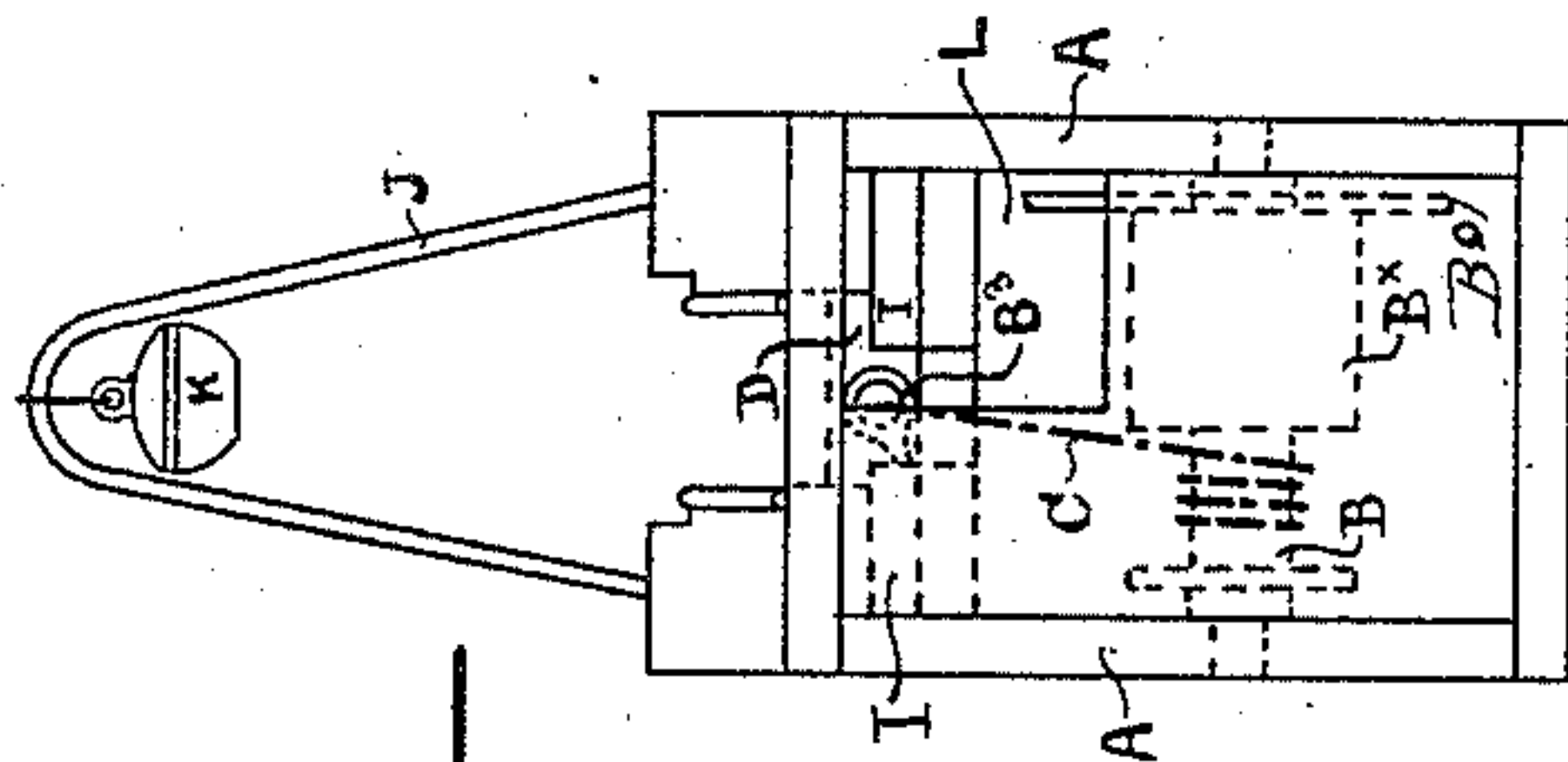
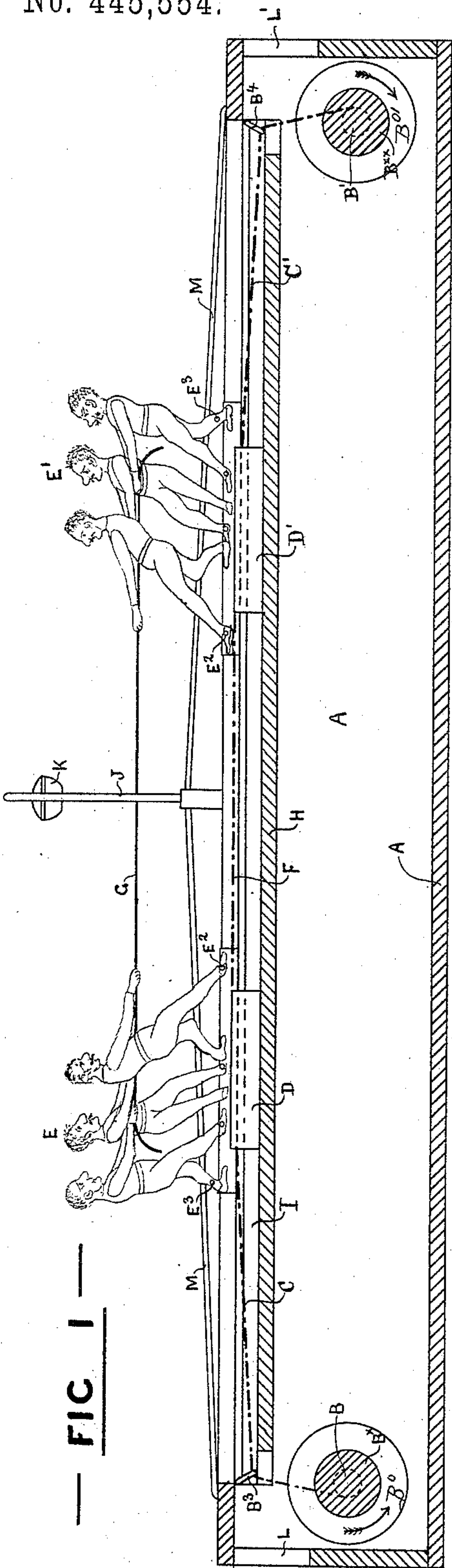


