

No. 698,294.

Patented Apr. 22, 1902.

B. KIPPELS.  
MERRY-GO-ROUND.

(Application filed Aug. 27, 1901.)

(No Model.)

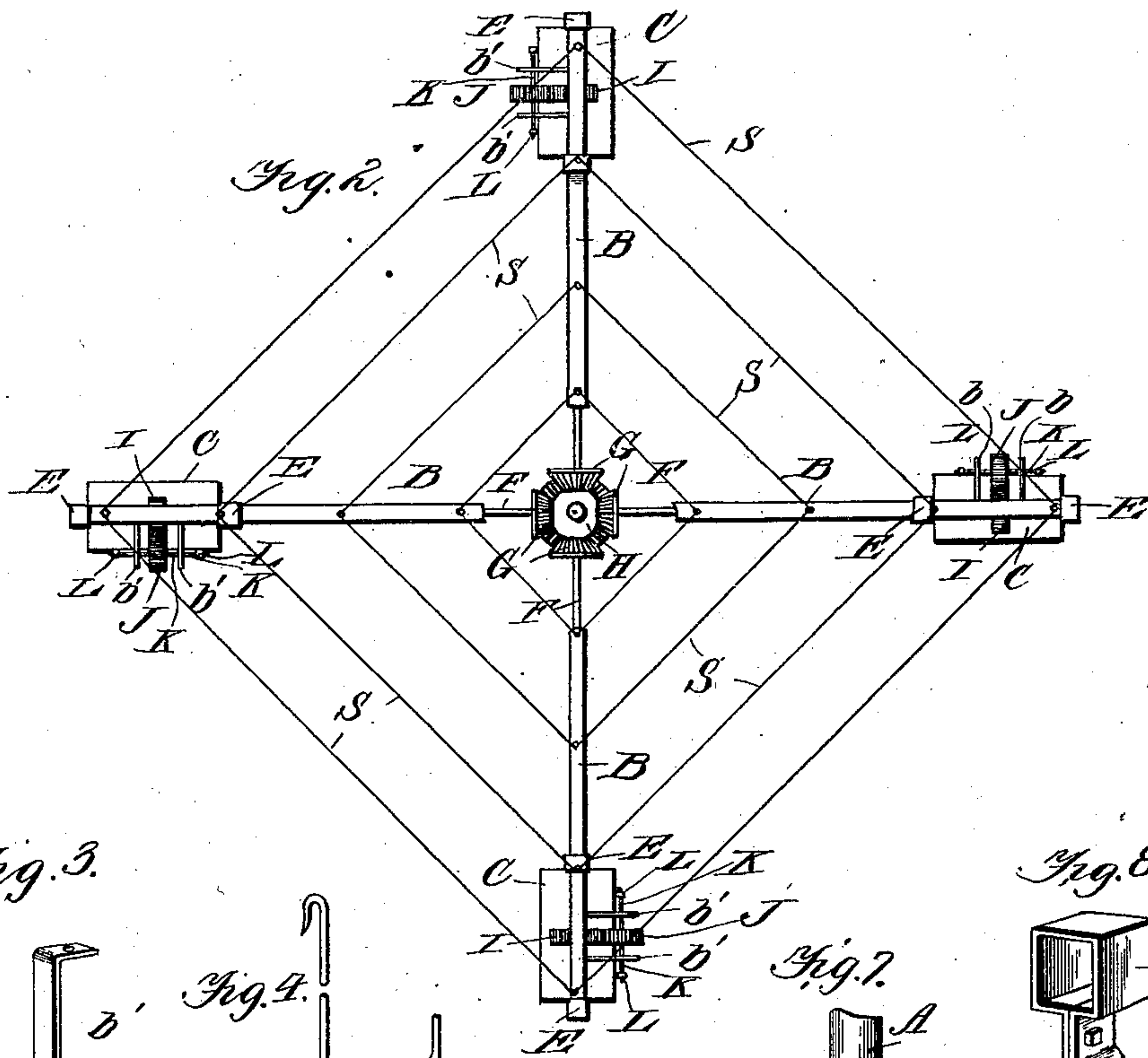
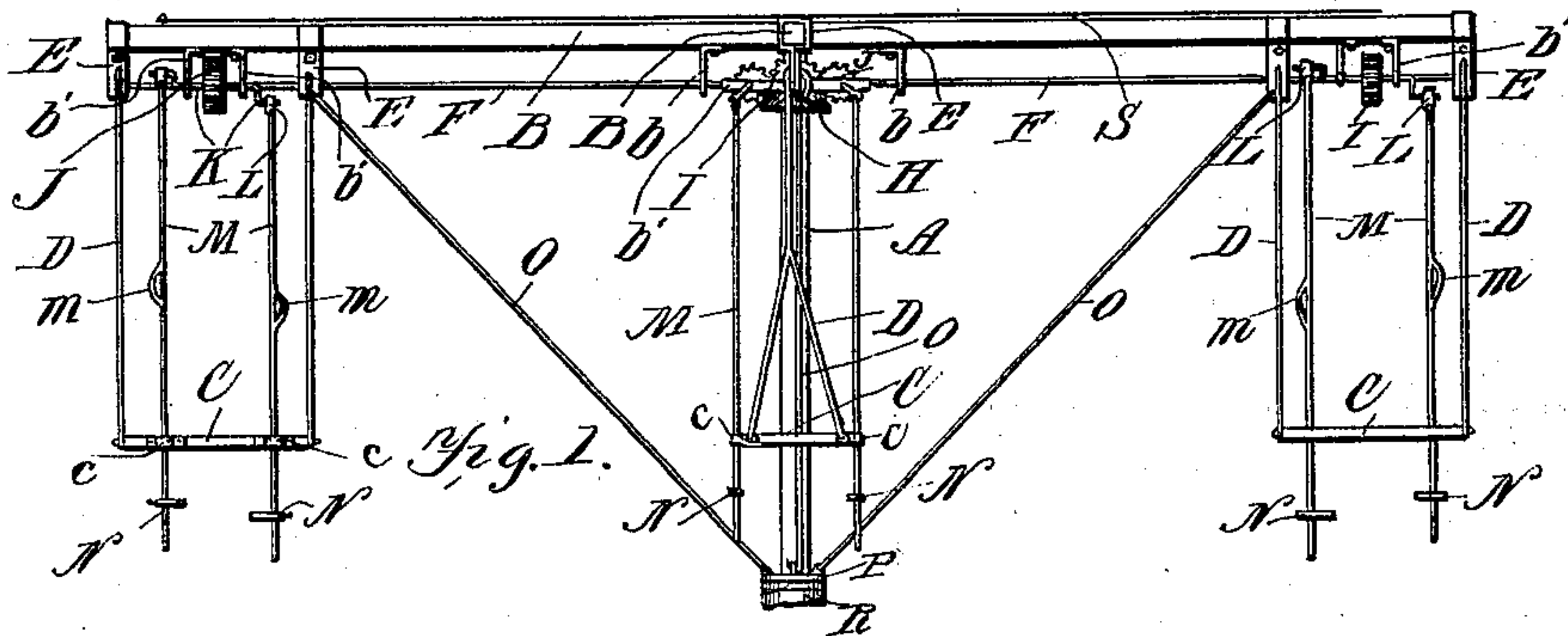


