

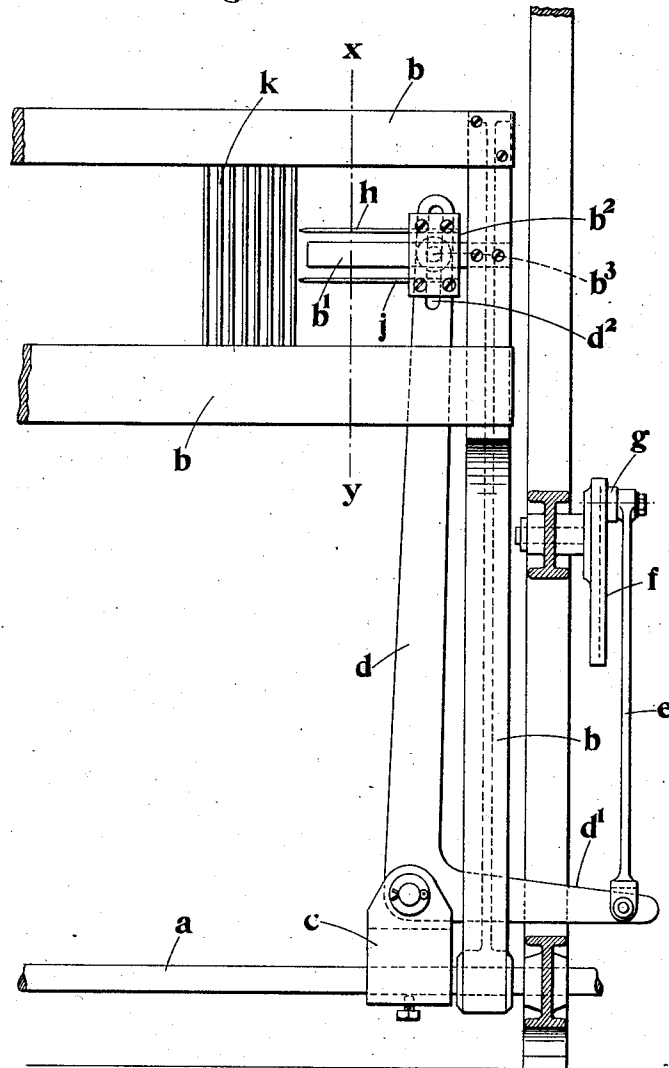
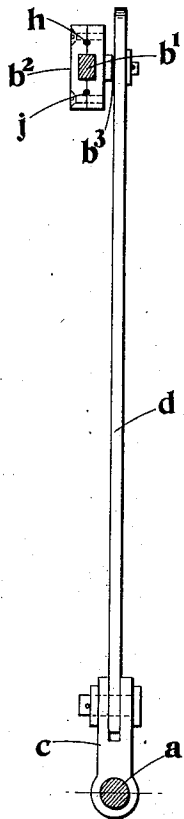
O. HALLENSLEBEN.
POWER LOOM FOR COCOANUT MATTING.
APPLICATION FILED MAY 8, 1912.

1,047,798.

Patented Dec. 17, 1912.
2 SHEETS—SHEET 1.

Fig. 1.

Fig. 1^a.



Witnesses—
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2 SHEETS—SHEET 2.

Fig. 2.

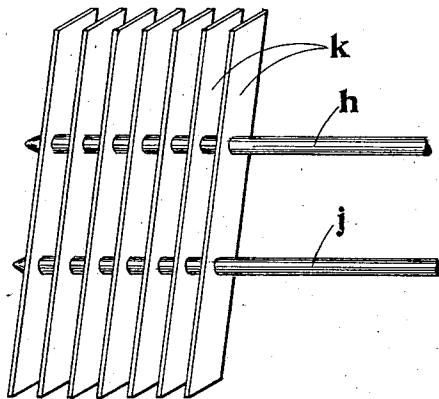


Fig. 3.

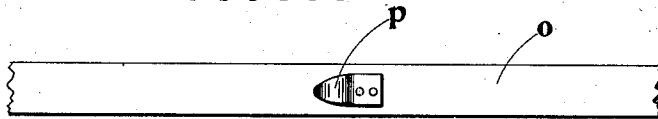


Fig. 4.

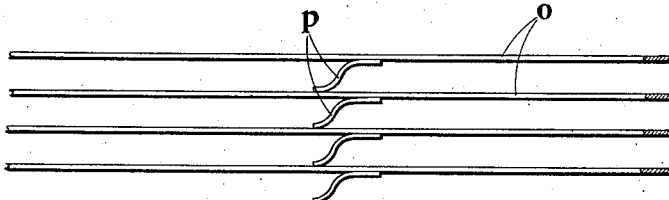
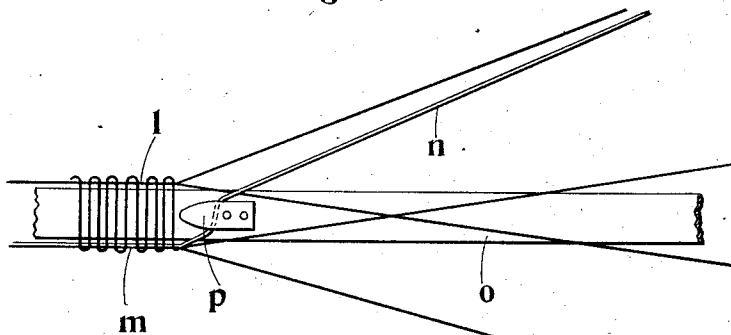


Fig. 5.



