

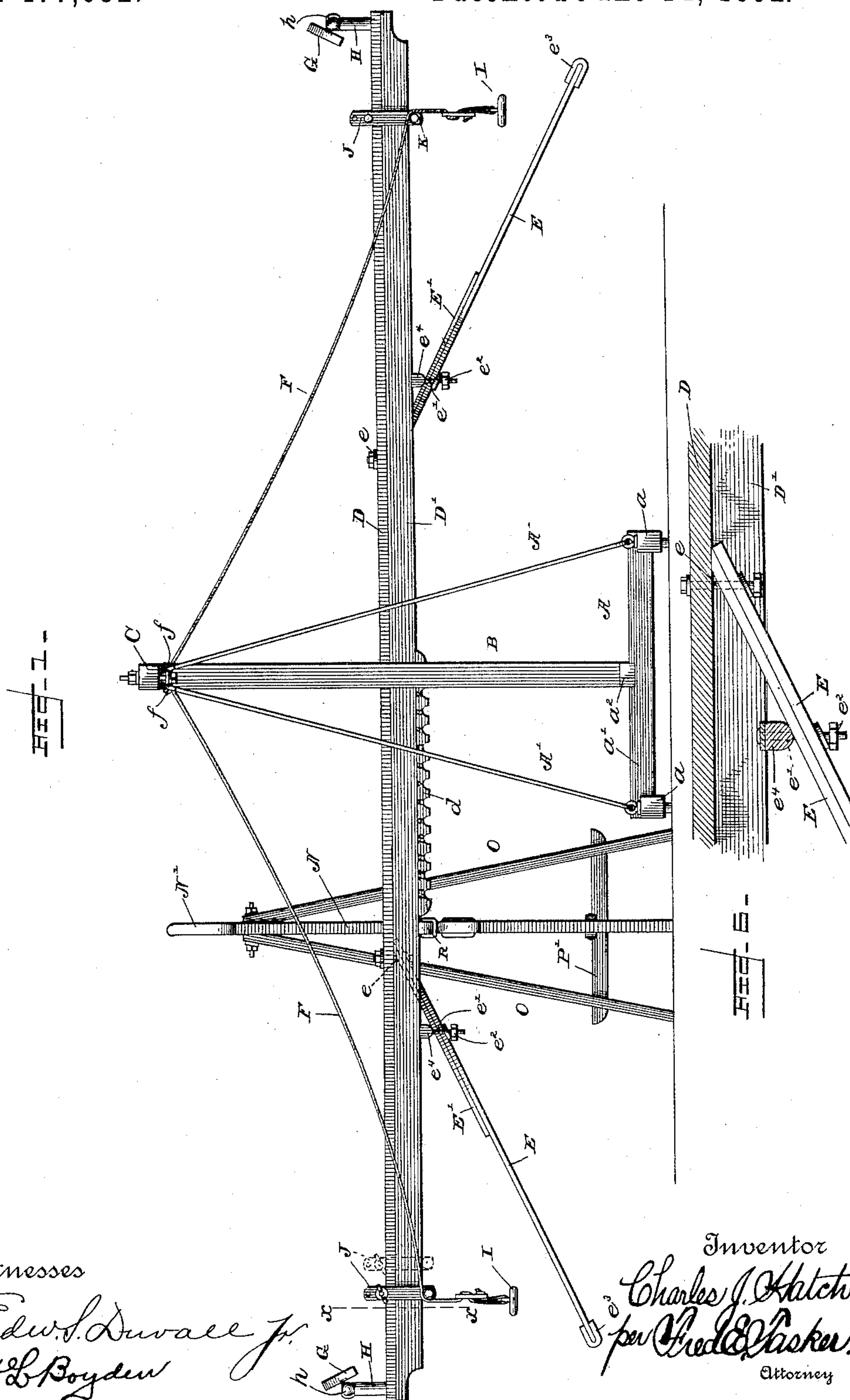
(No Model.)

