(No Model.)

M. LEACH, J. HEATON & J. BENTLEY.

LOOM FOR WEAVING DOUBLE PILE FABRICS.

No. 414,647. Patented Nov. 5, 1889.

Fig. 1.

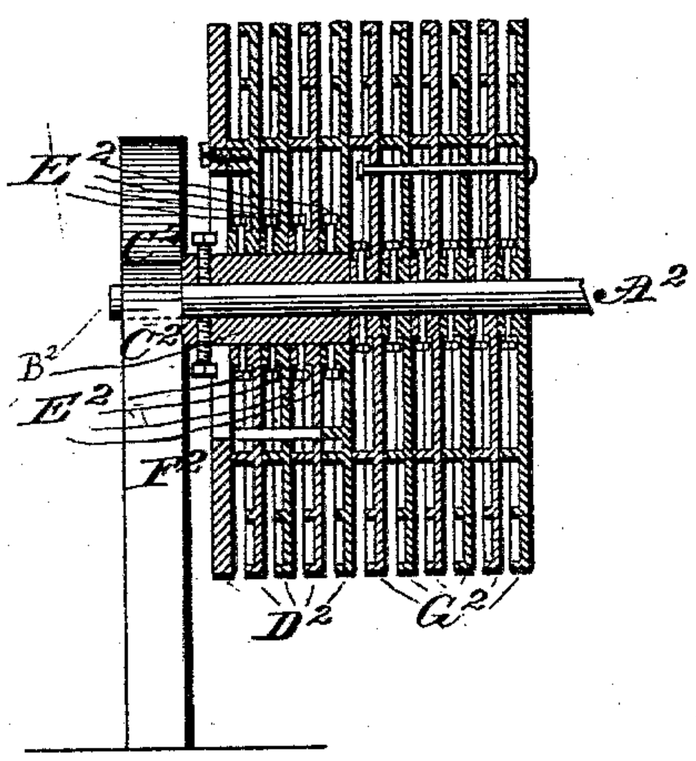
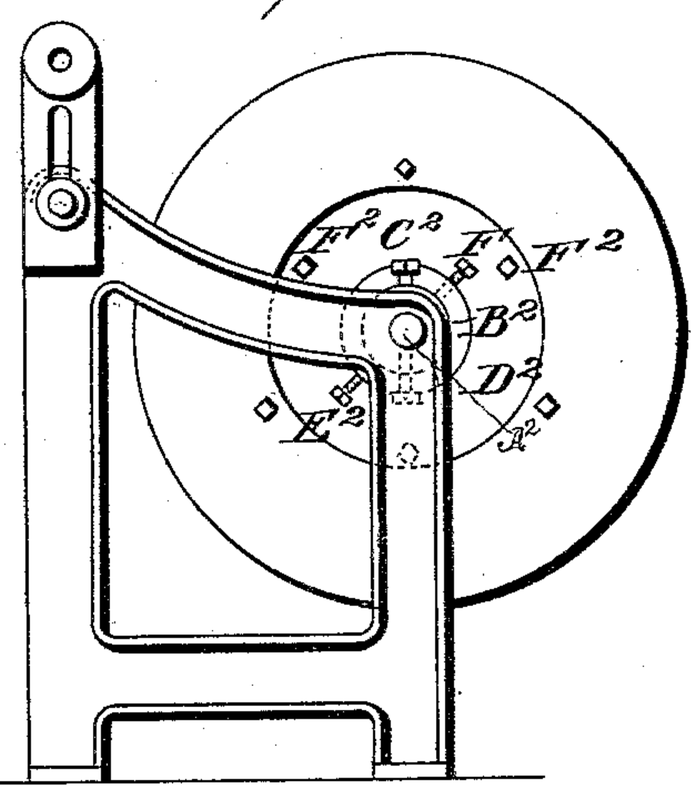


Fig. 2.



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UNITED STATES PATENT OFFICE.

MARK LEACH, JOHN HEATON, AND JOHN BENTLEY, OF BRADFORD, ENGLAND, ASSIGNORS TO JOHN DOBSON AND JAMES DOBSON, OF PHILADELPHIA, PENNSYLVANIA.

LOOM FOR WEAVING DOUBLE PILE FABRICS.

SPECIFICATION forming part of Letters Patent No. 414,647, dated November 5, 1889.