(No Model.)

H. HARGREAVES
MECHANICAL TOY.

No. 445,554.

Patented Feb. 3, 1891.



Witnesses:
H. de Vos.
C. L. Richards

Inventor:
Henry Hargreaves,
By *Richardson*
Attorneys.

UNITED STATES PATENT OFFICE.

HENRY HARGREAVES, OF LONDON, COUNTY OF MIDDLESEX, ENGLAND.

MECHANICAL TOY.

SPECIFICATION forming part of Letters Patent No. 445,554, dated February 3, 1891.

Application filed January 9, 1890. Serial No. 336,378. (No model.)

To all whom it may concern:

Be it known that I, HENRY HARGREAVES, a subject of the Queen of Great Britain, and residing at 74 Ferme Park Road, Stroud Green, in the county of Middlesex and Kingdom of Great Britain, have invented a new or Improved Mechanical Toy, of which the following is a specification.

This invention relates to a new or improved mechanical toy so constructed that its use or exercise requires more or less skill on the part of the person or persons playing therewith, and consequently the use or exercise thereof may be made a subject of competition between two or more such persons; but it may be used as a source of amusement by one person only, if desired. The said new or improved toy is illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional elevation of a toy constructed to represent the movements of two sets of players engaged in the game known as "the tug of war," and Fig. 2 is an end view of same.

