(No Model.)

# S. J. NOISEUX.

## SHUTTLE BINDER FOR LOOMS.

No. 404,649. Patented June 4, 1889.

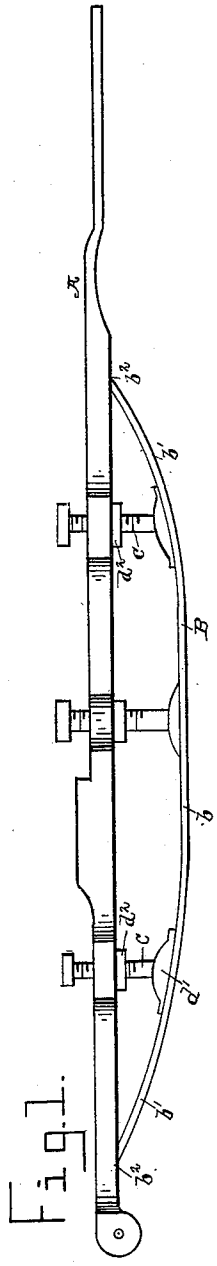

Fig. 1.

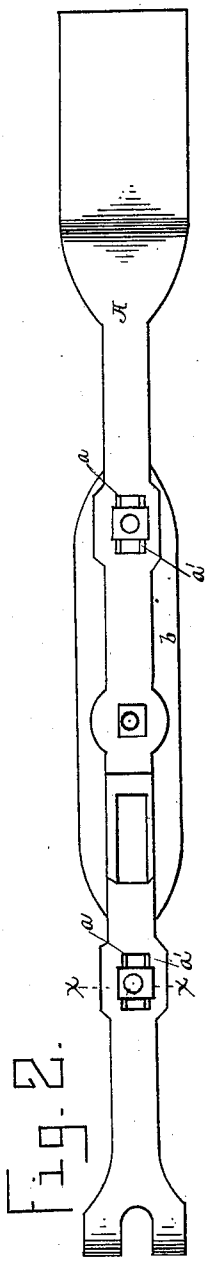

Fig. 2.

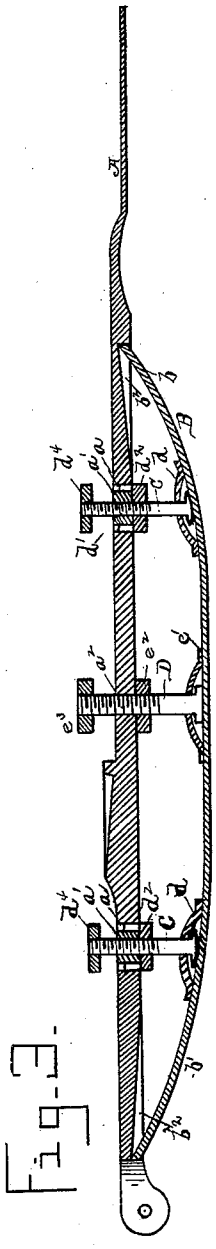

Fig. 3.

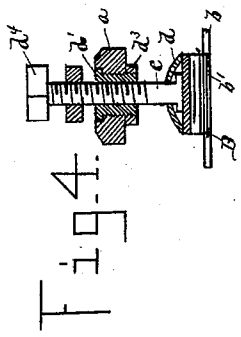

Fig. 4.

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# UNITED STATES PATENT OFFICE.

SAMUEL JEREMIE NOISEUX, OF SOMERVILLE, CONNECTICUT.

## SHUTTLE-BINDER FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 404,649, dated June 4, 1889.

Application filed April 25, 1888. Serial No. 271,794. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL JEREMIE NOISEUX, a citizen of the Dominion of Canada, residing at Somerville, in the county of Tolland and State of Connecticut, United States of America, have invented certain new and useful Improvements in Shuttle-Binders for Looms, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to certain new and useful improvements in shuttle-binders, having for its object the production of a device of this class comprising but few parts so arranged with relation to each other that the same is applicable to any size of shuttle.

The invention comprises a spine or back and a spring or bow connected thereto by adjustable bolts and guides, whereby said spring or bow can be given the desired relative arrangement with the spine or back, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of my invention. Fig. 2 is a plan view thereof. Fig. 3 is a central longitudinal section; and Fig. 4 is a cross-sectional view on the line $x\ x$, Fig. 2.

Referring to the drawings, A designates the spine or back, formed at its ends in the usual manner, as shown, the same being of course designed to be employed with a loom. (Not shown.) In this spine or back are formed two slots or openings $a\ a$, having upper grooves $a'$, as shown. Midway between these slots or openings is formed a central hole or aperture $a^2$.

B is a spring or bow, preferably constructed in the form shown—namely, with a flat central portion $b$ and curved or inclined ends $b'\ b'$, which are designed to project into grooves $b^2\ b^2$ in the under side of the spine or back A.

C C are two rods or bolts loosely secured at their lower ends to the inner face of the spring or bow B by means of apertured caps $d\ d$. The inner heads of these rods or bolts are free to turn in said caps. Each rod or bolt C is projected through the hereinbefore-mentioned slots or openings $a\ a$, and upon each of these rods or bolts is screwed a guide-block $d'$, disposed in the slots or openings $a$, and the upper shoulders of said guide-blocks are designed to rest within the grooves $a^2$, and the same are held in position by means of nuts $d^3$, screwed on the lower circular portions thereof and bearing against the under side of the spine or back. Upon the extreme upper ends of the rods or bolts C are secured outer heads $d^4\ d^4$, by means of which the rods or bolts C can be turned the desired extent, according to the inclination it is designed to give the operative face of the bow or spring B.

By reason of the inner ends of rods or bolts C being secured on the bent or inclined ends of bow or spring B the guide-blocks $d'$, through which said rods or bolts pass, are disposed in the slots or openings $a\ a$ so as to permit said guide-blocks to move longitudinally in adjusting said bow or spring.

D is a central threaded rod or bolt likewise loosely secured to the spring or bow B by means of a cap $e'$, and said rod or bolt is provided with an inner nut $e^2$ and with an outer head $e^3$, and by means of said nut $e^2$ the movement of said bolt is limited or regulated as may be desired.

The use and advantages of my invention will be apparent to those skilled in the art to which it appertains, and it will be particularly seen that by means thereof the bow or spring can be readily and easily adjusted and secured at the desired inclination to suit the taper of any given shuttle.

From the foregoing description it will be seen that any desired shape or curvature can be given to the face of the binder by simply adjusting rods or bolts, and that any desired permanent friction can be put upon the shuttle; and it will also be seen that by means of my invention the binder can be adjusted to any size shuttle as often as may be desired without weakening the spring or bow.

My improved binder, being made preferably of steel or other metal, is extremely lasting and will outwear any form of binder heretofore known or used; and my invention embodies advantages in points of simplicity, durability, general efficiency, and inexpensiveness.

I claim as my invention—

1. The spine or back having the slots or openings and the spring or bow having rods or bolts loosely secured thereto, and provided

with guide-blocks resting in said slots or openings, and having threaded apertures through which said rods or bolts project, substantially as shown and described.

2. The combination, with the spine or back, of the spring or bow, the nutted rods or bolts secured thereto and projecting through apertures in said spine or back, and the guide-blocks wherein work said rods or bolts, substantially as shown and described.

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

SAMUEL JEREMIE his × mark NOISEUX.

Witnesses:
LOREN GRISWOLD,
CHAS. R. POLLARD.