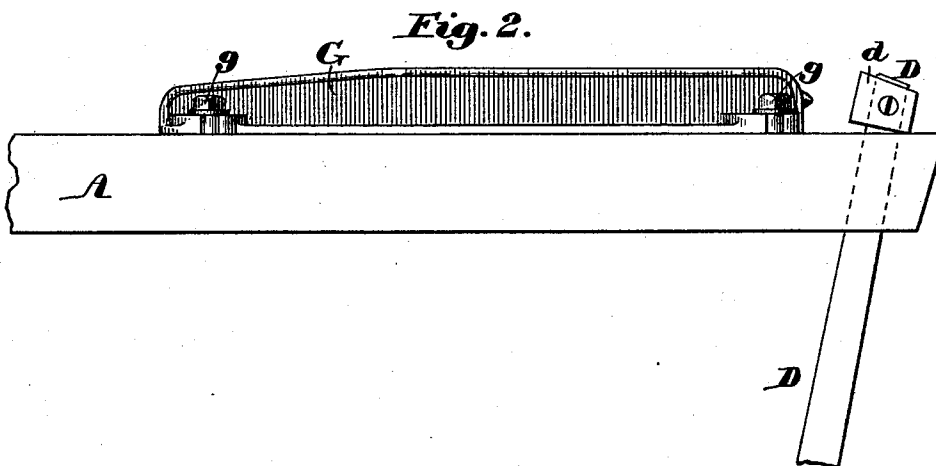
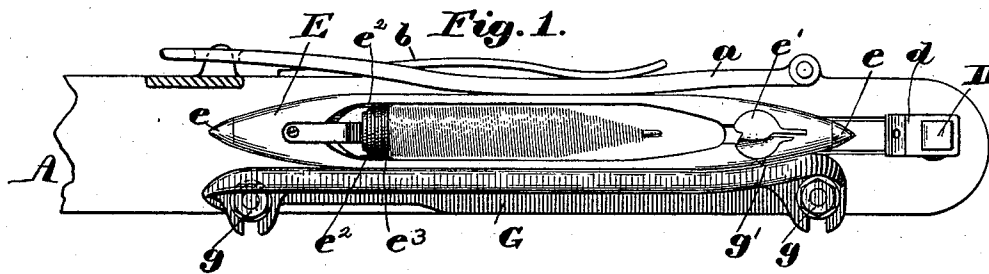


(No Model.)

J. A. CLAUS.
SHUTTLE BOX.

No. 582,981.

Patented May 18, 1897.



Witnesses:
Walter E. Lombard.
Thomas J. Drummond.

Inventor:
Joseph A. Claus,
by Crosby Gregory,
Attys.

UNITED STATES PATENT OFFICE.

JOSEPH A. CLAUS, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO THE
NORTHROP LOOM COMPANY, OF SACO, MAINE, AND HOPEDALE,
MASSACHUSETTS.

SHUTTLE-BOX.

SPECIFICATION forming part of Letters Patent No. 582,981, dated May 18, 1897.

Application filed December 17, 1896. Serial No. 615,981. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. CLAUS, of Lowell, county of Middlesex, State of Massachusetts, have invented an Improvement in Shuttle-Boxes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In automatic looms, or looms in which the shuttle is replenished with a bobbin while the shuttle is in the shuttle-box and the loom in motion, it is necessary in the operation of supplying the shuttle with a bobbin or filling carrier that the shuttle always occupy as nearly as possible exactly the same position in the shuttle-box whenever the pusher used to push the filling-carrier from the usual filling-carrier feeder into the shuttle acts, the filling in the shuttle having been exhausted or broken.

This invention comprehends improvements in the shuttle-box itself, whereby a definite position for the shuttle in the shuttle-box is insured.

In accordance with my invention I have given to the inner side of the front of the shuttle-box a peculiar shape—that is, I have provided it at or near its outer end, or its end nearest the end of the lay, with an inclined face, said face preferably conforming in shape to the wall of the shuttle back of its tip, so that as the shuttle enters the shuttle-box it will be acted upon at one side by the usual binder and will be pushed against the inner side of the front of the shuttle-box, the inclined side of the shuttle back of its usual tip or point coming to a bearing on the said inclined face and being stopped in exactly the proper position to receive a bobbin or filling carrier in its open top side and permit a bobbin-carrier having a broken or exhausted filling to be ejected from the under side of the shuttle through the slot in the end of the lay below said shuttle.

Figure 1 is a top or plan view of a part of lay with its shuttle-box and a shuttle therein to illustrate my invention, and Fig. 2 is a front elevation of the same.

The lay A, having at its end a shuttle-box slotted through from top to bottom, as shown

by dotted lines, Fig. 2, the binder *a*, the spring *b*, acting thereon to normally keep the binder pressed into the box, the picker-stick D, having a picker *d*, and the shuttle E, having tips *e*, a suitable self-threading device *e'*, and suitable jaws *e''* to receive the ringed head of a bobbin or filling carrier, are and may be all substantially as provided for in United States Patent No. 575,308, dated January 12, 1897, and in practice this loom will have coöperating with it a filling-carrier feeder and a pusher, all as provided for in said patent, to put a fresh filling-carrier into the shuttle whenever the filling has been broken or exhausted in the shuttle.

To insure the correct positioning of the shuttle in the shuttle-box under the pusher referred to, I have provided the shuttle-box at its front side with a front plate G, having ears presenting elongated opening for the reception of screws *g*, by which to confine the front plate in adjusted position. The inner side of this front plate, (see Fig. 1,) near its outer end, is provided with an inclined surface *g'*, which will preferably be of such shape as to conform, substantially, to the contour of the shuttle just back of its point *e*, so that as the said shuttle arrives fully into the box its inclined side will meet and bear against the inclined face of the front plate, the further movement of the shuttle in that direction being stopped by the said incline *g'*, the binder acting on the shuttle at its opposite flat side back of the pointed end, thus seating the shuttle against the said incline *g'*, so that the said shuttle will be checked and positioned correctly with relation to the slot in the lay, through which the spent filling-carrier in the shuttle may be ejected. The rigid front plate acts to receive against it the front side of the shuttle, the shuttle being acted upon at its rear side by the binder, which coöperates with the flat or straight side of the shuttle between its pointed ends, the binder exactly positioning the shuttle with its filling-carrier, so that the latter may be correctly ejected from the shuttle and so that the shuttle will be so placed that the transferrer, whenever it operates, can unerringly put a new filling-carrier into the shuttle, and, further,

the binder being extended along the back of the lay throughout the length of the shuttle prevents any possible displacement of the shuttle with relation to the width of the lay and the slot made in the same, as described.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

The lay slotted for the movement of the picker-stick and for the discharge of a bobbin-carrier from the shuttle employed on the race of the lay, a front plate adjustably connected to the lay at its front side at one side of said slot, and provided near its outer end with an inclined face shaped to conform with the shape of the taper of the shuttle between its tip and its flat side, combined with a binder pivoted at the rear side of the lay and bear-

ing on the shuttle at its flat side at the rear of the inclined point on which the said inclined face of the front plate bears, and a spring acting on said binder to hold it against the shuttle, the said binder constituting a wall along the inner side of the race and preventing any possible displacement of the shuttle with relation to the said slot in the raceway through which the filling-carrier is to be ejected, substantially as described.

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

JOSEPH A. CLAUS.

Witnesses:

ALBERT M. MOORE,
GRACE E. HIBBERT.