.

Application filed November 1, 1910. Serial No. 590,148.

To all whom it may concern:

Be it known that I, JOHN D. IRVING, a citizen of the United States, and a resident of Chester, in the county of Delaware and State of Pennsylvania, have invented new and useful Improvements in Slubbing and Roving Frames, of which the following is a full, clear, and exact description.

The invention relates to spinning, and its object is to provide certain new and useful improvements in slubbing and roving frames, whereby the operator is enabled to quickly regulate the tension of the roving or slubbing without knocking off and stopping the machine or without danger of injury to the hands.

For the purpose mentioned use is made of an auxiliary tension regulating mechanism, controlled by the operator and connected with the cross shaft, the said mechanism extending to the front of the roller beam to be within convenient reach of the operator, to enable the latter to swing the cross shaft out or into gear.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a roving frame provided with the auxiliary controlling mechanism, parts being shown in section; Fig. 2 is a cross section of the same; Fig. 3 is a side elevation of the same and showing the pinion on the cross shaft out of gear with the mate; and Fig. 4 is an enlarged plan view of the slide and lifting rod.

The weighted lever A is connected with the knock-off latch B and with the contact lever weight C pivotally connected with the bearing D' of the cross shaft D, carrying a pinion E in mesh with a gear wheel E' forming part of a train of gear wheels E² connected with the winding shaft F, journaled in the roller beam G and extending above the same, the upper end of the shaft F carrying a hand wheel F² under the control of the operator. On the winding shaft F is secured a gear wheel F³ in mesh with the cone rack F⁴. The parts so far described are common in slubbing and roving frames and form no part of my invention, and as the functions of the said parts are well known it is not deemed necessary to describe the same in detail.

On the upper end of the contact lever

weight C is secured an upwardly-extending rod H, terminating in an angular arm H' extending across a slide I, mounted on the roller beam G and the bracket G' at or near the middle of the machine. The slide I extends in a transverse direction so that the forward end of the slide is within convenient reach of the operator standing in front of the machine. The slide I is provided with transversely-elongated slots I' through which pass screws J screwing in the beam G and its bracket G', and on the forward end of the slide I is arranged a handle I² adapted to be taken hold of by the operator for moving the slide I transversely, the transverse movement being limited by screws J extending through the slots I'. On the top of the slide I near the rear end thereof is arranged an upwardly-extending cam K adjacent to the angular arm H', so that when the slide I is pushed rearwardly then the arm H' travels up the inclined face of the cam K whereby the rod H is raised and with it the contact lever weight C, so that the shaft D is moved upward and the pinion E moved out of mesh with the gear wheel E' (see Fig. 3). When this takes place the operator is enabled to regulate the tension, without stopping the machine, by means of the hand wheel F², which turns the upright winding shaft and the gear wheel F³, and moves the cone rack F⁴ and belt forward as required. This regulates the tension on the roving from beginning to end of the set of bobbins. After the tension is regulated the operator pulls the slide I forward so as to disengage the cam K from the arm E' in order to allow the parts to drop into their former positions, as shown in Fig. 1, with a view to reengagement of the pinion E with the gear wheel E'.

The top of the cam K is provided with a notch K' for receiving the arm H' at the time the slide I is pushed rearwardly, as above described, so that the several parts are held in a raised position during the time the operator regulates the tension of the roving or slubbing without stopping the machine.

From the foregoing it will be seen that by the arrangement described, the operator is enabled to quickly regulate the tension of the roving or slubbing without danger of injury to the hands, as the handle I² of the slide I is within convenient reach of the operator, and the latter need not reach in

between the spindles and under the bobbin shaft gears to lift the knock-off latch B, which stops the frame or pull back the lever A to re-start the machine.

5 Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. The combination of a cone rack, means including a winding shaft for adjusting said
10 cone rack in the general direction of its length, gearing connected with said winding shaft, a movable cross-shaft having a pinion forming part of said gearing, a weighted member connecting with said cross shaft, a
15 hand lever provided with an arm having a loose connection with said weighted member, a slide movable back and forth under direct control of the operator for shifting the position of said member in order to move
20 the cross shaft out of gear, and a knock-off latch connected with said hand lever and controllable directly by movements of the same.

2. In a slubbing and roving frame, the
25 combination with a cone rack, a winding shaft provided with a gear wheel meshing with said cone rack for the purpose of regulating the tension upon the roving, and gearing connected with said winding shaft,
30 of a cross shaft carrying a pinion adapted to mesh with a gear wheel of said gearing, a bearing for said cross shaft, a support in which said bearing has vertical movement, a contact lever weight pivotally connected at
35 its lower end with the movable bearing of said cross shaft, an upwardly extending rod on the upper end of said contact lever weight and terminating in an angular arm, a slide movable back and forth under the control
40 of the operator and across which the said angular arm extends, an upwardly extending cam on said slide for engaging said arm to lift the contact lever weight and the cross shaft and disconnect the pinion of said cross
45 shaft from said gear wheel, and a weighted hand lever having an arm connected with the upper part of said contact lever weight.

3. In a slubbing and roving frame, the
50 combination of a cone rack, means including a winding shaft having a gear connection with the cone rack for adjusting the latter,

a gear wheel in operative connection with the winding shaft, a cross shaft having a pinion adapted to mesh with said gear wheel, a vertically movable bearing for said cross
55 shaft, a weighted member pivotally connected at its lower end with the said movable bearing, a slide movable back and forth under the control of the operator and having a cam on its upper face, an arm carried
60 by the weighted member at its upper end and adapted to be engaged by said cam to lift the weighted member and move said cross shaft to disconnect its pinion from said gear wheel, a hand lever having a weighted
65 arm at one side and an arm at the opposite side having a loose connection with the upper part of said weighted member, and a knock-off latch connected with the lower end of said hand lever and controlled by the
70 movement of the same.

4. In a slubbing and roving frame, the combination with the roller beam, of a cone rack, a winding shaft journaled in the roller
75 beam and projecting above the same, the said winding shaft being provided with a pinion meshing with said cone rack, gearing connected with said winding shaft, a cross shaft having a pinion forming part of said
80 gearing, a vertically movable bearing for said cross shaft, a weighted member pivotally connected at its lower end with said bearing, a slide under control of the operator, the said slide being mounted on the roller beam and extending transversely,
85 means for limiting the movement of the slide, a cam arranged on the top of the slide near the rear end thereof and having an inclined face, and an upwardly extending rod on the upper end of said weighted member
90 and having an angular arm extending across the said slide adjacent to the cam and adapted to be engaged by the cam to lift the weighted member and move the cross shaft to carry its pinion out of gear.
95

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

JOHN D. IRVING.

Witnesses:

ANDREW A. CLARK,
THOMAS M. IRVING.