(No Model.)

F. M. EDMUNDS.

PAPER TRIMMING MACHINE.

No. 341,895. Patented May 18, 1886.

Fig. 2.

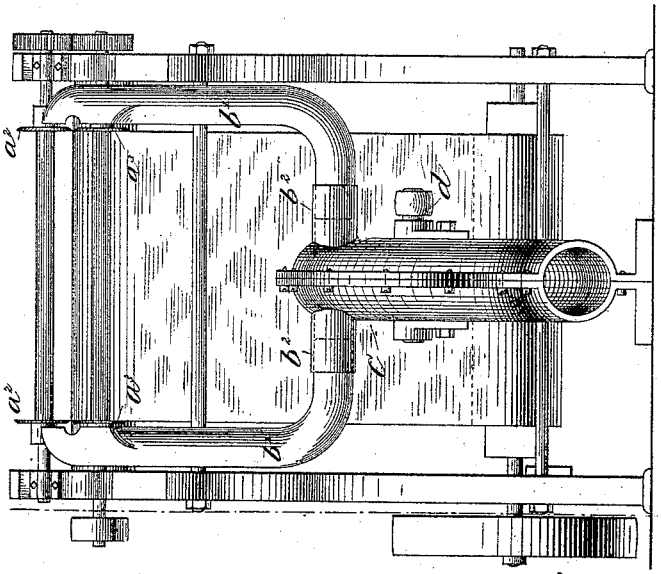


Fig. 4.

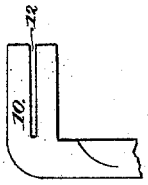


Fig. 3.

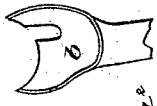
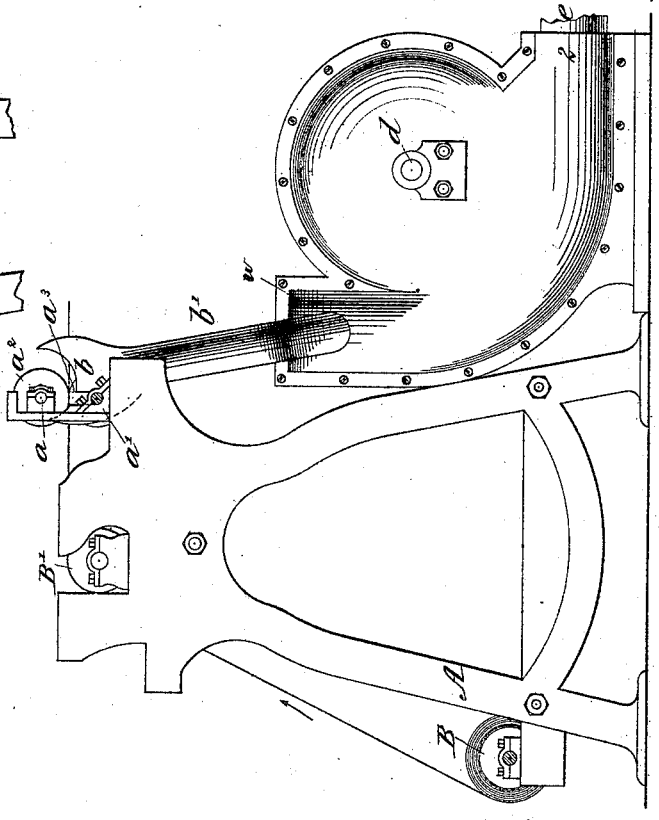


Fig. 1.



Witnesses:
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Inventor,
Per: Frank M. Edmunds.
Crosby & Gregory Attys.

UNITED STATES PATENT OFFICE.

FRANK M. EDMUNDS, OF FRANKLIN FALLS, NEW HAMPSHIRE.

PAPER-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 341,895, dated May 18, 1886.

Application filed December 26, 1885. Serial No. 186,756. (No model.)

To all whom it may concern:

Be it known that I, FRANK M. EDMUNDS, of Franklin Falls, county of Merrimac, and State of New Hampshire, have invented an Improvement in Paper-Trimming Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Webs of paper taken from the paper-making machinery and wound upon rolls to form rolls of paper to enter printing-presses and other machinery have to be trimmed at each edge, so as to present a web of uniform width and with straight edges.

