D. W. HAYDEN.

Stop Mechanism for Drawing-Frames.

No. 227,003. Patented April 27, 1880.

Fig. 1.

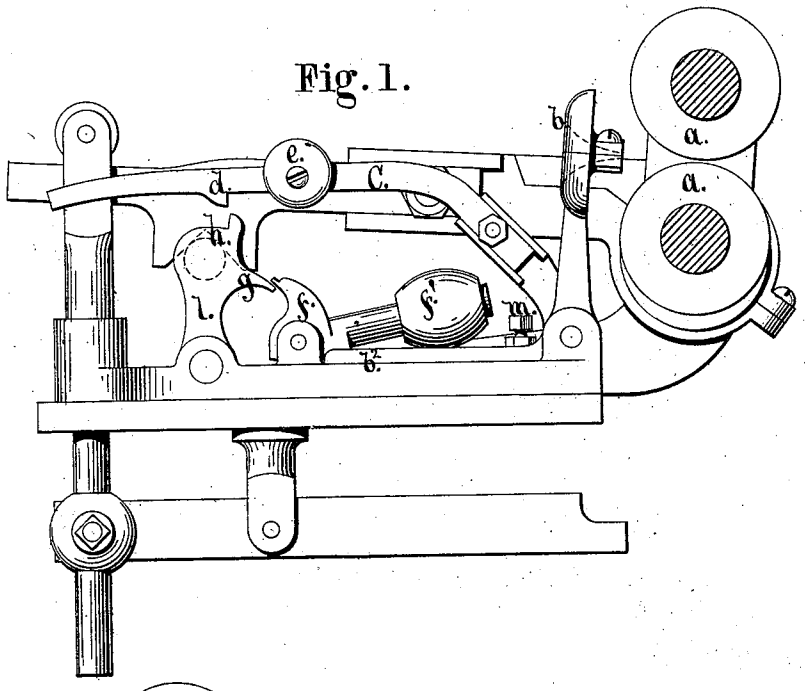
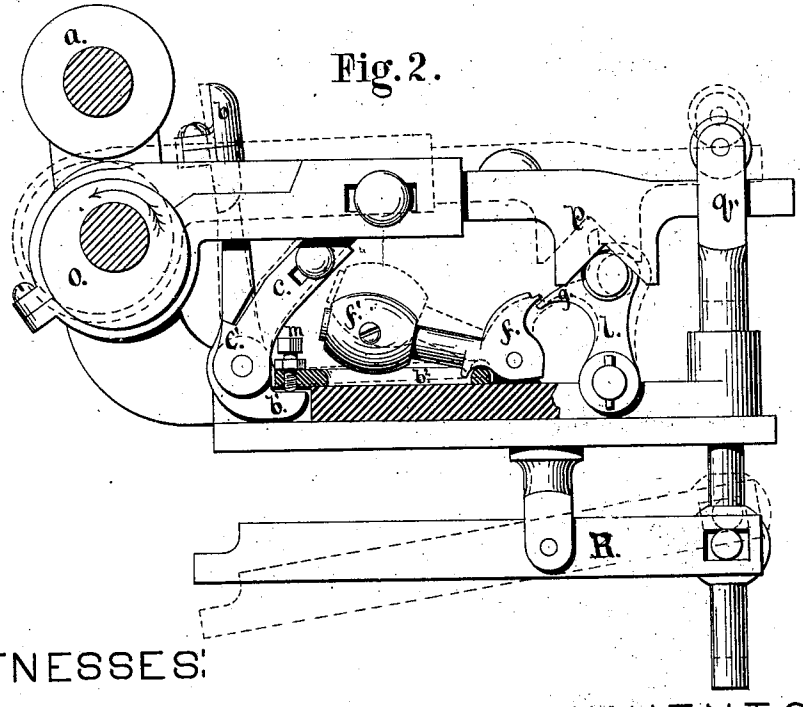


Fig. 2.



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UNITED STATES PATENT OFFICE.

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STOP MECHANISM FOR DRAWING-FRAMES.