2 Sheets—Sheet 1.

C. J. HATCH.  
SEESAW.

No. 477,052.

Patented June 14, 1892.



Witnesses

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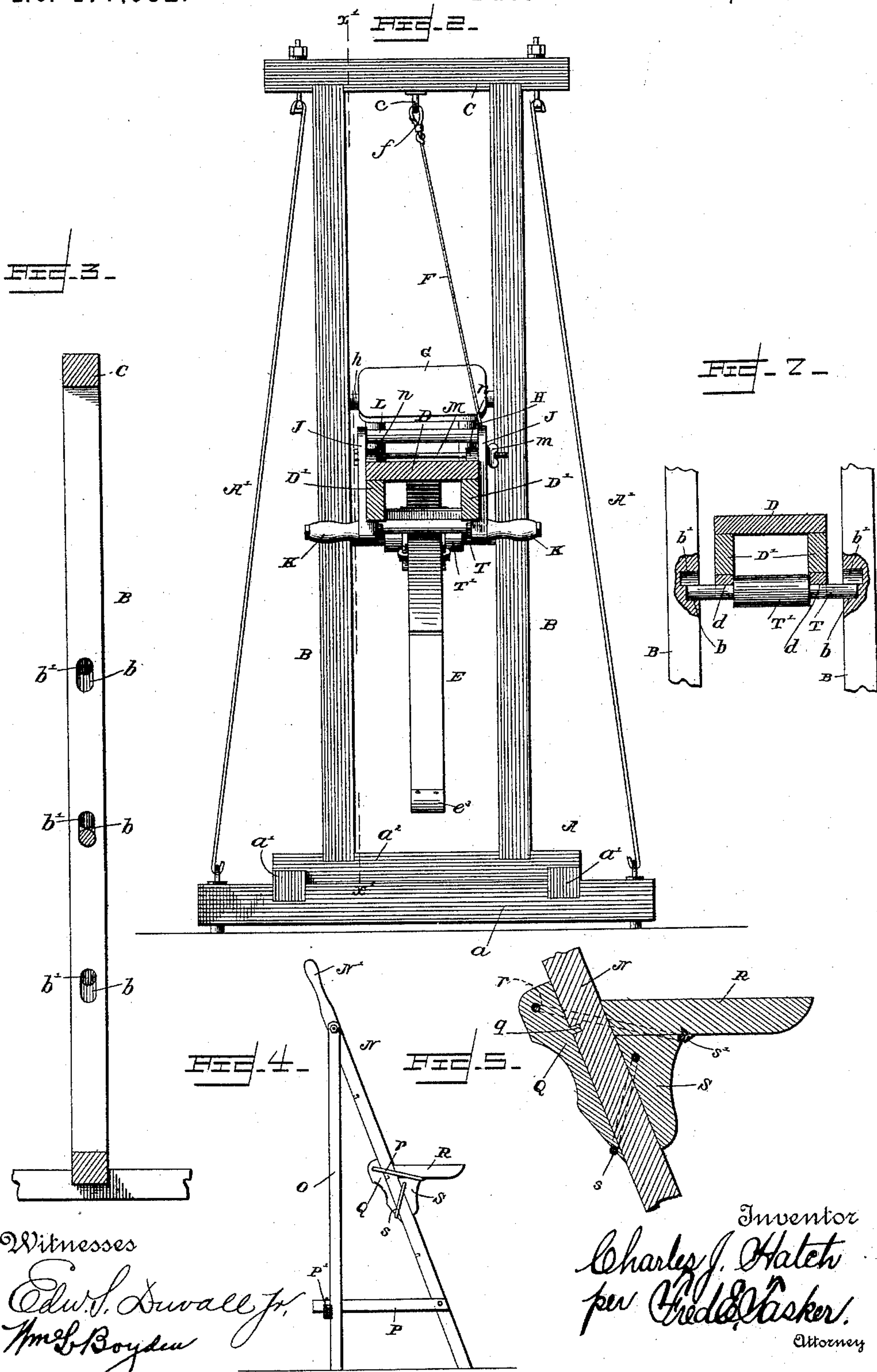
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# UNITED STATES PATENT OFFICE.

