

R. A. SMITH.
TOY GYMNASTS.

No. 171,703.

Patented Jan. 4, 1876.

Fig. 1.

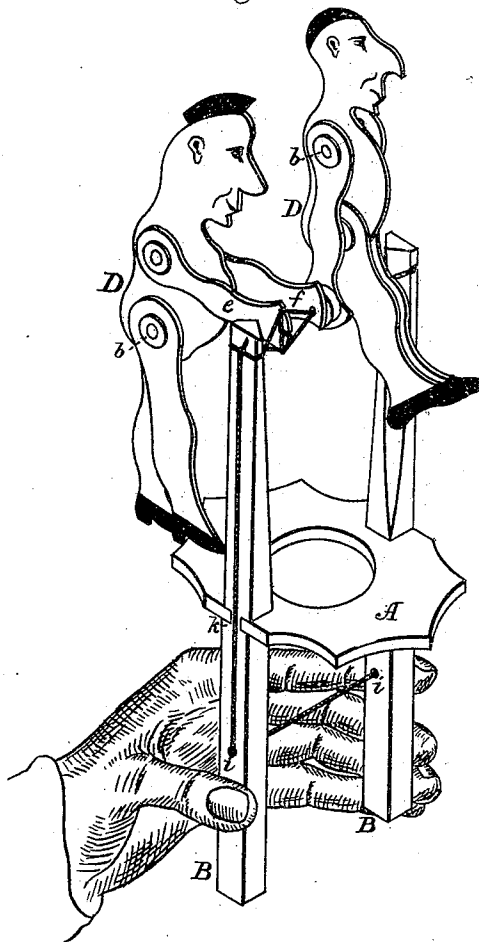


Fig. 2.

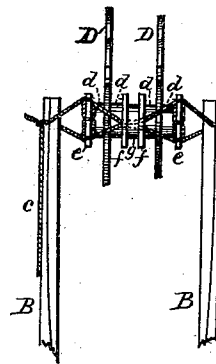


Fig. 3.

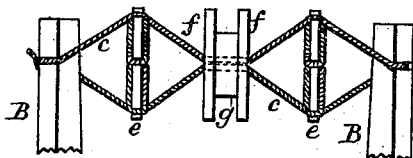
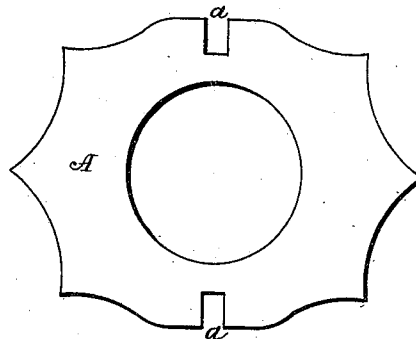


Fig. 4.



Witnesses:

H. H. Schott
J. A. Kemp

Inventor:

