

A. A. SWEET.

Stopping Mechanisms for Drawing-Frames.

No. 157,142.

Patented Nov. 24, 1874.

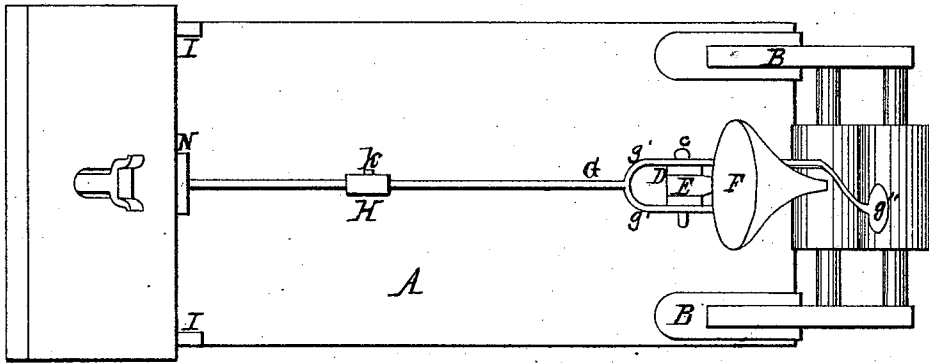


Fig. 1.

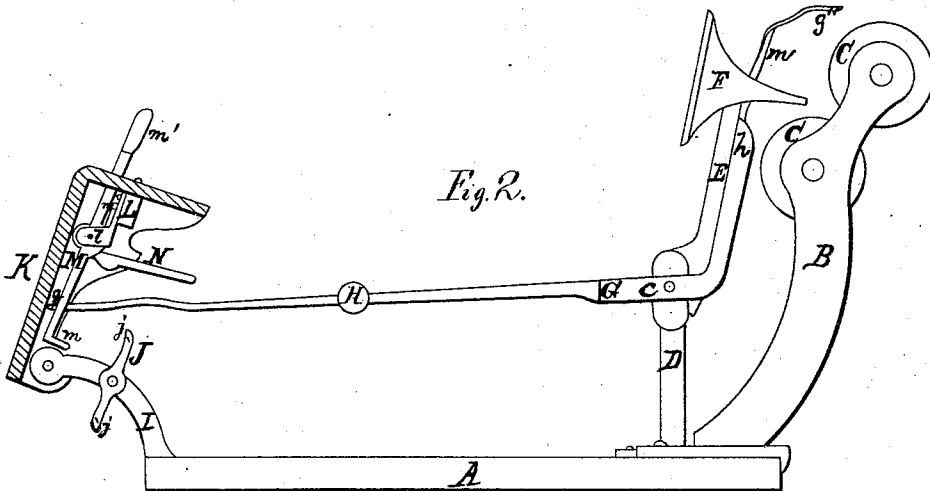


Fig. 2.

Witnesses.
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IMPROVEMENT IN STOPPING MECHANISMS FOR DRAWING-FRAMES.

Specification forming part of Letters Patent No. **157,142**, dated November 24, 1874; application filed May 3, 1873.

To all whom it may concern:

Be it known that I, ALBERT A. SWEET, of Woonsocket, in the county of Providence and State of Rhode Island, have invented a new and valuable Improvement in Stop-Motion for Drawing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of my improved stop-motion by a plan view. Fig. 2 is an elevation exhibiting the working parts.

This invention has relation to an improvement in stop mechanism on drawing-frames; and it consists in the construction and novel arrangement of devices, as will be hereinafter more fully described.

In the accompanying drawings, the letter A represents a part of the drawing-frame. B B are the supports of the calender-rolls, which are indicated by the letters C C. D represents the stand, having at its upper end the ears, between which the lower end of the trumpet-arm E is pivoted. F indicates the trumpet, attached to the upper end of said arm, and extending forward between the calender-rolls, as shown. G represents the trumpet-lever, branching at the stand D to pass on the outside of the ears thereof, to which it is pivoted by the pin *e*. These branches *g'*, after passing the fulcrum, are turned upward, and united to form a bearing, *h*, against which the trumpet-arm rests, the center of gravity of the trumpet being between said bearing and the vertical plane of the pivot *e*. The long arm of the lever G, which extends to the stop mechanism, is provided with a hook or catch, *g*, and with a balance-weight, H, which is designed to be adjusted on the lever, to regulate the draft on the trumpet, and may be secured by a set-screw, *k*.

At a suitable distance from the trumpet F the stop mechanism is arranged. This con-

sists of the stop-reel J, pivoted to the supports I, to which is also pivoted the frame K, which, by means of a hanger, L, and a pivot, *l*, supports the lever M, which is provided with a catch, *m*, at its lower end, and at its upper end with a forked sliver-guide, *m'*. To the hanger L is also pivoted the weighted knee-lever N, the lower or weighted arm of which is spread horizontally above the stop-lever M, and the upper arm of which is provided with a lateral projection or catch at its upper end, extending in front of the upper arm of the stop-lever M, and resting against the hanger L.

To the lever G is rigidly secured the top calender-roll guard *g''*, consisting of an arm, *m*, and an expansion or plate, adapted to be adjusted to the upper surface of the top calender-roll.

The operation of this stop mechanism is as follows: The reel J being in rotation, when the drawing is regular and even, the trumpet-lever is raised by the draft of the sliver on the trumpet, and kept at the proper height to admit of this free rotation.

Should the work become thin or break, the decreased draft on the trumpet will allow the long arm of the trumpet-lever to fall, and draw, by means of its hooked end, the catch of the stop-lever M in contact with the reel J, stopping the same.

If the trumpet is choked or snarled by heavy or bad work, it will be carried forward, and the trumpet-lever will be thrown up against the expanded weight of the knee-lever N, which at once throws the stop-lever M in connection with the reel.

As the work is apt to become lapped or wound on the calender-rolls, especially if they have become worn by grit, or otherwise, the devices described have been arranged to obviate this accident.

The trumpet is designed to be adjusted with its spout sufficiently close to the lower roll to be forced back by the rising of the lap, in which case the stop-lever will fall, stopping the reel. In the same manner this

lever will be depressed by a lap forming on the upper calender-roll, and pushing upward the plate of the guard *g''*.

What I claim as my invention, and desire to secure by Letters Patent, is—

The angular frame *K*, supported by the arms *I*, and carrying the stop-lever *M* and bell-crank *N*, in combination with the trumpet-lever *G*, bent laterally at its end behind

the lever *M*, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALBERT A. SWEET.

Witnesses:

G. A. WILBUR,
G. K. MILLOR.