Referring to the drawings, it will be seen that the toy therein depicted consists of a box or frame-work A, at each end of which is mounted a roller or pulley B B'. To the roller B is secured one end of a cord, chain, or band C, the other end of which, after passing through a guide-eye B³ or over a guide-roller, if preferred, is connected to a stand D, on which are secured the figures E, representing one set of players of the game. To the roller B' is secured one end of a cord, chain, or band C', the other end of which, after passing through a guide-eye B⁴ or over a guide-roller, if preferred, is connected to the stand D', on which are secured the figures E', representing the other or opposite set of players. The two stands D and D' are connected together by a third cord F or otherwise; or they may be made as one single stand carrying both sets of figures, and the two sets of figures are also connected together by the cord G, which represents the cord which the two sets of players are supposed to be pulling at. The stands D and D' are adapted to slide on the top H of the box A between guides I I.

J is a frame with a bell K suspended thereto.

The rollers B and B' are preferably pro-

vided with enlarged parts at B^x and B^{xx}, respectively, and these enlarged parts may be grooved or otherwise roughened on their circumferences the better to enable them to be turned by the finger of the hand or other instrument introduced through the corresponding openings L L' at the ends of the box A. The rollers B and B' may also be provided with fly-wheels B^o B^{o'}. It will now be understood that if the roller B, for example, be turned in the direction of the arrow by the finger or by a stick or other instrument introduced at the opening L the cord C will be wound up thereon and the figures E and E' will be drawn to the left, the cord C' being correspondingly unwound from the roller B'. If, on the other hand, the roller B' be turned in the direction of its arrow by the finger or other instrument introduced at the opening L', the cord C' will be wound up thereon and the figures E and E' will be drawn to the right, the cord C being correspondingly unwound from the roller B. Consequently if one player operates upon the roller B and another upon the roller B' the two can compete as to which of them will be first able to draw the figures E or E' up to or beyond the center of the length of the box, indicated by the frame J, and to cause the bell K to be rung by the head of one of the figures E or E' coming in contact therewith.

The figures E and E' may be caused to assume positions more or less inclined to the horizon in a backward direction as they approach the end of the box A and more or less forward out of the perpendicular as they approach the middle point J, in imitation of the positions the players naturally assume when one set succeeds in drawing the other beyond the prescribed mark. This is effected by pin-jointing the forward feet of the figures to the stands, as shown at E², for example, and by placing a pin E³ in the hinder leg of one or more of the figures, which pin comes under wires M, secured at each end of the box A, and rising from each end toward the middle, as shown. As the figures E or E' move backward they are caused to incline backward by the pin E³ being pressed downward by the wires M, and as they move forward toward the point J they are allowed to incline forward

out of the perpendicular by reason of the pin E^3 being allowed to rise by the said wires.

I claim—

1. The improved competitive mechanical
5 toy, consisting of a figure mounted on a stand,
a guideway for the latter, and independent
rollers, each connected with said stand and
adapted to be operated by different individ-
uals in competition to pull oppositely upon
10 the said figure, substantially as set forth.

2. The toy representing the game known as
"tug of war," said toy consisting of the com-
bination of a box or frame, stands $D D'$,
adapted to move thereon, opposing figures E
15 E' , carried on said stands, a connection be-
tween the stands, and means, such as the
cords $C C'$ and rollers $B B'$, for pulling said
stands oppositely by different persons in com-
petition, substantially as set forth.

3. The improved competitive mechanical 20
toy, consisting of a figure mounted on a stand,
a guideway for the latter, a signal device,
such as a bell K , adapted to be operated by
the figure, and independent rollers, each con-
nected with said stand and adapted to be op- 25
erated by different individuals in competition
to pull oppositely upon the said figure, sub-
stantially as set forth.

In testimony that I claim the foregoing as
my invention I have signed my name in pres- 30
ence of two subscribing witnesses.

HENRY HARGREAVES.

Witnesses:

W. A. SMITH,
115 Cannon Street, London.

W. J. NORWOOD,
17 Gracechurch Street, London.