M. P. & D. TODD.

HAND LOOM.

APPLICATION FILED NOV. 11, 1909.

975,179. Patented Nov. 8, 1910.

Fig. 1

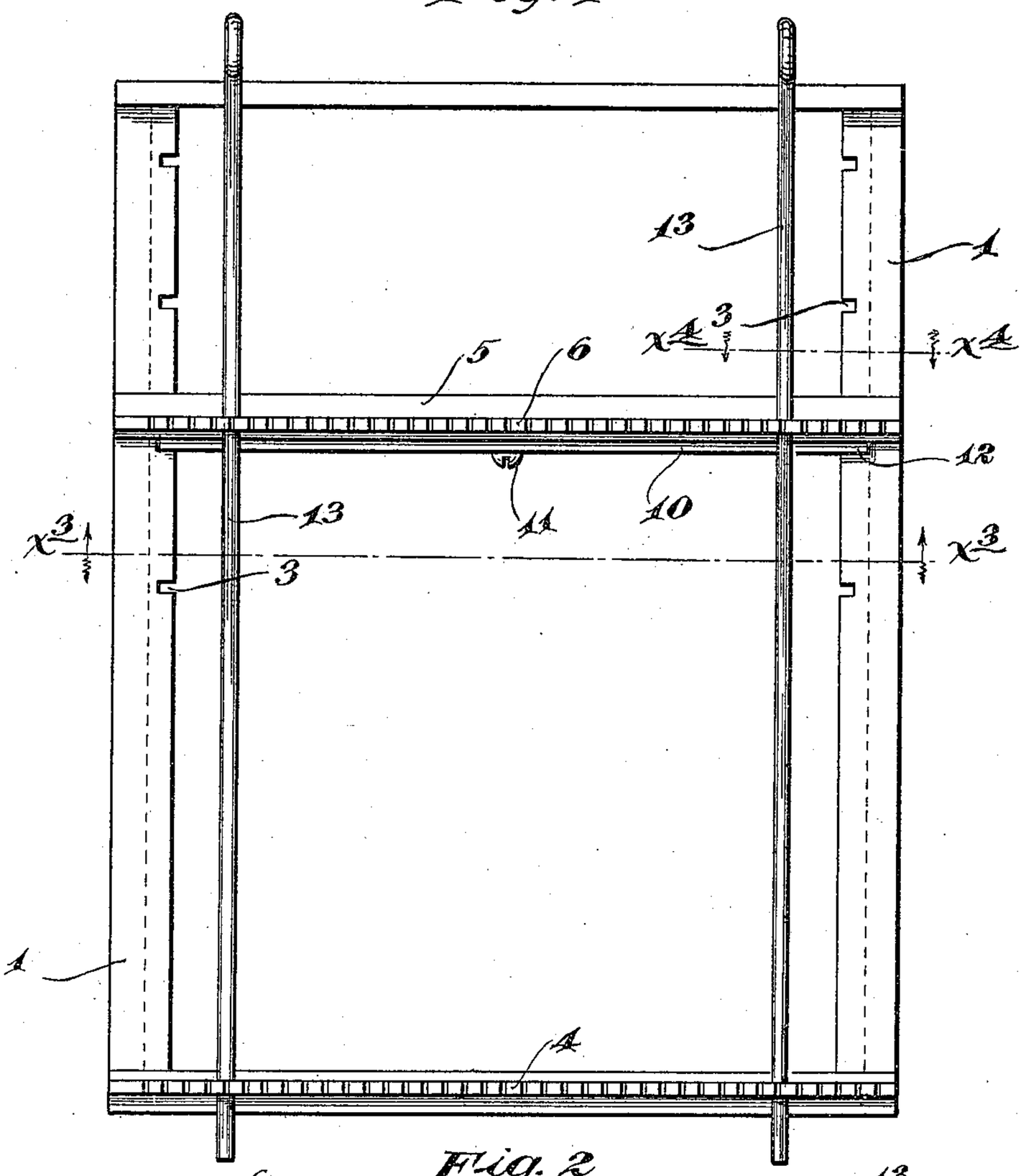


Fig. 2

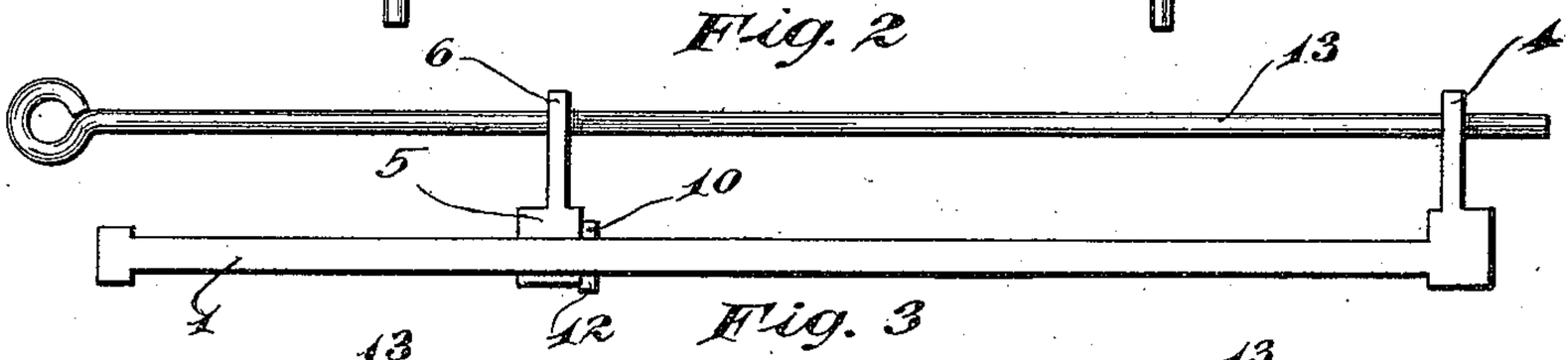


Fig. 3

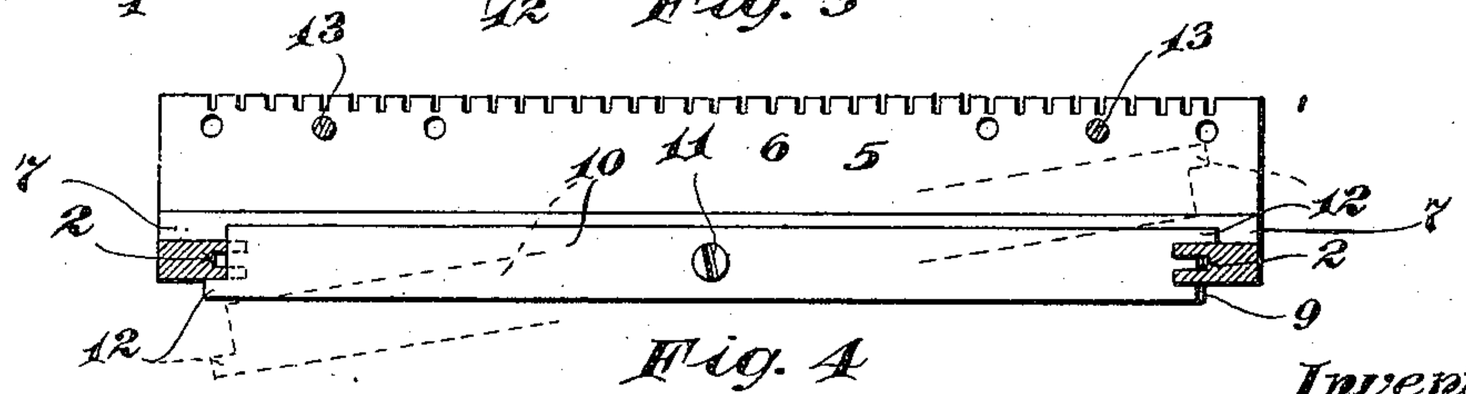
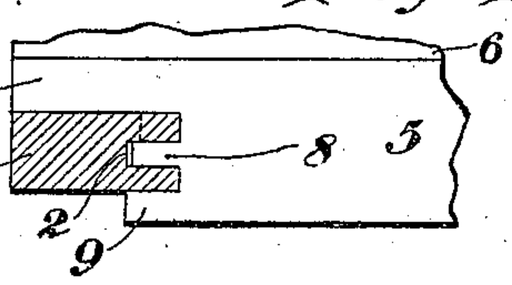


Fig. 4



Witnesses:
L. L. Simpson,
A. H. Oswald

Inventors:
Martha P. Todd
Dana Todd
By their Attorneys:
Williamson Merchant

UNITED STATES PATENT OFFICE.

MARTHA P. TODD AND DANA TODD, OF MINNEAPOLIS, MINNESOTA.

HAND-LOOM.

975,179. Specification of Letters Patent. **Patented Nov. 8, 1910.**

Application filed November 11, 1909. Serial No. 527,377.

To all whom it may concern:

Be it known that we, MARTHA P. TODD and DANA TODD, citizens of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Hand-Looms; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our present invention relates to kindergarten looms of the general character set forth and claimed in our prior Patent No. 679,132, of date July 23, 1901, and is particularly designed as an improvement on the loom disclosed and claimed in our later Patent No. 748,120 of date December 29, 1903. In the said later patent, the side bars of the loom frame were provided with notches on its inner edges and an adjustable warp supporting bar was arranged for engagement with the said notches to hold said adjustable bar in different positions in respect to a relatively fixed warp supporting bar. The present invention is an improvement on this construction and provides, as a supplemental part of the adjustable warp supporting bar, a lock bar which is intermediately pivoted thereto and is engageable at its opposite ends with the notches of the side bars of the loom frame.

