

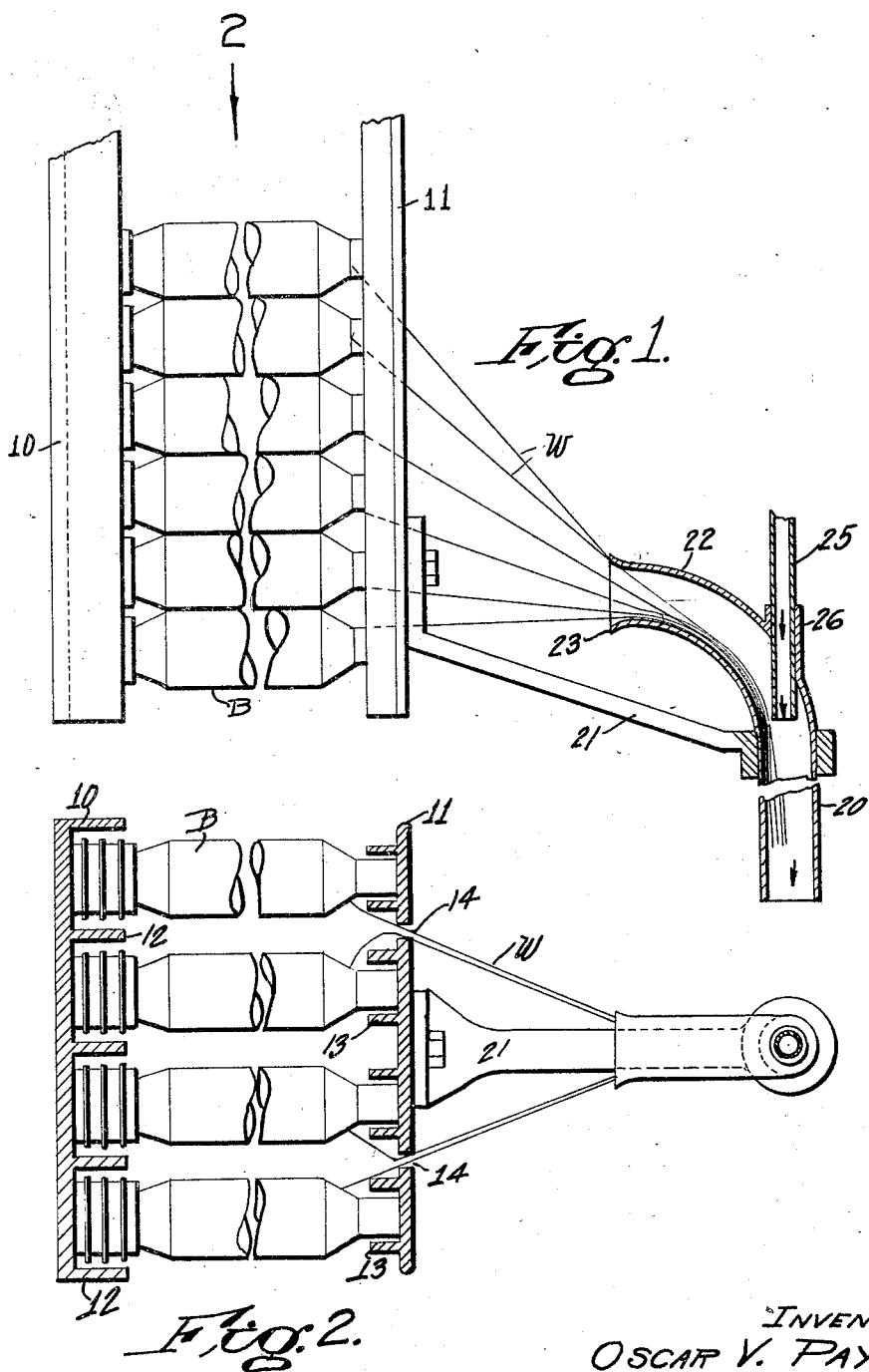
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PNEUMATIC THREAD HOLDER AND TENSION DEVICE FOR WEFT REPLENISHING LOOMS

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PNEUMATIC THREAD HOLDER AND TENSION DEVICE FOR WEFT-REPLENISHING LOOMS.

