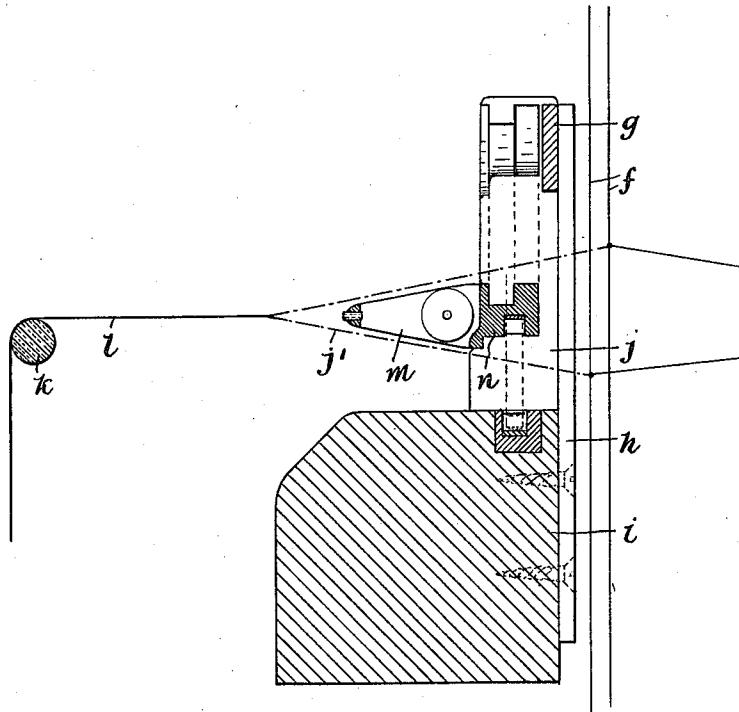


F. BENZ, JR.
BATTEN STRUCTURE FOR NARROW WARE LOOMS.
APPLICATION FILED APR. 17, 1911.

1,017,076.

Patented Feb. 13, 1912.



WITNESSES:
Wm. Dell.
Elise Kaufmann.

INVENTOR,
FREDERICK BENZ JR.
BY *John Edward.*
ATTORNEY.

UNITED STATES PATENT OFFICE.

FREDERICK BENZ, JR., OF HALEDON, NEW JERSEY, ASSIGNOR TO JOSEPH FRANK, OF NEW YORK, N. Y.

BATTEN STRUCTURE FOR NARROW-WARE LOOMS.

1,017,076.

Specification of Letters Patent.

Patented Feb. 13, 1912.

Application filed April 17, 1911. Serial No. 621,455.

To all whom it may concern:

Be it known that I, FREDERICK BENZ, JR., citizen of the United States, residing at Haledon, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Batten Structures for Narrow-Ware Looms, of which the following is a specification.

My object in and by the present invention is so to construct the batten-structure of a loom of the narrow-ware class as to secure any of several alternative advantages, to wit, either greater clearance between each shuttle and the warp shed, or, the amount of such clearance remaining unincreased, the employment of shuttles having either larger bows or projecting portions (and hence greater capacity for weft or filling), or increased contact between each shuttle and the block or other support in which it runs.

A further object of my invention is so to construct the framework whereby the shuttle blocks are supported or held in position, and so to combine said framework with the shuttle blocks, as not only to facilitate the positioning of the reeds but keep the several shuttle blocks absolutely true to the position in which they are originally set, that is, so that their shuttle guiding grooves are as perfectly alined with each other as if the whole series of grooves were formed in a single strip or piece.

In the accompanying drawing the single view is a vertical section of the improved batten structure, the harness and a warp shed appearing in elevation and a guide for the goods appearing also in section.

In said drawing the batten structure appears in its rearmost position, leaving a space between the rearmost part thereof and the harness *f*. While it is the object of the loom builder to reduce this space as much as possible, in order to secure compactness and for other reasons, it must not be less than a certain amount, else the batten will contact with the harness and wear the same.

Heretofore the bracing strip *g* was secured against the backs of the uprights *h*, in turn secured to the backs of the batten proper *i* and shuttle blocks *j*, and was the part from which (to wit, from the back thereof) the measurement was taken for the preservation of the necessary distance between the harness *f* and the portion of the

batten-structure which most nearly approached the harness. I have ascertained that by re-arranging the said bracing strip and the uprights, so that the former is disposed forward of the latter, any of the advantages which I have above enumerated may be obtained. Thus in the drawing the bracing strip *g* is shown forward of the uprights *h*, which are metallic plates perfectly flat throughout, their positions being transposed relatively to the old arrangement already described, and the backs of the shuttle blocks being recessed to receive said strip. By this transposition of the strip and uprights, the batten proper and the shuttle blocks are brought nearer to the harness by a distance precisely equal to the thickness of the bracing strip.

It will be understood that the apex of the shed *j'* must stand a given distance from the harness *f* (or from the guide *k* on the breast-beam—not shown, over which the woven goods *l* passes). Therefore if the shuttle body *n* and the shuttle bow *m* remain of the same dimensions as heretofore, appreciably greater clearance will be left between the warps of the shed *j'* and the bow of the shuttle. Or, if this clearance remains the same, then either the bow or the shuttle may be made larger (so as to accommodate a filling carrier of greater capacity than before) or the body of the shuttle may be made of greater forward to rear dimension so that, upon correspondingly augmenting the forward to rear dimension of the shuttle block, the contact surfaces between the shuttle body and shuttle block will be correspondingly augmented, increasing the working life of both of them.

It will be observed that my construction involves these additional advantages: The framework, comprising the bracing strip and plates or uprights *h*, because the bracing strip, as shown, is let into recesses at the back of the shuttle blocks, is practically interlocked with the several shuttle blocks and bears down upon the subjacent surfaces of said recesses, so that when the said framework is secured to the shuttle blocks and batten proper each shuttle block must retain permanently the exact position to which it is adjusted by the batten builder; therefore the several grooves in the blocks retain permanently that precise alinement with each other in which they are initially

set, insuring the true running of the shut-
tles in their grooves and the elimination of
wear which, because it is irregular or not
uniform throughout the entire length of the
5 bearing surfaces of the shuttles and grooves,
results in undue vibration and noise. Again,
the backs of the bracing strips and batten
proper being vertically alined with each
other, they form with the uprights or plates
10 reed pockets or recesses to which the reeds
may be conveniently introduced from the
rear, to be then secured to the backs of the
bracing strip and batten proper, instead of,
as in the old construction, having to be in-
15 troduced from above down in front of the
bracing strip and back of the batten proper.

Having thus fully described my inven-
tion, what I claim as new and desire to se-
cure by Letters Patent is:

20 The combination of the batten proper,
shuttle blocks arranged thereon, the batten

proper and shuttle blocks having vertical
rear faces flush with each other, and the
backs of the shuttle blocks having horizon-
tally alined recesses extending across them, 25
and means for securing the shuttle blocks to
the batten proper including a framework
interlocked with the shuttle blocks and com-
prising flat upright plates bearing against
the backs of the batten proper and shuttle 30
blocks and a bracing strip arranged against
the front faces of and connecting said plates
and received by and bearing down upon the
lower surfaces of said recesses, substan-
tially as described. 35

In testimony whereof I affix my signature
in presence of two witnesses.

FREDERICK BENZ, JR.

Witnesses:

JOHN W. STEWARD,
WM. D. BELL.

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