CHARLES J. HATCH, OF BAYONNE, NEW JERSEY.

## SEESAW.

SPECIFICATION forming part of Letters Patent No. 477,052, dated June 14, 1892.

Application filed February 4, 1892. Serial No. 420,283. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES J. HATCH, a citizen of the United States, residing at Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Seesaws; and I 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.

This invention relates to an improvement in that class of toy devices commonly known as "seesaws," the object of the invention being to provide a portable toy which can be easily taken apart and put together again, and which thus can be readily packed for transportation from place to place when desired, and will prove a useful calisthenic game apparatus when erected or arranged for practical use; and the invention consists in the construction, arrangement, and combination of parts and in numerous details thereof, substantially as will be hereinafter described and claimed.

In the annexed drawings, illustrating my invention, Figure 1 is a side elevation of my improved seesaw. Fig. 2 is an enlarged end elevation of the same in partial section on the line  $x x$  of Fig. 1. Fig. 3 is a vertical sectional elevation on the line  $x' x'$  of Fig. 2, showing the form and location of the slots in the side uprights of the central supporting structure. Fig. 4 is a detail side view of the independent tripod device which is used to support one end of the seesaw at certain times. Fig. 5 is an enlarged sectional view showing the means for securing the step portion of said tripod device to the brace which holds it. Fig. 6 is an enlarged partial sectional view showing the means for connecting one of the underneath springs to the seesaw-board. Fig. 7 is a detail sectional view showing the supporting-shaft and the arrangement of notches.

Similar letters of reference designate corresponding parts throughout all the different figures of the drawings.

The three main features of my improved seesaw are, first, the elongated supporting-board, which provides seats at each end for the users of the toy; second, the central supporting structure which upholds the board at a proper point near the middle of its length,

thus providing a fulcrum on which the board can have an alternate up-and-down or reciprocatory movement, and, third, an independent removable tripod-support, which can be placed underneath any point of the movable board for the purpose of holding the latter temporarily in a horizontal position, as shown in Fig. 1, to permit the users of the device to mount it before beginning to operate it or for other purposes, and these three main parts are constructed and provided with numerous details and adjunctive parts, as I shall now describe.

Referring first to the central structure, which provides the fulcrum whereon the seesaw-board may vibrate, it will be seen that it consists of a base A, a pair of uprights B B, and a horizontal cross-beam C, supported upon the upper ends of these uprights. The base A consists, preferably, of the two parallel bars  $a a$ , provided with feet, as shown, if desired, the pair of horizontal parallel bars  $a' a'$ , which rest upon the bars  $a a$  at right angles thereto and enter slots cut in bars  $a a$ , being themselves rabbeted for the purpose of forming the connection, and these bars  $a' a'$  support at their middle point the transverse connecting-bar  $a^2$ , which is rabbeted and which rests in slots cut in the bars  $a' a'$ . (See Fig. 2.) This transverse bar  $a^2$  receives in slots cut therein the lower ends of the uprights B B. The upper beam C and the two bottom bars  $a a$  are provided at each end with eyebolts or other similar suitable equivalent devices, to which are connected the braces A', which securely connect the top and bottom portions of the central structure and maintain the uprights B B in a firm and solid perpendicular position.

D represents the elongated vibratory board of the seesaw. It may be of any suitable and preferable length, width, and other dimensions. It is provided on each side with the lateral cleats D', which are furnished on their lower edges at points somewhere near the center of the length of the board with rows of notches, preferably of curved or semicircular form  $d$ . In the drawings I have, for the sake of an example, represented rows of thirteen, which are numbered from "1" to "13." These notches permit an endwise adjustment of the



board relatively to its support in order to suit different weights on the different ends thereof.

