

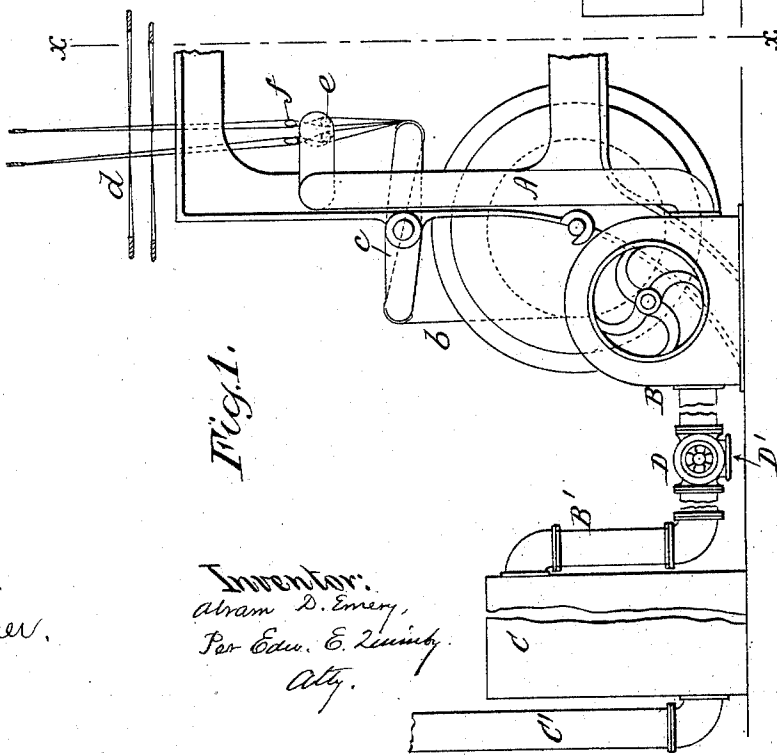
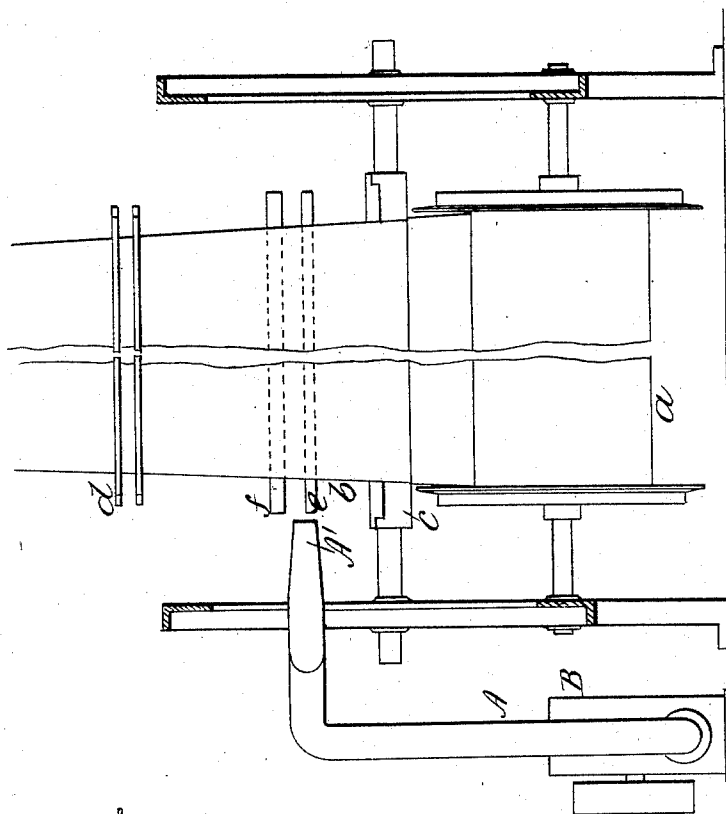
(No Model.)

A. D. EMERY.
FLUFFING DISCHARGER FOR LOOMS.

No. 503,471.

Patented Aug. 15, 1893.

Fig. 2.



Witnesses:

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FLUFFING-DISCHARGER FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 503,471, dated August 15, 1893.

Application filed April 14, 1892. Renewed December 1, 1892. Serial No. 453,698. (No model.)

To all whom it may concern:

Be it known that I, ABRAM D. EMERY, of Taunton, Massachusetts, have invented an Improvement in Fluffing-Dischargers for Looms, of which the following is a specification.

This invention has two objects: One is to dislodge and discharge from proximity to the warp threads the lint or fiber, commonly called fluffing, which is detached from the warp threads in the act of forming the sheds, and is liable to collect on the yarn as the same is led from the warp beam to the harnesses; and the other is to facilitate the dampening of the warp threads, when such dampening is required, owing to the dryness of the environmenting atmosphere. These objects are accomplished by means of a compressed air service pipe provided with a nozzle for directing a blast of air across the plane of the warp threads.