Application filed April 5, 1888. Serial No. 269,681. (No model.) Patented in England August 21, 1885, No. 9,918.

To all whom it may concern:

Be it known that we, MARK LEACH, JOHN HEATON, and JOHN BENTLEY, subjects of the Queen of Great Britain, residents of Bradford, England, but at present temporarily residing in the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Looms for Weaving Double Pile Fabrics, (for which and for other improvements therein described we have obtained Letters Patent of the Kingdom of Great Britain, dated August 21, 1885, No. 9,918), of which the .following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Our invention relates to looms for weaving double pile fabrics, in which two or more cloths or backings are simultaneously woven with connecting pile-threads between them and cut apart laterally, so as to form two separate pieces of pile fabric delivered simultaneously at the front of the loom; and our improvements relate to that portion of the loom which controls the weaving of the connecting pile-threads forming the pile surface of the plush or fabric produced.

It consists in the mechanism hereinafter described for simultaneously connecting and simultaneously disconnecting the tappets or cams actuating the healds carrying the pile warp when in the process of weaving double pile fabrics it becomes necessary to weave a "tab" or plain piece of cloth without pile.

In the accompanying drawings, illustrating our invention, Figures 1 and 2 represent a section and side view, respectively, of the set of tappets employed, showing the devices for connecting and disconnecting it with the tappet-shaft, the tappets actuating the healds carrying the pile warp.

The construction and operation of the frame-work and leading features of a double-pile-plush loom are well known in the art, and it is therefore unnecessary to illustrate or describe the same; but for greater certainty reference may be made to English Letters Patent to George Davies, No. 2,429, dated November 1, 1858, for the general features of such a loom.

Our invention is applied to that portion of the loom known as the "shedding mechanism," which is also well known in the art and unnecessary to show or describe; but for greater certainty reference may be made to our said English patent above referred to, No. 9,918, of August 21, 1885, and to United States Letters Patent No. 292,664, dated January 29, 1884, in the drawings of which is shown a loom for weaving double pile fabrics having shedding devices, the general features of which are such as are in common use, and which may be employed in connection with the tappet-cam mechanism forming the subject of our present invention. It is to be noted, however, that such features of the loom shown in said English Patent No. 2,429, of November 1, 1858, and United States Patent No. 292,664, of January 29, 1884, as are necessary to be used in connection with the present improvements to operate it are common to all looms for weaving double pile fabrics, reference being made herein to such patents merely for the purpose of illustration, in order that our present invention and its application to a double-pile-plush loom may be clearly understood.

Referring now to Figs. 1 and 2 of the annexed drawings, wherein is specifically shown the improvement constituting the subject-matter of our present invention, A^2 is the tappet or cam-shaft, shown broken off and disconnected from the loom. The driving mechanism intermediate between it and the main shaft, being that ordinarily employed, is therefore not shown.

B^2 is a sleeve fixed on the shaft A^2 by the set-screws C^2 or other known analogous detachable or disconnectible means. The tappets or cams D^2 are employed to actuate the healds carrying the pile warps and are made to fit the sleeve B^2, being affixed to said sleeve by the set-screws E^2 and bolted together by the bolts F^2, while the tappets G^2 are annexed to the tappet-shaft A^2 in the usual manner. Thus when in weaving double pile plush on the loom it is required to weave a tab or plain piece of cloth without pile it is only necessary to loosen the set-screws C^2, and the tappet-shaft A^2 then revolves, leav-

ing the tappets D^2 stationary. Thus the healds carrying the pile warp are not actuated, and the material is woven without pile. On setting the sleeve B^2 to its original position on the tappet-shaft and retightening the set-screws C^2 the healds carrying the pile warp are again actuated and the pile formed.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of the tappet-shaft A^2 with the sleeve B^2 and means for detachably connecting said sleeve with said shaft, the tappet-cams D^2, employed to actuate the pile-warp healds adjustably secured to the sleeve B^2, and the tappets G^2, secured to said tappet-shaft A^2, substantially as and for the purpose set forth.

In testimony whereof we have hereunto affixed our signatures this 9th day of December, A. D. 1885.

MARK LEACH.
JOHN HEATON.
JOHN BENTLEY.

Witnesses:
FRANCIS S. BROWN,
H. T. FENTON.