SPECIFICATION forming part of Letters Patent No. 227,003, dated April 27, 1880.

Application filed May 19, 1879.

To all whom it may concern:

Be it known that I, DANIEL W. HAYDEN, of Providence, in the county of Providence, State of Rhode Island, have invented a new and useful Improvement in Stop Mechanisms for Drawing-Frames; 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.

This invention has reference to an improvement in stop mechanisms for drawing-frames, cotton-sliver eveners, or railway-heads; and it consists in the peculiar construction claimed, by which the toe of the trumpet-lever engages with the lever which, in its turn, raises a stop and causes the same to interfere with a vibrating arm, which causes the stopping of the machine, as will be more fully set forth hereinafter.

Figure 1 is a view of my improved stop mechanism, showing its connection with the mechanism by which the belt-shipper is detached and the machine stopped. Fig. 2 is a view, partly in section, showing the stop mechanism, in solid lines, in the position occupied when a sliver of the proper size is passing through the trumpet, and in broken lines the position of the various parts when extra strain is exerted on the trumpet by a sliver too large to pass through the same.

The object of this invention is to reduce the distance between the trumpet and the vibrating arm, and so arrange the parts that the trumpet may be placed close to the delivery-rolls, and a slight motion of the trumpet, when the sliver becomes too heavy, will raise the stop and cause the driving-belt to be moved from the tight to the loose pulley, so as to stop the machine.

In the drawings, *a a* are the delivery-rolls of the drawing-frame, railway-head, or cotton-sliver evener. *b* represents the trumpet, secured to a short arm and hinged on a fulcrum. The lower end of the trumpet-lever is provided with a toe, *b'*, which rests against the adjusting-screw *m*, secured to the hinged frame b^2. This frame is hinged on the same pin forming the fulcrum of the arm of the trumpet *b*, and extends forward under the stop *f*.

Any strain on the trumpet will press the toe *b'* against the adjusting-screw *m* and bring the forward end of the frame b^2 firmly against the stop *f*, and as soon as the strain on the trumpet overcomes the adjustable balance-weight *f'* the stop will swing on its pivot and interfere with the vibrating arm *l* by coming in contact with the projection *g*.

c is the trumpet-lever, also hinged on the same fulcrum with the trumpet-arm. The lever *c* is provided with the toe *c'*, against which a shoulder on the trumpet-arm rests, and also with a stop, *d*, which, when the sliver breaks or becomes too much attenuated, interferes with the stop *h* on the vibrating arm *l*.

e is an adjustable balance-weight secured to the lever *c*.

Vibrating motion is imparted by a crank or eccentric, *o*, giving reciprocating motion to the V-shaped pawl *p*, and by the pawl riding on the pin on the arm *l* imparts vibrating motion to the same.

As soon as the vibration of the arm *l* is stopped the V-shaped pawl rises on the pin and raises the slide *q*, and by means of the lever R disengages the shipper mechanism, and the machine is stopped.

This stop mechanism is peculiarly adapted for railway-heads, as the whole occupies less space than stop mechanisms as heretofore constructed; and when so used the sliver is made to pass from the drawing-rolls through the evener-trumpet to the rolls *a a*, and thence, by a loop around these rolls, through the trumpet *b*, and again through the rolls *a a*, by which it is delivered to the cans.

The first trumpet operates the speed-regulating mechanism so as to even the sliver, and the trumpet *b* the stop mechanism, as herein described.

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

1. The combination, with the trumpet and trumpet-arm provided with the toe *b'*, adjusting-screw *m*, the frame b^2, vibrating arm *l*, and the hinged stop *f*, provided with an ad-

justable weight, and arranged, as described, to interfere with the vibrating arm *l*, substantially as and for the purpose set forth.

2. The combination, with the vibrating arm *l*, provided with the stops *h* and *g*, of the trumpet *b*, lever *c*, and frame b^2, and the weighted stop *f*, the whole arranged, as described, to interfere with the vibration of the arm *l*, substantially as and for the purpose set forth.

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