F. T. THEBERT.

ROTATABLE SEESAW.

APPLICATION FILED JUNE 11, 1917.

1,254,174.

Patented Jan. 22, 1918.

2 SHEETS—SHEET 1.

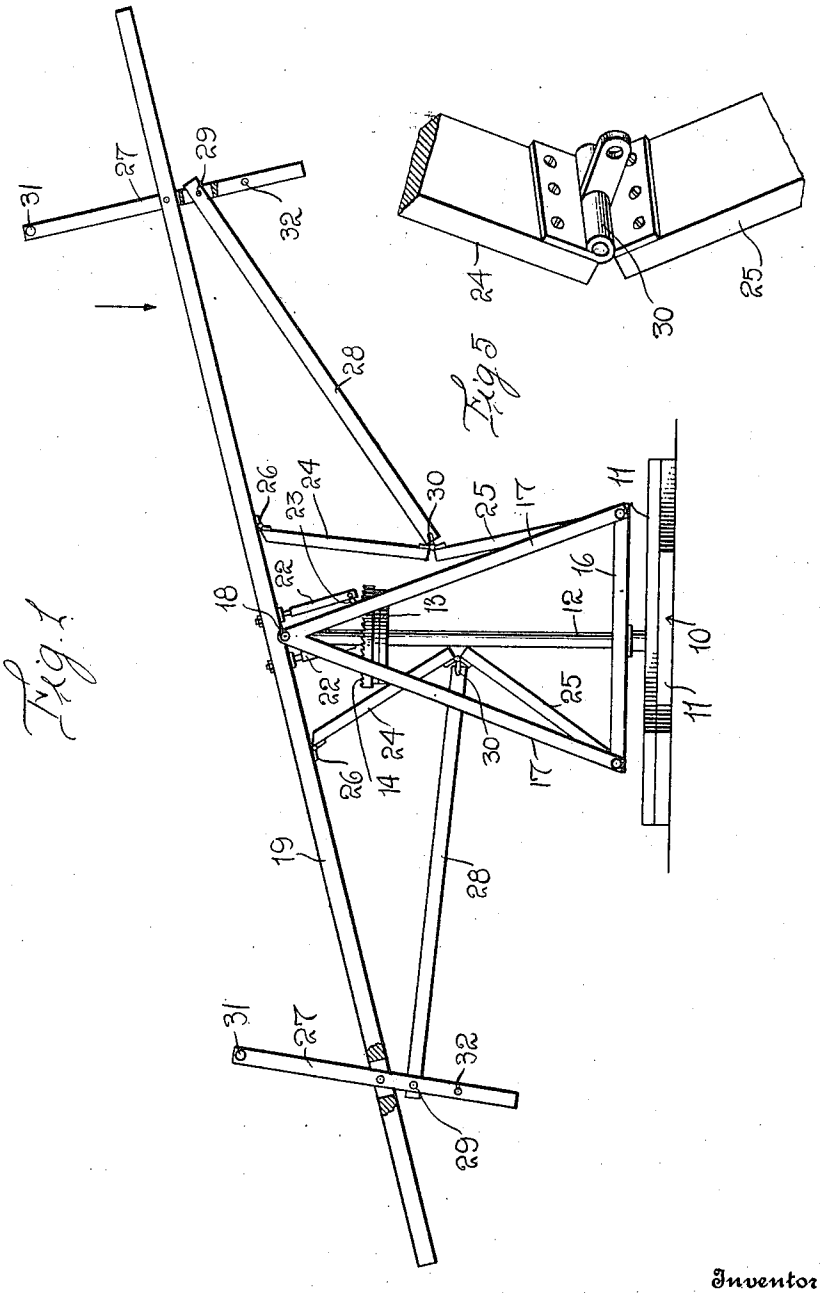


Fig. 1.

Fig. 5

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Fig. 4

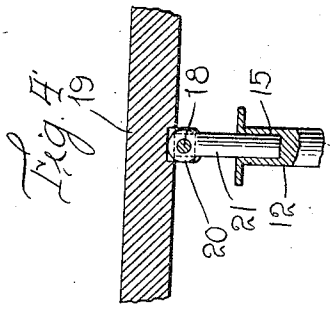


Fig. 2

Fig. 3

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FREDERICK T. THEBERT, OF BESSEMER, MICHIGAN.

ROTATABLE SEESAW.