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This invention relates to a device for holding the weft ends of bobbins or weft carriers which are inserted in the magazine of a weft replenishing loom.

It is customary to hold such weft ends by winding them about a fixed part of the loom or magazine, but it is found that threads thus rigidly held are frequently broken, due to the unyielding attachment of the threads.

It is the general object of my invention to provide a type of weft end holder in which the threads are retained without rigid attachment, so that the sudden strain at the time of transfer will be yieldingly received, and the frequent breakage of weft threads will be thereby avoided.

With this general object in view, an important feature of my invention relates to the provision of a pneumatic thread holder and tension device, in which the threads are held by the suction created by a blast of air directed through the tubular end holder.

My invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly pointed out in the appended claims.

A preferred form of the invention is shown in the drawings, in which

Fig. 1 is a front elevation of parts of a weft carrier magazine, with my improved end holder attached thereto and shown in section, and

Fig. 2 is a sectional plan view of the parts shown in Fig. 1.

Referring to the drawings, I have indicated parts of a weft carrier magazine comprising end plates 10 and 11 having ribs or partitions 12 and 13 which define vertically disposed compartments to receive the butts and tips of weft carriers B, all in the usual manner and as well known in the art. Vertically extending slots 14 are provided in the end plate 11 through which the weft ends W may be drawn outward to be secured in the weft end holder.

My improved end holder and tensioning device comprises a tubular member 20 mounted in a bracket 21 secured to the end plate 11. The tubular member 20 has an offset portion 22 which is curved toward the

magazine, and is preferably provided with a bell-shaped mouth 23.

A pipe 25 is held in a projection 26 at the side of the member 20, the pipe 25 being substantially aligned with the straight lower portion of the tubular member and preferably projecting partially within said tubular member as indicated in Fig. 1. Air under pressure from any suitable supply is forced through the pipe 25 into the member 20, creating a strong draft of air toward the open lower end of the member 20, and at the same time causing an induced flow of air through the curved entrance portion 22.

When placing fresh weft carriers B in the magazine, it is merely necessary to draw the ends W out through the slots 14 and present the ends at the mouth 23 of the tubular member 20. The strong current of air will then draw the ends into the member 20 and will exert a sufficient tension thereon for the purpose of weft replenishment, while at the same time the weft ends will be so held that they can readily yield slightly to relieve the sudden and excessive strain sometimes arising at the moment of transfer.

It will also be noted that as soon as the weft end is severed from the weft carrier by the thread cutter after the shuttle is picked, the draft of air will act to draw the severed weft end into the tubular member and to eject it at the lower end thereof, where it may be received in any suitable receptacle.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed otherwise than as set forth in the claims, but what I claim is:—

1. In a weft replenishing loom, a magazine adapted to receive a plurality of weft carriers, a thread holder and tension device associated with said magazine and comprising an end holding member, and pneumatic means to draw within said member weft ends from said weft carriers when said carriers are placed in said magazine and the ends are presented to said member, said pneumatic means thereafter exerting continuous yielding tension on said weft ends so long as said weft carriers remain in said magazine

and during transfer thereof to the running shuttle.

2. The combination in a loom as set forth in claim 1, in which the holder and tension
5 device comprises an open tubular thread holding member.

3. The combination in a loom as set forth in claim 1, in which the holder and tension
10 device comprises an open tubular thread holding member and in which said pneumatic means causes a current of air to flow through said tubular member in a direction
away from said magazine.

4. The combination in a loom as set forth
15 in claim 1, in which the thread holder and tension device comprises a curved tubular

thread holding member open from end to end and in which said pneumatic means injects a blast of air into said tubular member in a direction away from said magazine. 20

5. The combination in a loom as set forth in claim 1, in which the thread holder and tension device comprises a tubular thread
25 holding member having an offset thread receiving portion directed toward said magazine and having an air outlet portion and in which said pneumatic means directs a blast of air through said outlet portion away from
said magazine.

In testimony whereof I have hereunto af-
30 fixed my signature.

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