The web is now trimmed as it is being wound upon a roll by means of rotating cutters mounted on rotating shafts, and the ribbons of paper taken from both edges are wound upon spools or rolls; but this is objectionable, for by reason of slits in the edges of the paper and other causes the ribbons become broken, and the ends of the ribbons are then liable to be caught by the traveling web and wound up with it to the detriment of the web. A great deal of dust is also present during the winding operation, which is very disagreeable and troublesome to the operator.

To obviate the employment of the spools for the ribbons and any liability of the ribbons becoming wound with the web, and to collect the dust, I have provided the usual trimming-machine with mouths or receivers, having co-operating with them an exhaust or suction apparatus which draws or sucks the ribbons and dust into the said mouths, and taking the ribbons into pipes discharges them therefrom into a suitable receptacle.

My invention consists, essentially, in the combination, with a paper-trimming mechanism, of mouths or receivers for the ribbons of paper, and with an exhaust or suction apparatus to operate, substantially as will be hereinafter described.

Figure 1 in side elevation represents a sufficient portion of a paper-trimming machine to illustrate a practical embodiment of my invention. Fig. 2 is a front elevation thereof; Fig. 3, a detail showing the shape of the mouth or receiver, and Fig. 4 a modified form of mouth or receiver.

The frame A, the roll B, containing, as herein shown, the web or paper to be trimmed, and the leading-roll B′, and the shafts $a\,a'$, provided with rotating cutters $a^2\,a^3$, two cutters for each edge of the web, are all as usual in paper-trimming machines.

In front of the cutters $a^2\,a^3$ in the direction of the travel of the web or paper, drawn through the machine by any usual or suitable feeding mechanism, I have placed the open mouths or receivers b, forming parts of the pipes b', in connection with the casing of the exhaust-fan C, which may be of any usual or suitable construction, having the inlet and outlet mouths w and e, the fan rotating within the casing also being of any suitable well-known construction.

Herein for sake of saving space on the drawings I have shown the exhaust-fan as placed upon the floor next the trimming-machine; but it will be understood that the said exhaust-fan may be placed at a remote distance from the machine, and, if desired, on a lower or other floor of the building in which the machine is operated.

In practice the pipes $b'\,b'$ will have telescopic or other sections, as at b^2, to permit the mouths or receivers and parts of the pipes to be adjusted horizontally toward and from each other, to adapt the open mouths or receivers to properly co-operate with the cutters $a^2\,a^3$, which are made adjustable on their shafts according to the width of the web and the width that the ribbons are to be cut from the webs.

In practice the ribbons cut from the edges of the webs will be inserted in the open mouths or receivers, and as the web or paper is fed through the machine the rotation of the shaft d of the usual belt-wheel in the exhaust-fan C will suck and draw the ribbons into the pipes b', and the said ribbons, after arriving substantially at the point marked 2 of the exhaust-fan, are thereafter blown out through the delivery-pipe e, a part of which is shown in Fig. 1, the said delivery-pipe delivering the ribbons into a suitable box or receptacle adapted to receive them.

In Fig. 4 I have shown a modified form of mouth or receiver, which may be joined with the pipes b', said mouth or receiver being of tubular form, as shown at 10, and extending a short distance in a direction parallel with the leading-roll of the machine, suitable slots, 12, being provided on each side of the said

mouth or receiver and extending inward a short distance, through which the paper to be wound is made to pass. By this form of mouth or receiver the dust present is more easily drawn into the pipes or collected than by the mouth previously described.

The web or paper passing beyond the cutters will be wound upon a suitable roll or shaft in usual manner.

I do not desire to limit my invention to the employment of a fan by which to create an indraft of air into the open mouths of the pipes B′, for any other well-known exhaust apparatus—such as a pump—might be used without departing from my invention; but I prefer an exhaust-fan for cheapness and simplicity.

I claim—

In a paper-trimming machine, the cutters to trim the edges of the web, combined with pipes having open mouths to receive the ribbons or strips of paper cut from the web, and also the dust present at such operation, and with an exhaust apparatus to suck and take away from the trimming-machine the said ribbons or strips of paper and dust, all substantially as described.

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

FRANK M. EDMUNDS.

Witnesses:
E. B. S. SANBORN,
FRANK H. DANIELL.