1,254,174. Specification of Letters Patent. Patented Jan. 22, 1918.

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To all whom it may concern:

Be it known that I, FREDERICK T. THEBERT, a citizen of the United States, residing at Bessemer, in the county of Gogebic and State of Michigan, have invented certain new and useful Improvements in Rotatable Seesaws, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to see-saws, and the general object of the invention is to provide a see-saw in which the beam is not only mounted for oscillation in a vertical plane, but is also mounted for rotation in a horizontal plane, means being provided whereby the beam shall be rotated as the beam is oscillated and by the act of oscillating the beam.

A further object of the invention is to provide improved means for causing a rotation of the beam in a horizontal plane, as it is oscillated, this means being very simple and not liable to get out of order.

A further object is to provide improved means for causing the vertical oscillation of the see-saw beam, which will be very effective for the purpose intended and whereby relatively great power may be transmitted to cause the oscillation of the see-saw by the use of relatively little strength on the part of the operators.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of a see-saw constructed in accordance with my invention;

Fig. 2 is a fragmentary perspective view showing the means whereby the see-saw beam is rotated, as the see-saw is oscillated;

Fig. 3 is a section through the beam to show the pivotal support for the beam and allied parts;

Fig. 4 is a vertical section on the line 4—4 of Fig. 3;

Fig. 5 is a fragmentary perspective view of the knuckle connection between the toggle links and the link 28.

Referring to these drawings, 10 designates a base which is illustrated as formed of crossed members 11, bolted to each other in their crossed relation and extending upward from these members is a central fixed shaft 12, which carries the fixed ratchet wheel 13, the upper face of which is formed with radiating ratchet teeth 14, the ratchet wheel being concentric to the shaft 12. At its upper end the shaft 12 is formed with a socket 15.

Mounted upon the lower end of the shaft 12 and rotatable therearound is a supporting member 16 and extending upward and inward from the ends of this supporting member are the supporting braces 17. There are two of these braces on each side and the braces are connected at their upper ends by means of a transverse bolt 18, this bolt or pivot 18 being rotatably mounted in the upper ends of the braces 17. The middle portion of the pivot 18 is preferably rectangular in form and is attached to the see-saw beam 19 in any suitable manner. The middle portion of the pivot 18 is embraced by an eye 20, from which extends a member 21, which is inserted in the socket 15 and rotates therein, the pivot 18 rotating in this eye. It will be obvious that with this construction the beam 19 will not only oscillate vertically but may rotate around the standard 12. For the purpose of causing such a rotation upon an oscillation of the beam 19, I attach to the under face of the beam, in any suitable manner, at diametrically opposite points, the downwardly extending hangers 22, which at their lower ends are bifurcated and pivotally support pawls 23, these pawls extending in opposite directions and coacting with the teeth 14. It will be obvious now that as the beam 19 is oscillated in one direction, one of the hangers 22 will move in the direction of the arrow (see Fig. 1) that is in the direction of inclination of the teeth 14, while the other hanger 22 will move in an opposite direction and also move upward. Thus the pawl of the first named hanger as it engages with the ratchet teeth, will act to turn the beam in a horizontal plane, or in a plane at an angle to the plane of the standard 12, while the other pawl will be rendered inoperative and then as the beam oscillates in the other direction, the second named pawl will become operative and the first named pawl will become inoperative and thus a continuous rotary movement will be given to the beam 19, as it is oscillated.

While I do not wish to be limited to any particular manner of oscillating this beam 19, I have shown opposite disposed pairs of toggle [illegible] the uppermost links 26 are [illegible] to the under

face of the beam 19, as at 26, the lowermost links being hingedly connected to the upper face of the supporting bar 16. Pivotally mounted adjacent the ends of the beam 19 are the operating levers 27, which extend down through slots in the beam 19 and which are slotted for the reception of the adjacent ends of the actuating rods 28, which are pivoted to the levers 27 as at 29. These rods 28, at their lower ends, are operatively pivoted to the hinges 30, which engage the upper link 24, to the lower link 25 on that side, in the manner illustrated in detail in Fig. 5. The upper end of each lever 27 is provided with the cross handle 31 while adjacent the lower end each lever is provided with the foot rests 32.

