Dec. 19, 1922. 1,439,331.

R. SCHOFIELD.

WARPER.

FILED JUNE 27, 1922. 2 SHEETS—SHEET 1.

Fig. 1.

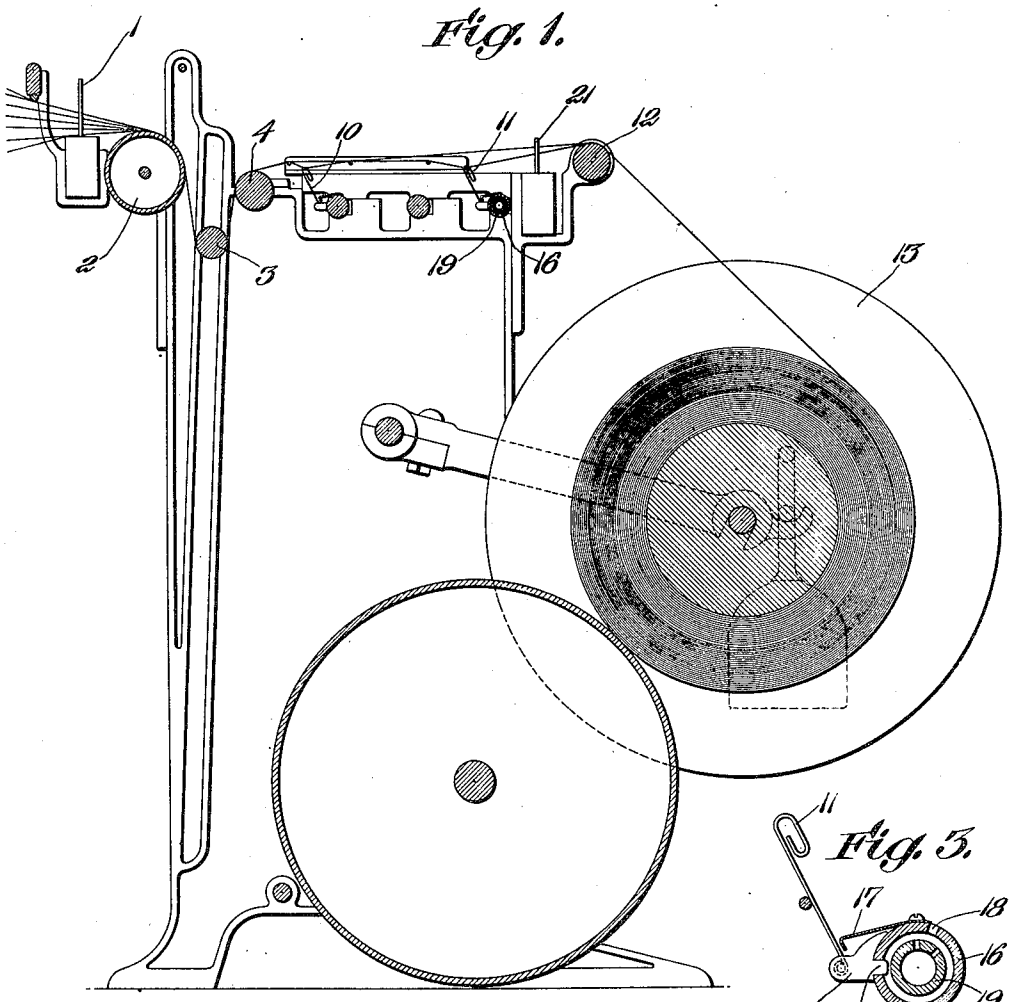
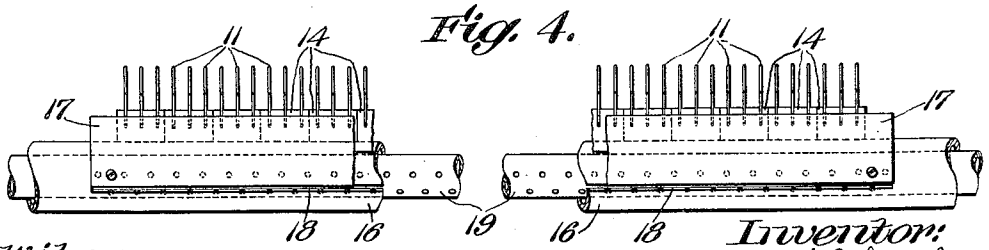


Fig. 3.

