Benjamin Moon's Improved Evener.

117098

PATENTED JUL 18 1871

Fig. 1.

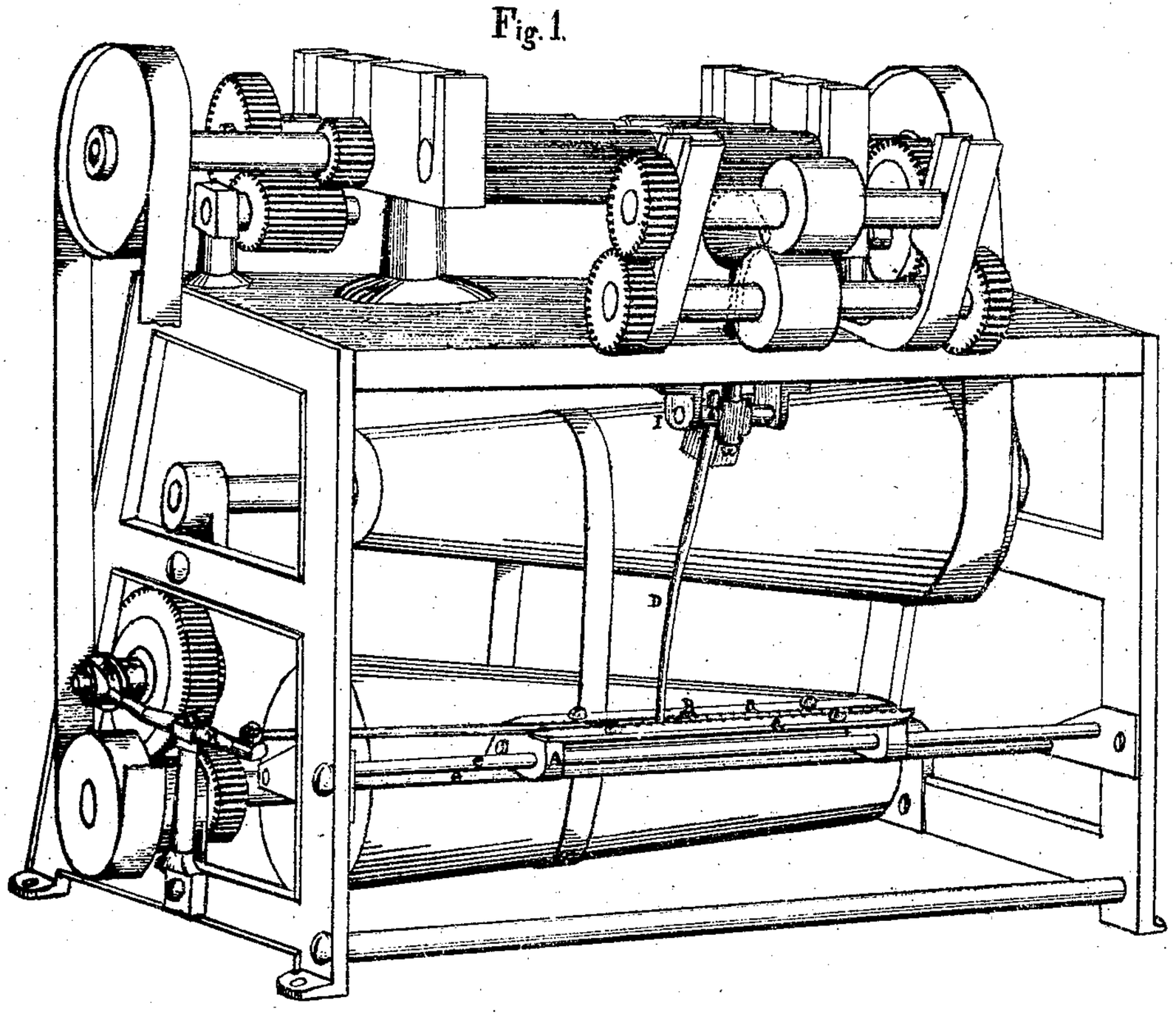


Fig. 2.

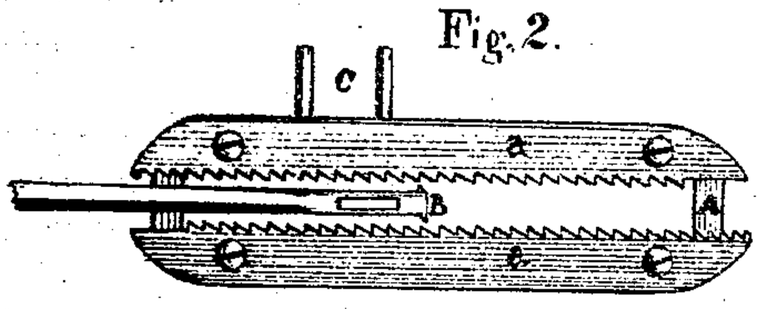


Fig. 3.

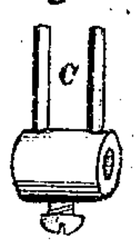


Fig. 4.