Between the uprights B B is a horizontal support T, consisting of a short round shaft 5 the ends of which are held in holes in the uprights B B. By reference to Fig. 3 it will be seen that the inner opposing sides of said uprights are provided with a series of inwardly-cut slots *b*. In Fig. 3 I have shown three of 10 these. A portion—say about half—of each slot at *b'* is deeper than the other part. This permits the fulcrum-shaft T to be readily inserted by being thrust into the deepest portion *b'* and then dropped into the lower parts 15 of the slot, the inside faces of which are the same distance apart on the opposite uprights as the length of the shaft T. The provision of a series of openings *b* permits the short shaft T to be adjusted at the desired height 20 to allow of a greater or less vibration of the seesaw-board. After the said board has been once placed in position between the uprights B B it will be noted that its height can be changed whenever desired without removing 25 it from such position, the change being effected by allowing one end to rest upon the tripod-support, while the other end is lifted and the supporting shaft T readjusted in different holes. The notches *d* engage the shaft 30 T. Said shaft is formed with an enlargement at the middle portion thereof, which rests between the lateral flanges D' D', thus accomplishing a better connection between the seesaw-board and the shaft and permitting an 35 easier movement of the two in conjunction with each other when the device is in actual operation. It will be evident that the connection between the notched sides of the board and the shaft T is a gravity connection 40 merely and that the board can easily be lifted whenever desired.

At each end of the board D is a seat-back G, which is hinged to the horizontal bar *h*, supported on uprights H H, which are fast- 45 ened in any desirable way to the ends of the board D. The ends of the bars *h* are formed with handles, so that they may be readily grasped whenever it is desired to move the seesaw up and down by hand. The seat-backs 50 G can be adjusted at any desired inclination by means of their hinged connection in order to suit the user. It will be evident that a child may be seated upon each end of the board D with his or her back against the 55 part G.

The oscillating or vibratory seesaw-board it provided on its under side with inclined flat springs, which are designed to strike the floor as the seesaw vibrates, and thus cause 60 a rebound or cushion and make elastic the movement of the device. These springs may vary widely in their construction. I preferably make them of a thin, flat, tough, and elastic strip of wood E, tipped at its lower end with 65 a rubber or other elastic tip *e*<sup>3</sup>. These springs E are preferably reinforced by similar shorter strips E', which lie along the upper half-section thereof.

The upper ends of the springs E and their conjunctive reinforcing-strips E' are securely fastened to the board D by 70 means of bolts *e* or in any other suitable way, and I also preferably employ other bolts *e'*, which pass through short transverse strips *e*<sup>4</sup>, which are secured to the under edges of the sides D', and which bolts *e'* are provided with 75 nuts *e*<sup>2</sup> and also with washers which bind against the springs and securely hold them. Thus it will be seen that the springs are held at all points, to wit: first, their upper extreme 80 ends, and second, at points a short distance below those points. It will be evident that as the seesaw vibrates up and down the rubber-tipped ends of the springs will touch the floor and assist in making the movement of the device easy, pleasant, and efficient. 85

The board D is provided at points near each end thereof with foot-supporting frames consisting of vertical bars J J, situated on the outside faces of the flanges D', which bars J J 90 are connected together at the top by a cross-piece L, while the lower ends of bars J are provided with the horizontal rods K, which are rounded and afford nice supports for the feet of the child who may be seated upon the board D, said rounded bars K being supported 95 on bolts that pass through them and through the lower ends of the bars J. The bars J are also connected by means of a bolt M, situated a little below the connection L, said bolt being provided on its outer screw-threaded end 100 with a thumb-nut *m*, which can be screwed up so as to tightly clamp the bars J to the sides D' of the seesaw-board. Small semi-circular blocks *n* rest upon the upper face of the board D and through them pass the bolt 105 M, and these blocks serve to keep the bars J in a vertical position when the clamping process is going on. Thus it will be seen that these foot-supporting frames, constructed substantially in the manner that I have 110 described, can be adjusted from point to point upon the seesaw-board so as to permit of their location either nearer to or farther away from the seat-backs G.

