F. B. HART.

CLEARER-ROLL SUPPORTS FOR SPINNING-FRAMES.

No. 191,585. Patented June 5, 1877.

Fig. 2.

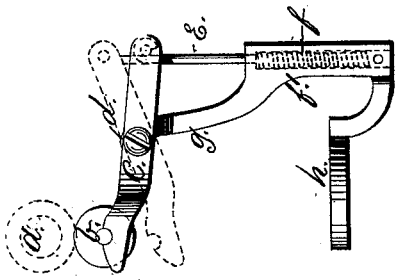
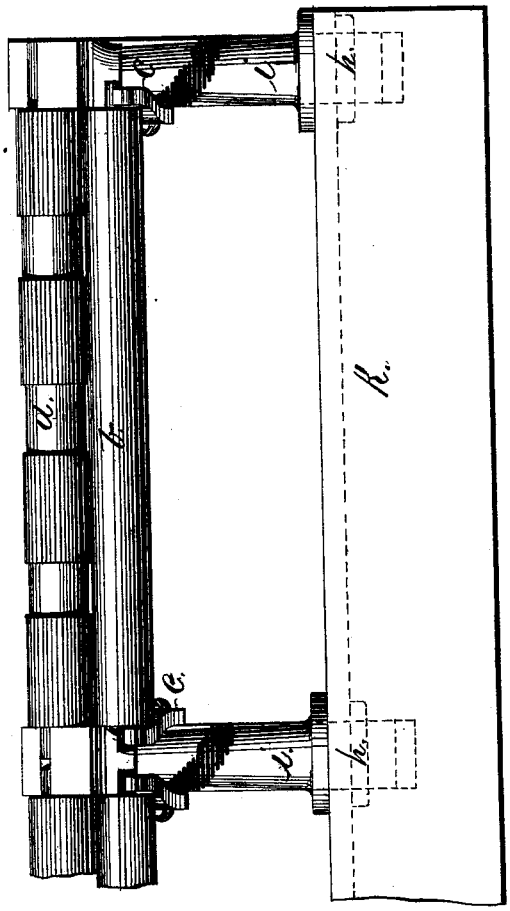


Fig. 1.



WITNESSES.

John L. Calder

Joseph A. Miller Jr.

INVENTOR.

F. B. Hart

by Joseph A. Miller

Attorney

UNITED STATES PATENT OFFICE.

FREDRIC B. HART, OF BRISTOL, RHODE ISLAND.

IMPROVEMENT IN CLEARER-ROLL SUPPORTS FOR SPINNING-FRAMES.

Specification forming part of Letters Patent No. **191,585**, dated June 5, 1877; application filed January 20, 1877.

To all whom it may concern:

Be it known that I, FREDRIC B. HART, of Bristol, in the county of Bristol and State of Rhode Island, have invented certain new and useful Improvements in Clearer-Roll Supports; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification:

Figure 1 is a front view of one of the delivery-rolls of a spinning-frame, showing the clearer-roll supporter on the yielding spring-pressed levers. Fig. 2 is a view of my improved clearer-roll spring and the standard by which the same is supported.

This invention has reference to improvements in the yielding support for the clearer-roll used in spinning-frames, under the delivery-rolls, for the purpose of clearing the delivery-rolls of all waste, so as to prevent the lapping of the same on the delivery-rolls; and consists in the novel arrangement of substantial hinged levers, provided at their front ends with bearings for the clearer-roll, their rear ends being connected by rods with spiral springs, arranged to keep the clearer-roll against the delivery-roll, and allow the same to yield as it becomes filled with waste, and also when it is taken out or replaced.

It further consists in providing a separate standard to support the yielding levers, and also contain the coiled springs, by which the clearer-roll is pressed against the delivery-roll.

In the drawings, *a* is the delivery-roll. *b* represents the clearer-roll. *c c* are the hinged levers, aranged with bearings for the clearer-roll, and supported at *d*. *e* is the rods, connecting the rear ends of the levers *c c* with the coiled springs *f*. *g* is the arm supporting the fulcrum *d*. *h* is a bracket, provided with a hole, that the standard may be secured under the rail *k* by the nut, with which the posts *i i* are secured to the rail K.

If desired, the standard may be secured to the rear of the rail *k* at *f'*, or in any other convenient manner.

Clearer-roll springs, as heretofore constructed, have usually consisted of thin metal springs secured on top of the posts *i i*. Such springs will either be liable to bend, and lose their elasticity sufficient to allow the clearer-roll to press imperfectly against the delivery-roll, and thus allow the waste to lap on the same, or when sufficiently stiff they are liable to break and cause stoppage and loss of time, as the rolls and bolsters have to be removed to replace the springs, and such springs also bear too hard on the rolls, when the clearer-roll is partly filled with waste and the diameter enlarged.

My improved clearer-roll springs are strong and durable. They can be secured to the frame or taken off without removing the rolls or the bolsters. They hold the clearer-rolls firmly and uniformly up to the delivery-rolls. They allow the taking out and replacing of the clearer-rolls without danger or injury, while the coiled springs, being contained in the standard and protected, are not liable to catch and hold the waste, as is the case with the older style of springs.

Clearer-rolls have been supported on hinged arms, provided with weights to counterbalance the weight of the roll, and press the same against the delivery-roll, but such weighted arms press the clearer-roll with diminishing force as the same increases in diameter, while the coiled spring in my invention increases the pressure with the increase of waste on portions of the clearer-roll, and thus prevents lapping at points where less waste has accumulated.

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

1. The combination, with the standard *g f'*, arranged to support the levers *c*, and contain the coiled springs *f*, with the hinged levers *c*, rods *e*, and springs *f*, all arranged to support the clearer-roll of a spinning-frame, substantially as and for the purpose set forth.

2. The combination, with the standard *g f'*, arranged to support the hinged levers *c*, of the bracket *h*, arranged to secure the standard to the spinning-frame, substantially as and for the purpose specified.

F. B. HART.

Witnesses:
JOSEPH A. MILLER,
L. V. NORWOOD.