In the accompanying drawings, which illustrate the invention in its preferred form, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a plan view, showing the complete loom; Fig. 2 is a side elevation of the loom; Fig. 3 is a transverse section taken on the line x^3 x^3 of Fig. 1; and Fig. 4 is an enlarged section taken on the line x^4 x^4 of Fig. 1.

The body of the loom is in the form of a rectangular frame 1, the side bars of which, on their inner edges, are formed with longitudinal grooves 2 and longitudinally spaced lock notches 3. One of the end bars of the frame 1 is provided with an upwardly extended flange 4 that is notched to afford a series of projections over which the warp threads may be turned and by which the warp may be secured and properly spaced. An adjustable warp supporting bar 5, having a notched flange 6 for spacing and supporting the warp and for coöperation with the notched flange 4, is arranged to slide upon the notched sides of the frame 1. In this preferred construction, the above noted sliding engagement, between the ends of the adjustable bar 5 and the sides of the frame 1, is accomplished by the engagement of upper, lower and intermediate finger-like projections 7, 8 and 9 on the ends of the said bar 5 respectively, with the upper and lower surfaces of the side bars of the said frame 1 and with the longitudinal grooves 2 thereof. This engagement, while permitting free sliding movements of the bar 5 on the sides of the frame 1, holds the former against oscillatory or rocking movements. The said bar 5 is adapted to be placed in interlocked sliding engagement with the sides of the frame 1 or to be detached therefrom by turning the said bar 5, in the plane of the said frame, into an oblique position in respect to the said side bars.

The lock bar 10, which is preferably a thin wooden strip, is intermediately pivoted to the bar 5, preferably by a screw 11, and the ends thereof are adapted to be turned into or out of engagement, at will, with any one of the transverse alined pairs of the lock notches 3. When engaged with the lock notches, as stated, the lock bar 10, as is evident, locks the bar 5 against sliding movement on the side bars of the frame. To limit the pivotal movement of the lock bar 10, in one direction, in the lock position best shown in Fig. 3, it is provided at its ends with stop lugs or projections 12, one of which is located below the coöperating notched side bar and the other of which is located above its coöperating notched side bar.

The numeral 13 indicates side rods which are inserted endwise through alined perforations in the notched warp supporting flanges 4 and 6. The rods 13 form no part of the present invention, and the purpose and operation thereof are fully disclosed and the said rods are broadly claimed in our prior Patent No. 679,132, further identified above.

The drawing strain of the warp tends to move the bar 5 toward the relatively fixed warp supporting bar and, hence, the lock lever 10 is preferably applied to that side of the bar 5 which is nearest to the said fixed warp supporting bar, in the position that is best adapted to withstand the drawing strain of the warp.

The improved loom above described is of simple construction and of small cost and has the very great advantage that it may be very easily operated and, hence, is especially well adapted for use by children in kindergarten and elsewhere.

What we claim is:

1. The combination with a loom frame provided with notches in its side bars, of a warp supporting bar mounted to slide on said frame while operatively connected thereto and provided with a pivoted lock bar engageable with the notches of said frame, to adjustably hold said warp supporting bar in different positions.

2. The combination with a loom frame having lock notches in the inner edges of its side bars, of a warp supporting bar mounted to slide on the notched side bars of said frame while operatively connected thereto and provided with a pivoted lock bar engageable with the notches of said side bars, to adjustably hold said warp supporting bar in different positions.

3. The combination with a loom frame having lock notches in the inner edges of its side bars, of a warp supporting bar mounted to slide upon the notched side bars of said frame while operatively connected thereto and provided with an intermediately pivoted lock bar, the ends of which are engageable with the notches in said side bar, to hold said warp supporting bar in different adjustments thereon, substantially as described.

4. A loom frame having in the inner edges of its side bars longitudinally extended grooves and longitudinally spaced lock notches and provided at one end with a fixed warp supporting bar in combination with an adjustable warp supporting bar having end projections arranged to embrace the said notched bars and to engage the longitudinal grooves thereof, and a lock bar intermediately pivoted to said warp supporting bar, engageable at its ends with the lock notches of said side bars and provided at its said ends with projecting stop lugs located on opposite sides of the coöperating notched side bars, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

MARTHA P. TODD.
DANA TODD.

Witnesses:
HARRY D. KILGORE,
F. D. MERCHANT.