F F designate cords, ropes, or cables, which 115 are provided at their ends with adjustable handles I, which are easily grasped by the hand of the child or person using the apparatus, and the opposite ends of these ropes are provided with snap-hooks, which engage an 120 eyebolt on the upper cross-bar C of the central supporting structure of the apparatus. The child by pulling upon the rope can operate the device.

The independent tripod structure, to which 125 I have hereinabove referred as being valuable for use for various purposes in supporting one end of the vibratory board at certain times, is shown in detail in Fig. 4, and also appears clearly in Fig. 1, and it consists of three bars 130 N and O O, said bars O O being pivoted to the bar N at a short distance below the upper end thereof, which is formed as a handle N'. To the bar N, near the lower end thereof, is piv-



5 oted a horizontal bar P, which has its oppo-  
 site end connected to a cross-bar P', which  
 connects the two bars O O. Of course all  
 these parts are readily separable from each  
 other when desired for the purpose of taking  
 the apparatus apart. R designates a flat hori-  
 zontal step having the downward extension S  
 10 formed with an inclined edge, which permits  
 it to be seated upon the edge of the inclined  
 bar N. The opposite edge of the bar N has lo-  
 cated against it a block Q, provided with a  
 small projection or lug q, which enters a cor-  
 responding notch in the bar N. Loops r and  
 15 s connect these parts together, all as clearly  
 shown in Fig. 5, and it will be noted that the  
 link s passes through a perforation in the ex-  
 tension S, so that it is permanently connected  
 to the extension S, and its free end is adapted  
 20 to pass over the lower pointed end of the  
 block Q and enter a notch in the edge there-  
 of. The other link r passes through a perfo-  
 ration in the block Q near the upper end  
 thereof, and is thereby permanently connect-  
 ed to the block Q, while its free end engages a  
 25 notch in the step R. By lifting the step R  
 the links can be thrown loose, so that those  
 parts may all be slid off from the bar N.  
 They are readily fixed in position, however,  
 upon said bar by causing the lug q to enter  
 30 its notch or hole and then depressing the step  
 R as much as possible and causing the links  
 to assume the position shown in dotted lines  
 in Fig. 5, after which a small screw s' is pref-  
 erably inserted into the under side of the  
 35 step R for the purpose of holding the link r  
 in immovable position.

The operation of the apparatus will be evi-  
 dent from the foregoing description of the con-  
 struction without need of further explanation,  
 40 and, also, it will be noted that various parts  
 of the device may be modified in form and lo-

cation and adaptation without departing from  
 the invention, and I reserve the liberty of va-  
 rying the combination of parts in numerous  
 details in order to cause it to serve the best  
 45 practical use in various locations.

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

1. In a seesaw, the combination of the cen- 50  
 tral support consisting of the base A, the up-  
 rights B B, the upper cross connecting-bar C,  
 and the adjustable fulcrum T, which is sup-  
 ported in slots in the inner opposing faces of  
 the uprights B B, the vibrating board D, and 55  
 the foot-supporting frames provided thereon,  
 consisting of the side bars J J and foot-sup-  
 ports K K, carried thereby, substantially as  
 described.

2. The combination, with the board D and 60  
 its support, of the foot-supporting frames con-  
 sisting of the vertical side bars J J, connec-  
 tion L, foot-supports K K, carried by the lower  
 ends of the bars J, and clamping-bolt M, sub-  
 stantially as described. 65

3. The combination, in seesaw apparatus,  
 with the vibrating board thereof, of foot-sup-  
 porting frames consisting of the side bars J  
 J, connected by the upper rod L, said bars  
 carrying at their lower ends the foot-support- 70  
 ing bars K K and the clamping-bolt M, and  
 the hinged seat-backs G G, carried by the  
 horizontal handle-ended bars h, mounted on  
 uprights H, supported on the ends of the  
 board D, substantially as described. 75

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

CHARLES J. HATCH.

Witnesses:

JAMES BENNY,  
 ROBERT E. NAYLOR.