This device is especially useful in connection with an upright loom, in which case the air blast is directed into the space or spaces between the groups of warp threads. The air blast blows the fluffing out of said space or spaces to one side of the loom.

When occasion arises for dampening the warp threads, owing to the dryness of the atmosphere in which the loom is situated, compressed moist air or vapor is supplied to the compressed air service pipe. By this device the warp threads are dampened by the local application of vapor, without the necessity of moistening the atmosphere of the entire room in which the loom is placed, which is the expedient heretofore practiced.

As will readily be perceived various forms of apparatus may be employed for effecting the described results. The only essential features of such apparatus are the compressed air service pipe, means for supplying air or vapor under pressure thereto, and a nozzle for directing the blast of compressed air, or vapor, into a path in suitable proximity to the warp threads.

The accompanying drawings, representing so much of an upright duplex loom as is necessary to illustrate the mode of supplying the device for carrying out the present invention, and also symbolically representing a form of

apparatus suitable for the purpose, are as follows:

Figure 1 is an elevation of the apparatus affording an end view of a portion of the loom. Fig. 2 is a vertical section taken through the plane indicated by the dotted line $x-x$ on Fig. 1.

The drawings represent recognizable portions of a duplex loom for simultaneously weaving two fabrics side by side. From the usual warp beam, a , the warp yarns, b , are led over the outer bar and under the inner bar of the whip roller, c , and thence upward to the harness, d , the systems of lease rods, e and f , being applied in the usual manner.

A compressed air service pipe, A , is provided with a nozzle, A' , for directing a blast of air in a horizontal direction into and through the spaces between the groups of warp threads separated from each other by the systems, e and f , of lease rods. Air under pressure is supplied to the service pipe, A , by the pressure blower, B , the induction pipe, B' , of which is connected with the moist air chamber, C . By appropriately changing the position of a three-way valve, D , in the induction pipe, B' , air may be drawn into the blower either from the moist air chamber, C , or through the valve inlet, D' , from the atmosphere of the room in which the loom is situated. The valve, D , will ordinarily be set to draw air from the room, but in case the atmosphere of the room becomes very dry the valve will be changed to establish connection with the moist air chamber, C , and as a result moist air will be drawn into the pressure blower and be discharged from the nozzle, A' , into and through the space between the groups of warp threads.

Any of the well known appliances for moistening the air supplied to the service pipe, A , may be employed and, similarly, any of the well known means for keeping up the supply of compressed air to the service pipe, A , may be employed. For example, the moist air chamber, C , may be provided with the upright air induction pipe, C' , for supplying air to the chamber, C , beneath the surface of a body of water in the lower part thereof. The upper part of the chamber may be loosely filled

with an absorbent fiber of any kind, such as cotton, so that the air drawn out through the pipe, B', will have been made to absorb moisture by contact with the water and wet fiber
5 contained in the moistening chamber.

Another common mode of moistening air in a chamber is by directing a fine spray of water into the chamber, and establishing a current of air transversely through such spray.
10 In some cases also, the moistening effect is produced by the introduction of low steam into the moistening chamber. Any of the well known expedients for moistening air may be adopted as the moistening chamber *per se*
15 forms no part of the present invention. Similarly, the blower, B, is to be regarded simply as one means of keeping up the supply of compressed air in the air service pipe, A, and it will of course be understood that any other
20 of the well known means for accomplishing such result may be employed without departure from the present invention.

The drawings illustrate the application of the invention to a duplex loom for simultaneously weaving two fabrics side by side, but
25 it will be understood, of course, that the invention is equally applicable to single looms and to looms which are either upright or horizontal.

30 What is claimed as the invention is—

1. The herein described method of effecting

the dislodgment and removal of fluffing from the warp yarns of a loom, between the warp beam and the harnesses, which consists in separating the warp yarns into groups and forcing a current of air through the spaces between the said groups of warp yarns. 35

2. The method of dampening the warp yarns in a loom, herein described, which consists in separating the warp yarns into groups and forcing through the space between said groups of warp yarns a current of moist air or vapor. 40

3. The combination, as herein set forth, of the warp beam of a loom and means for guiding the yarns from the warp beam to the harnesses, with a compressed air service pipe, a nozzle for discharging a blast of air into and through the space between the groups of warp yarns and means for supplying compressed air to said service pipe. 45

4. The combination, as herein set forth, of the warp beam of a loom and means for guiding the yarns from the warp beam to the harnesses, with a compressed air service pipe, a nozzle for discharging a blast of air into and through the space between the groups of warp yarns, and means for supplying moist air under pressure to said service pipe. 50

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