Fig. 4.



Witness:

Alfred H. McGlinchey.

Inventor:

Robert Schofield

by his attorneys

Van Everen Fish

Hildreth & Carey

Dec. 19, 1922. 1,439,331.

R. SCHOFIELD.

WARPER.

FILED JUNE 27, 1922. 2 SHEETS—SHEET 2.

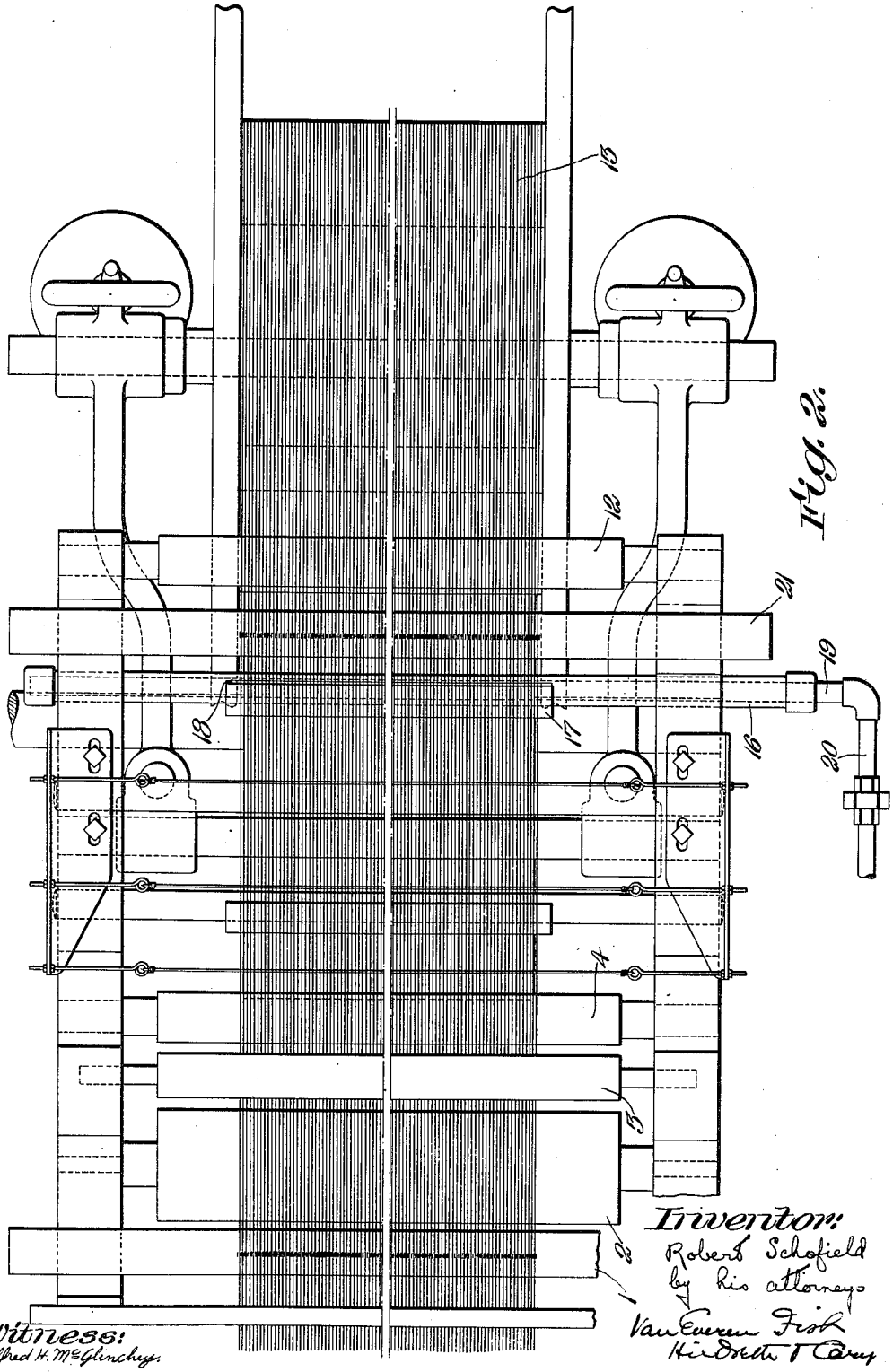


Fig. 2.