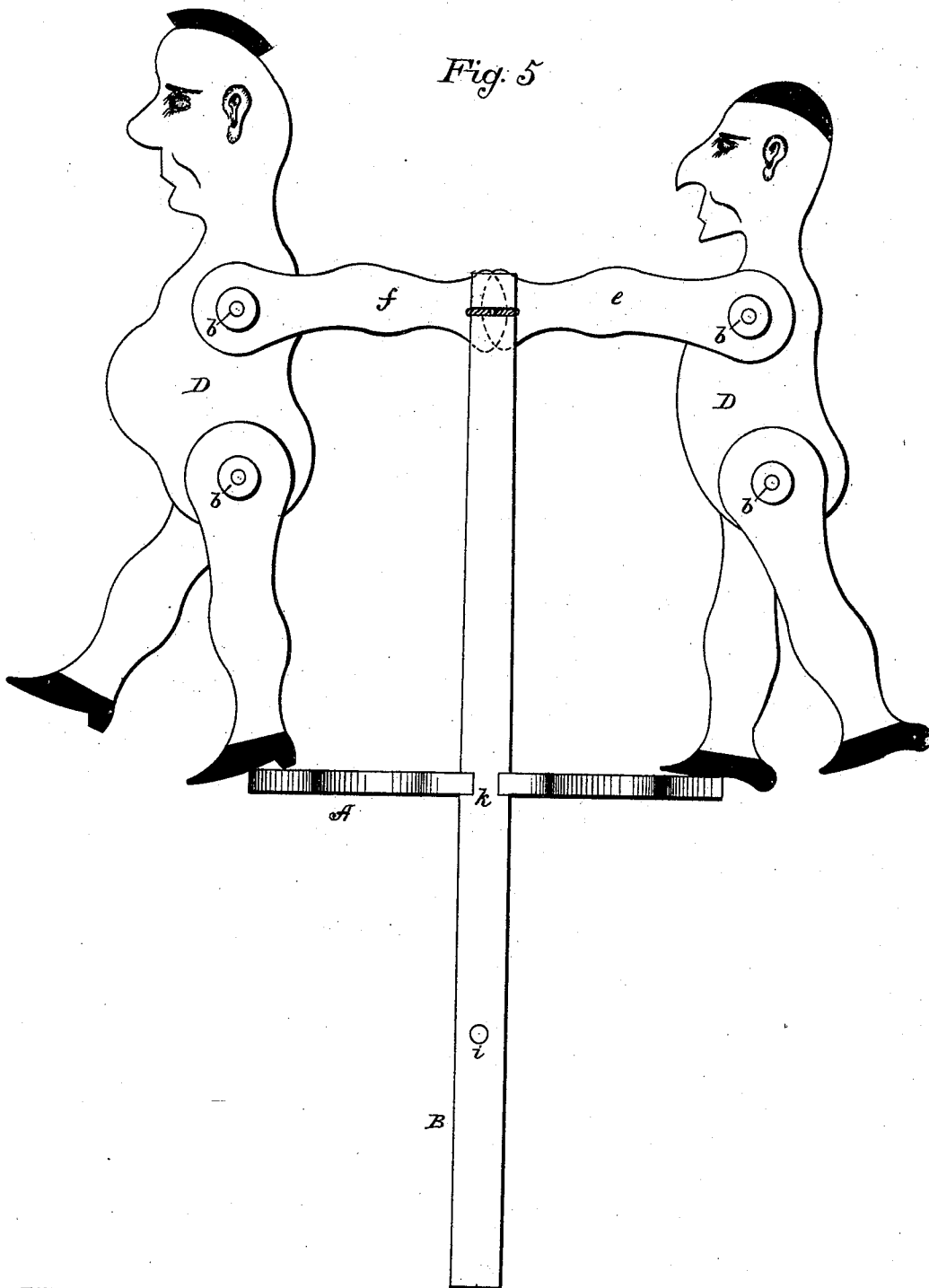
Reuben A. Smith

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Fig. 5



Witnesses:

H. H. Schott.
A. W. Perry

Inventor:

Reuben A. Smith

UNITED STATES PATENT OFFICE.

REUBEN A. SMITH, OF EAST WEARE, NEW HAMPSHIRE.

IMPROVEMENT IN TOY GYMNASTS.

Specification forming part of Letters Patent No. **171,703**, dated January 4, 1876; application filed March 6, 1875.

To all whom it may concern:

Be it known that I, REUBEN A. SMITH, of East Weare, county of Hillsborough, State of New Hampshire, have invented certain Improvements in Toys, of which the following is such a full, clear, and exact description as will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, in which similar letters of reference indicate corresponding parts in the different figures.

Figure 1 is a perspective view of the toy complete. Figs. 2 and 3 are front views of a portion of the device, showing the arrangement of the cords attached to the arms of the figures, and by which they are operated. Fig. 4 represents the platform which separates the side levers, and Fig. 5 is a side view of the toy upon an enlarged scale.

This invention relates to that class of toys called acrobats or gymnasts, which consist of caricatured figures of persons, the limbs being freely jointed to the body, and the figure caused to perform somersaults and other evolutions through the agency of certain cords and other devices, to which they are attached; and the invention consists in the construction and arrangement of the parts, as will be hereinafter fully described, and then pointed out in the claim.

In the drawing, A represents a platform of wood or other suitable material, which serves as a support for the acrobats when in a standing position, and is provided upon its opposite sides with recesses *a*, into which are loosely fitted the side levers B B by cutting gains in their opposite sides at the point *k*. These levers are made slightly tapering toward their upper ends, and, in operating the toy, perform the function of levers of the first order, with their fulcrum at the points of junction with the table A. Near their upper ends are cut notches, which serve to receive and retain in position the cords *c c*, by which the figures are operated. These figures D are formed from thin pieces of wood, pasteboard, or similar light material, the body and limbs being of any fanciful outline, and connected to each other by means of the rivets *b*, which pass through the parts, and upon which they revolve loosely. Between the arms and body,

at the shoulders, are interposed the washers *d*, which keep the arms at such a distance from each other as to allow the legs and body of the figure to pass between them in vaulting and performing their various evolutions. The ends or hands of the arms *e* are provided with three notches for the reception of the two parts of the cord *c*, the cords in passing them being separated to as great a distance as their breadth will allow, and secured in the notches by taking a turn around a portion of the hand, and through a central notch, and then being more firmly secured therein by glue; but in passing the central arms *f* the cords are simply passed through a small round orifice therein, and thence through the washer *g*, thus causing the cord to form a bar or center, upon which the figures turn in their gyrations.

It will be seen that the position of the cords where they are attached to the side levers B is such that, no matter which side of the platform the figures may be resting upon, they will always have a half-turn between the arms and the side levers. This arrangement of the parts will be clearly understood by an inspection of Fig. 3. After having performed their office as a vaulting-bar for the figures, they may pass down the sides of the side levers B, and through holes therein below the platform, as shown at *i*, thus forming a stay for the purpose of retaining the parts in their proper relation to each other; or, if desired, a separate cord may be used for this purpose, having a knot at each end.

The operation of the device is as follows: The toy being held in the hand, as shown in Fig. 1, pressure from the thumb and fingers will cause the lower ends of the side levers to approach each other, and thus their lever-like action upon the platform A, which forms the fulcrum, expands their upper extremities, producing a strain upon the cords, which, in its endeavor to straighten the half-turn between the side levers and the arms of the figures, cause the latter to spring or vault upward by their action upon the outer arms *e*, the central arms *f* remaining passive except so far as to furnish a steady central support for the revolving figure, and their positions may be varied at will by the degree of pressure applied,

thus causing them to assume a great variety of ludicrous and mirth-provoking positions.

I am aware that a patent has been granted to Jacob Schroennesen, bearing date July 11, 1872, being No. 127,927, for an arrangement of devices for causing a single figure to perform various movements; but this I do not claim, as in my device a platform is used, upon which the figures may rest, and the cords are passed through but one of the hands of the figure, allowing the figures to revolve upon a steady central point, which performs the function of the ordinary vaulting-bar.

I therefore claim, and desire to secure by Letters Patent, the following:

The figures D, provided with the perforated arms *f* and notched arms *e*, in combination with the central washer *g*, cords *c*, side levers B, and platform A, all constructed and arranged to operate substantially as and for the purpose specified.

In testimony that I claim the foregoing I hereunto affix my signature in the presence of two witnesses this 5th day of March, 1875.

REUBEN A. SMITH.

Witnesses:

M. P. HARWOOD,
M. K. CHANDLER.