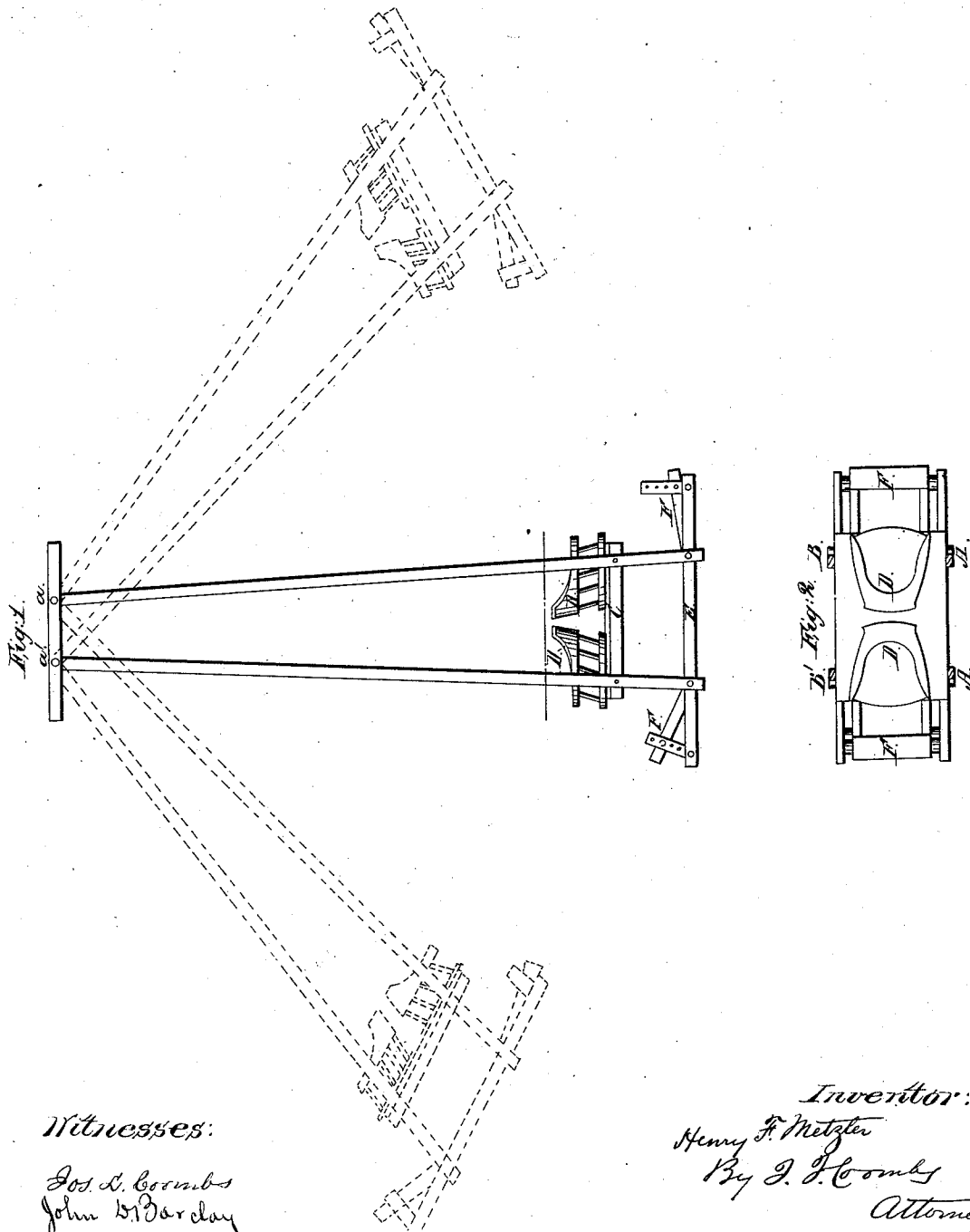


H. F. Metzler,

Swing,

N^o 82,018.

Patented Sep. 8, 1868.



Witnesses:

*Doc. L. Coombs
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Inventor:

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United States Patent Office.

HENRY F. METZLER, OF NEW YORK, N. Y., ASSIGNOR TO LOUISA METZLER,
OF SAME PLACE.

Letters Patent No. 82,018, dated September 8, 1868.

IMPROVEMENT IN SWINGS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HENRY F. METZLER, of New York, in the county of New York, and State of New York, have invented a new and useful Improvement in Swings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing.

Four rods or bars, A, A', B, and B', are suspended from any structure of suitable height, by means of pivot-joints *a a'*, or in any other way which will allow them to vibrate freely. At a convenient distance from the ground or floor for a seat, the suspended bars A and A' are connected by a cross-bar, C, pivoted to said suspended bars so as to form flexible joints, and the opposite bars B and B' are connected in the same way, in the same horizontal plane, by a similar cross-bar. The seat or seats D, (which may be either double or single,) rests upon a platform extending from one of said cross-bars to the other, and rigidly attached to both. At a convenient distance below the seats to form a foot-rest, two other cross-bars E connect the suspended bars A A' and B B' being pivoted thereto in the same manner as said upper bars C, but these cross-bars extend, at each end, some distance beyond the suspended bars to which they are pivoted. Across from end to end of said cross-bars E is a foot-board or treadle, F, at a convenient distance from the seat, and made adjustable to accommodate it to persons of any size. When the seat is single, or when there are two seats, both facing the same way, but one foot-board or treadle will be required.

If the suspended bars are hinged at the top the same distance apart as at the bottom, it is manifest that the seat and cross-bars C and E will maintain a horizontal position throughout the vibrations of the swing. This, however, is not desirable, and I prefer to suspend the vibrating bars so that the distance between A and A', and between B and B' will be about one-half as great at the top as at the cross-bars which support the seat; but in the other direction the vibrating bars are the same distance apart at the top as at the bottom. By varying the distance between said bars at the top and at the bottom, the seat may be made to incline more or less from a horizontal position as the swing vibrates.

This swing may be so constructed as to terminate at the cross-bars which support the seat, having no lower cross-bars or treadle, but a much better effect will be obtained if the lower cross-bars and treadle are added.

When two seats are placed in the same swing, they may be placed both facing one way, or back to back, or may be made in an S-form, or that of a conversation-chair.

A person seated in the swing, by taking hold of the suspended rods or bars, at the most convenient points for the hands, and pulling, will cause the swing to incline forward, and by pressing against the rods with the hands, will cause it to incline backward, and by repeating these motions a few times, the swing may be made to vibrate to any desired height.

If, however, the lower cross-bars and treadle be attached, the person in the swing should press upon the treadle with the feet at the same time the pull is made by the hands, and, when pushing with the hands, should release the pressure of the feet. To stop the swing, it will only be necessary for the operator to reverse the motion by which it was started. When two persons are seated in the swing, facing in opposite directions, they must pull and push alternately.

Having thus fully described my invention, and its mode of operation, what I claim, and desire to secure by Letters Patent, is—

1. The four suspended vibrating rods or bars, in combination with the pivoted cross-bars, for supporting the seat or seats, substantially as and for the purpose described.
2. The four suspended vibrating rods or bars, in combination with the pivoted cross-bars supporting a seat or seats, and the lower pivoted cross-bars and treadle or treadles, substantially as described.

HENRY F. METZLER.

Witnesses:

HENRY BARAGWANATH,
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