Witness:
Alfred H. McGlinchey.

Inventor:
Robert Schofield
by his attorneys
Van Everen Fish
Hiram Carey

Patented Dec. 19, 1922. 1,439,331

UNITED STATES PATENT OFFICE.

ROBERT SCHOFIELD, OF NEW BEDFORD, MASSACHUSETTS.

WARPER.

Application filed June 27, 1922. Serial No. 571,178.

To all whom it may concern:

Be it known that I, ROBERT SCHOFIELD, a citizen of the United States, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Warpers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improvement in warpers. Heretofore one of the objections to warpers has resided in the fact that as the yarn passed through the machine it accumulated pieces of fly or lint or dust which were carried in by the yarn onto the beam and caused defects in the fabric woven from the warp.

The object of the invention is to improve the construction of the warper so as to reduce or eliminate the accumulation of fly, lint or dust on the warp. To the above end the present invention consists in an improvement in warpers hereafter described and particularly defined in the claims.

In the preferred form of the invention Fig. 1 is a sectional elevation of a beam warper, Fig. 2 is a plan of the same and Figs. 3 and 4 are details illustrating respectively a section of the drop wire bar and an elevation of the same.

The illustrated embodiment is described as follows:

The warps coming from the creel pass first through the comb 1, thence over the guide roll 2, under the take-up bar 3 and over the guide roll 4 to the drop wires 10 through which some of the warps pass and thence to the drop wires 11 through which the remainder of the warps pass, and thence over the guide roll 12 to the warp beam 13. The drop wires 10 are of the usual construction and arrangement but the drop wires 11, while themselves of the usual construction, are supported in a bar of a new form. These drop wires are mounted on drop wire blocks 14 which have feet 15 which enter a groove in the bar 16. The drop wire bar 16 is a hollow tube provided with the usual lip 17 and with an air slot 18. The bar 16 receives the air pipe 19 which is connected by a pipe 20 with the source of air under pressure which is discharged from holes in the pipe 19 into the interior of the bar 16 as shown in Fig. 3. The air finds its way out of the bar 16 through the air slot 18 which extends from end to end of the lip 17 as shown in Fig. 4. The operation is as follows. The blast of air discharged from the air slot 18 impinges on the warps passing through the comb 21 and dislodges and removes from the warp any particles of fly, lint or dust which may have adhered thereto in the passage of the warp through the machine so that as the warp passes on to and is wound up on the warp beam it is free from fly, lint or dust.

While the preferred form of the invention contemplates the use of an air blast discharged upon the warp as it passes from the drop wires to the warp beam it is to be understood that the invention contemplates in its broader aspects a construction in which the blast of air to which the warps are subjected is secured by exhaustion, thus the drop wire bar 16 may be exhausted by suitable means and the current of air flowing across the warps to the air slot 18 will clear the warps of fly, lint or dust and such material will be conveyed away from the machine through the pipe connections.

Having thus described the invention what is claimed is:

1. A warper having, in combination, combs, drop wires, a warp beam, and stationary means adapted to be located beneath the warps for directing a current of air across the warps in a manner to remove therefrom any particles of fly or lint before winding upon the beam.

2. A warper having, in combination, combs, drop wires, a warp beam, a hollow drop wire bar provided with an opening, and means for maintaining a current of air in the bar in a manner to remove from the warp any fly, dust or lint before winding upon the beam.

3. A warper having, in combination, combs, drop wires, a warp beam, and means

for removing particles of fly or lint from the warp comprising a hollow bar provided with a longitudinal slot and adapted to be placed near the warp beam, and means for maintaining a current of air through the slot in the bar.

4. A warper having, in combination, a warp beam, means for guiding the warps to the beam, a hollow slotted bar located near the warps where they pass to the warp beam, a perforated air pipe received within the bar, and means for maintaining a current of air in the air pipe in a manner to remove from the warps any particles of fly or lint before winding upon the beam.

ROBERT SCHOFIELD.