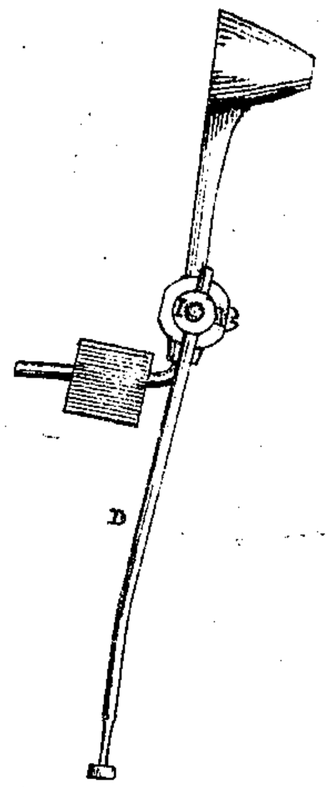
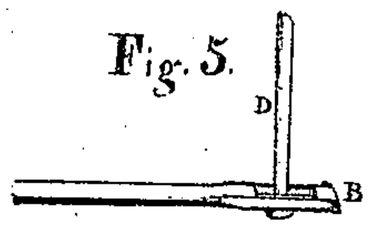


Fig. 5.



Witnesses Chas. F. Hughes
A. J. Deerhing

Benjamin Moon Inventor.

UNITED STATES PATENT OFFICE.

BENJAMIN MOON, OF COVENTRY, RHODE ISLAND.

IMPROVEMENT IN DRAWING-FRAMES.

Specification forming part of Letters Patent No. 117,098, dated July 18, 1871.

To all whom it may concern:

Be it known that I, BENJAMIN MOON, of the town of Coventry, in the county of Kent and State of Rhode Island, have invented a new and useful Improvement in Eveners to be applied to Railway-Head or Drawing-Machines; and I do hereby declare that the following specification, taken in connection with the drawing making a part of the same, is a full, clear, and exact description thereof, in which—

Figure 1 is a view, in perspective, of a railway-head machine with my improvement. Figs. 2, 3, 4 and 5 are detailed parts.

My invention relates to the machines employed in that part of the manufacture of cotton-staple goods where more or less cardings together are passed through drawing-machines and delivered in any required size or weight in the yard; and it is designed to enable such machines to produce more uniform work and lessen the liability of breakage and waste in the process.

To enable others skilled in the art to manufacture and use my invention, I will proceed to describe its construction and operation.

In the accompanying drawing, A, Fig. 1, represents a carriage, which is fitted to slide on rods *e e*, so that it can be moved from one side of the railway-head machine to the other. Upon its top are screwed two ratchet-racks, *a a*. These racks are placed parallel with each other and a short distance apart, leaving between them a space of sufficient width to receive the double-acting pawl B, as shown in Fig. 2. C, Fig. 3, is a shipper secured by a set-screw to a rod on one side of the carriage A. It can be placed at any point upon the rod, as the case may require, so as to alter the position of the belt upon the cone-pulleys to regulate the draft of the machine to correspond with the quantity of cotton that comes from the cards, this being necessary at times when a portion of the section of cards is stopped for repairs, which is often done. In that case there would be less cardings running through the machine, and a change in the draft would be required in order that the machine might produce the same delivery as before the lessening of the number of running cards. To have the evener work with the same accuracy under such a change it is necessary to place the shipper to correspond with it, thus keeping the carriage in position so that the double-acting pawl may have the same range to act upon the racks of the carriage in moving it toward either side of the machine. D, Fig. 4, is a lever or arm connected with the trumpet. It has its fulcrum at I, and hangs similarly to a pendulum at or near its center of gravity, Fig. 1, thus making it susceptible to the slightest change or variation in the amount of cotton passing through the trumpet, by which variation the trumpet moves forward or backward, giving a corresponding motion to the lever D. The pawl B is thus made to engage the ratchet-teeth of the carriage and move it as may be required to regulate the position of the belt on the cone-pulleys, so as to keep the draft equalized with the delivery. The lever D is fitted into a slot made in the pawl B, and has a nut or washer on the end, as shown in Fig. 5. By this arrangement the pawl is suspended between the racks in position ready to perform its work from the sliding or vibrating motion given it by the double helical cam *m* through the oscillating lever *n*, which lever is attached to the pawl-arm, as shown in Fig. 1. When the cotton passes through the trumpet uniformly and of the proper thickness the pawl moves between the racks, engaging with neither, and acts upon the carriage in shifting the belt to alter the draft only when required by variations in the thickness of the staple, thus making the delivery uniform at all times. In constructing the racks, I have left off a few teeth on one of the ends of each, bringing the planes at the opposite sides and ends of the carriage, so that the teeth of one of the racks at these ends would be out of reach of the pawl, Fig. 2, thus preventing the entire running out of the carriage and injuries or breakage that might otherwise occur. In case of the breaking of one of the cardings the pawl would engage with the teeth of one of the racks and move the carriage until it passed into the plane. By the joining of the carding the pawl would act in reverse on the teeth of the opposite rack, returning the carriage to its former place. Near the fulcrum I, Fig. 4, a weight is attached for a balance.

The advantages of my invention are: It is simple and not liable to get out of order. It requires but little power to operate it, and therefore a slight condensing of the cotton is all that is necessary, thus obviating the cutting of the staple, which injury often occurs by the condensing of the cotton hard in the use of spring or

weighted rolls. It is not affected by the lint or the thickening of oil, and requires but little care in its use, and longer cone-pulleys with less taper can be used, which lessens the liability of the belt slipping, as sometimes happens in short quick-tapered pulleys.

I do not claim the trumpet as my invention; but,

What I do claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, with the trumpet and its weight, of the pendent arm or lever D, hung as described at I, and operating in the manner and for the purpose set forth.

2. The carriage A, with the ratchet-racks *a a* and shipper C, in combination with the double-acting pawl B, and with the trumpet and its arm D, when all are arranged and operated as herein described.

BENJAMIN MOON.

Witnesses:
PETER F. HUGHES,
A. J. CUSHING.