Witnesses—

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UNITED STATES PATENT OFFICE.

OTTO HALLENSLEBEN, OF HANAU, GERMANY.

POWER-LOOM FOR COCOANUT MATTING.

1,047,798.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed May 8, 1912. Serial No. 695,968.

To all whom it may concern:

Be it known that I, OTTO HALLENSLEBEN, a subject of the German Emperor, residing at 50 Akadamiestrasse, Hanau, Germany, have invented certain new and useful Improvements Relating to Power-Looms for Cocoanut Matting, of which the following is a specification.

This invention relates to power looms of the type described in my application Serial No. 578302 dated August 22nd 1910 and has for its object to provide means for retaining the warp in a straight line between the upper and lower warps of double pile matting thus preventing the formation of loops on the return of the batten frame after beating the weft.

According to the invention I provide upon the shaft of the batten frame a pivotally mounted bell crank lever of which one end is operated from an eccentric, cam or the like and of which the other end is adapted to cause one or more short wires to engage with corresponding holes provided in the reed so that thus the warp is guided in a straight line from the upper to the lower warps and vice versa.

According to the invention, moreover, I provide spring tongues upon the separator bars, which tongues on the return of the reed and the formation of the open shed engage with the warp and thus prevent the latter from becoming slack and thereby forming obstructions in the shed.

In the accompanying drawing is illustrated a constructional form of the invention.

Figure 1 is a part front elevation of the device for forming the open shed. Fig. 1^a is a section on the line $x-y$ of Fig. 1. Fig. 2 is a detail view of the reed and the short wires adapted to engage therewith. Figs. 3 and 4 show a side elevation and plan respectively of the separator bars. Fig. 5 shows the manner in which the warp is retained in position.

In carrying the invention into effect I provide on the batten shaft a , upon which the batten frame b is mounted, an adjustable member c in which is pivotally mounted a bell crank lever d d^1 . On the batten b is provided a guide rail b^1 on which a member b^2 is adapted to slide. In the member b^2 are mounted two wires h , j which are adapted to engage with holes provided in the reed k

(Fig. 2). The member b^2 is connected to the arm d of the bell crank lever by a pin b^3 which passes through a slot d^2 provided in the said arm d . The second arm d^1 of the bell crank lever is by means of a link e connected to a disk f provided with a cam groove in which runs a roller g mounted at the end of the link e .

As in looms for weaving cocoanut matting the batten first beats up the weft during the formation of a new shed and again when the shed has been completed the groove in the disk is of such a contour or the disk is driven at such a speed by the mechanism of the loom that before the second beating up, the wires h and j pass into the upper and lower warps l and m (Fig. 5) and the holes in the reed k and the warp n is thus guided vertically from the upper to the lower warps and vice versa. A complete open shed is thus formed, but as on the return of the batten and in consequence of the tension of the warp, the warp n forms a loop and the open shed is thus obstructed. In order to obviate this difficulty the separator bars o , running in the direction of the warp n are provided with spring tongues p . These tongues p are disposed in such a position that when the reed strikes against the weft the matting is moved a few millimeters in advance of the tongues p and the warp n is caught by the tongues p and retained in this position to form the complete open shed.

It will be understood that instead of the disk f having a cam groove an eccentric, or other cam surface could be employed and that the spring tongues p could be replaced by any other spring operated members without departing from the spirit of the invention.

What I claim as my invention and desire to secure by Letters Patent is:—

1. The combination with a loom for double pile fabrics, of means for effecting the forward and return stroke of the reed and means for maintaining an open shed on the return stroke of the reed for the insertion of the wefts.

2. The combination with a loom of means for maintaining an open shed on the return stroke of the reed, the reed being provided with holes, said means comprising wires adapted to pass into said holes, and means for retaining the warp passing from the upper and lower warps in position.

3. The combination with a loom of means for maintaining an open shed on the return stroke of the reed, the reed being provided with holes, said means comprising a shaft
5 on which said reed is mounted, a pivoted bell-crank lever mounted on said shaft, means for imparting a reciprocating movement to said lever, wires on said lever, said wires being adapted to pass into said holes
10 and means for retaining the warp passing from the upper to the lower warp in position.

4. The combination with a loom of means for maintaining an open shed on the return stroke of the reed, the reed being provided
15 with holes, said means comprising a shaft on which said reed is mounted, a pivoted bell-crank lever mounted on said shaft, means for imparting a reciprocating movement to said wires on said lever, said wires
20 being adapted to pass into said holes and means for retaining the warp passing from the upper to the lower warp in position, con-

sisting of separator bars and tongues provided on the separator bars.

5. The combination with a loom of means 25 for maintaining an open shed on the return stroke of the reed, the reed being provided with holes, said means comprising a shaft on which said reed is mounted, a pivoted bell-crank lever mounted on said shaft, means for 30 imparting a reciprocating movement to said lever, the reciprocation of the lever being one to two in relation to the reciprocations of the reed, wires on said lever, said wires being adapted to pass into said holes and 35 means for retaining the warp passing from the upper to the lower warp in position.

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

OTTO HALLENSLEBEN.

Witnesses:

JEAN GRUND,

CARL GRUND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