It will now be obvious that by oscillating the levers 27, the toggle links 24 and 25 will be alternately caused to take a vertical position or an angular position with relation to each other and that when forced into a vertical position they will lift the corresponding end of the beam 19 and when shifted to an angular position they will draw the corresponding end of the beam 19 downward. It will, of course, be understood that the levers 27 are operated in reverse directions so that, for instance, when one lever 27 is pulled toward the end of the beam 19, the other end of the lever is pushed toward the other end of the beam and vice versa. It will also be seen that the children riding on the beam may use both their arms and legs for the purpose of oscillating these levers and inasmuch as the rods 28 are connected to the toggle links 24 and 25, a very great leverage will be secured to cause the vertical oscillation of the beam 19. This vertical oscillation will cause a rotation of the beam 19 around the standard 12 and thus a continuous rotary motion will be transmitted to the beam 19 as well as a vertical oscillation.

While I have illustrated a particular means for securing a vertical oscillation of the beam 19, it is to be understood that I do not wish to be limited to this as other means may be employed for the purpose in conjunction with the means for securing the rotation of the beam around the standard 12. It will be obvious, however, that the construction which I have devised for the purpose of oscillating the beam is very simple, thoroughly effective and that relatively weak children may readily operate this see-saw.

Having described my invention, what I claim is:—

1. A see saw comprising a base, a beam pivotally supported on the base, operating levers pivotally mounted upon opposite ends of the beam, and means for causing an oscillation of the beam upon an oscillation of the levers including members fulcrumed upon the base and bearing against the beam on opposite sides of its pivotal center, said members being operatively connected to the levers.

2. A see-saw comprising a base, a beam pivotally supported upon the base, operating levers pivotally mounted upon opposite ends of the beam and extending below the beam, and members causing an oscillation of the beam upon an oscillation of the levers, said members being pivoted for movement in a vertical plane and operatively bearing against the beam on opposite sides of its pivotal center, and operative connections between said levers and said members.

3. In a see-saw base, a standard mounted thereon, a ratchet wheel mounted upon the standard and having upwardly facing teeth, a supporting member mounted upon the standard but rotatable therearound and having upwardly extending supporting braces, a pivoting member mounted upon the upper ends of said braces for oscillation therein and being disposed above and operatively connected to the standard, a beam mounted upon said pivot member for oscillation and rotation therewith, means for oscillating the beam, hangers mounted on the beam and depending therefrom toward the ratchet teeth, and pawls carried by said hangers and extending in opposite directions and operatively engaging the ratchet teeth.

4. A rotatable see-saw comprising a base, a standard mounted thereon, a ratchet wheel mounted upon the standard, a supporting member rotatably mounted upon the beam and having laterally upwardly extending braces, a beam operatively supported upon said braces for oscillation in a vertical plane, pawls carried by said beam and engaging the ratchet teeth to cause a rotation of the beam, the braces and the supporting member around said standard as the beam is vertically oscillated, oppositely disposed pairs of toggle links each pair being hingedly connected to each other and to the supporting member and the beam, levers pivotally mounted upon the beam, and operating rods pivotally connected to said levers and operatively connected to the toggle links.

5. A rotatable see-saw comprising a base, a standard mounted thereon, a ratchet wheel fixed upon the standard, a supporting member rotatably mounted upon the standard, oppositely disposed braces extending upward from the supporting member in convergent relation, a pivot carried upon the upper ends of the braces and operatively engaging the standard for rotary movement in a horizontal plane, a beam mounted upon said pivot to oscillate and rotate therewith, hangers depending from the beam and diametrically opposed to each other, pawls piv-

oted to the lower ends of the hangers and engaging the teeth on the ratchet wheel, oppositely disposed pairs of toggle links, the links of each pair being pivoted to each other and one of said links being pivoted to the beam and the other to said supporting member, levers pivotally mounted adjacent the extremities of the beam and projecting therethrough, handles attached to the outer ends of the levers, foot rests attached to the lower ends of the levers, and an operating rod pivotally connected to each lever and pivotally connected to the joint between the corresponding toggle links.

6. A see-saw comprising a base, supporting members mounted thereon, a beam pivotally mounted upon said supporting members for vertical movement, levers mounted upon the ends of the beam, oppositely disposed pairs of toggle links, each pair hingedly connected to each other and to the beam and the base respectively, and operating rods pivotally connected to the levers and to said toggle links.

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

FREDERICK T. THEBERT.

Witnesses:

WALLACE H. DAGGETT,

TORSTEN EGGEN.