Fig. 3.



Fig. 4.

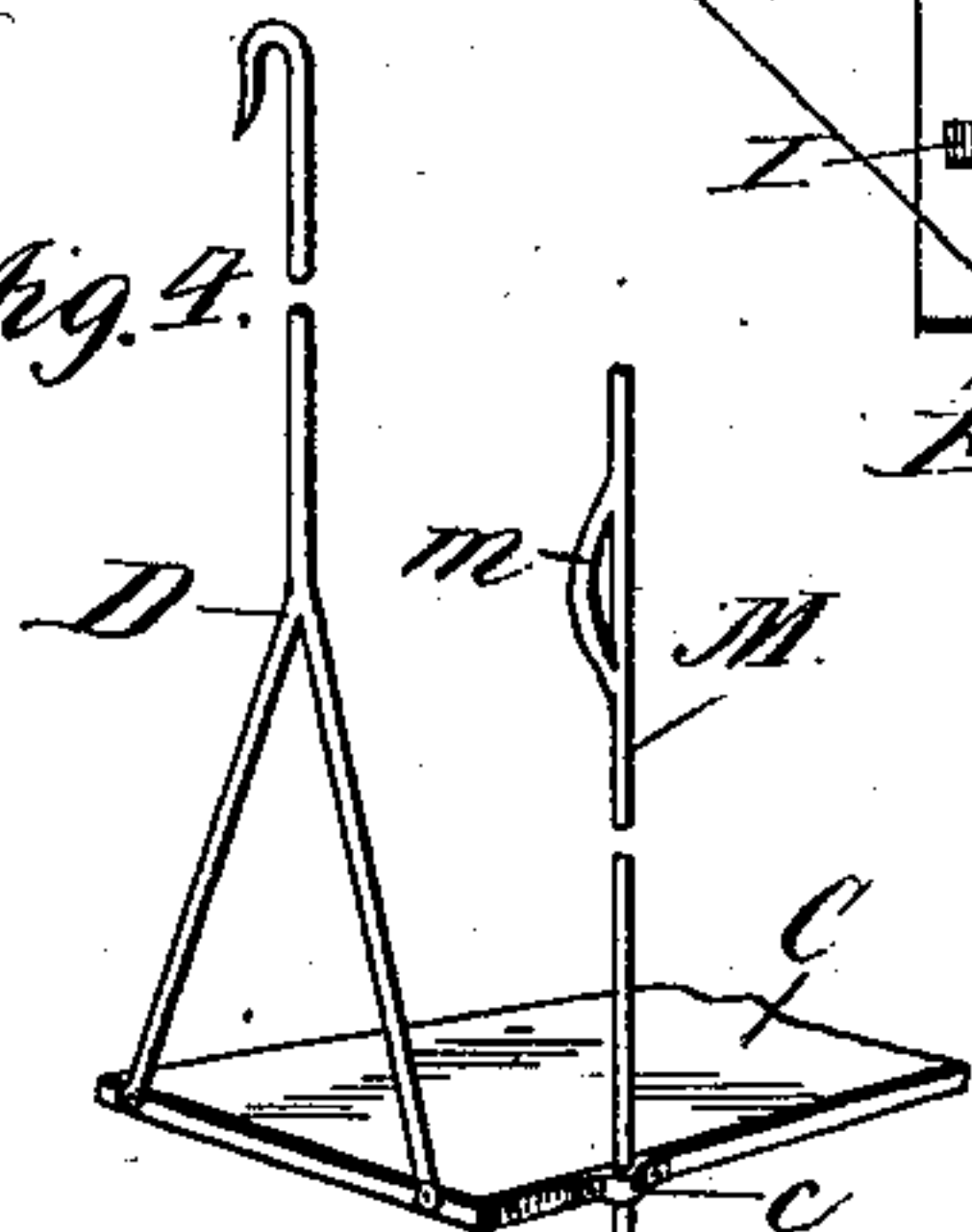


Fig. 5.

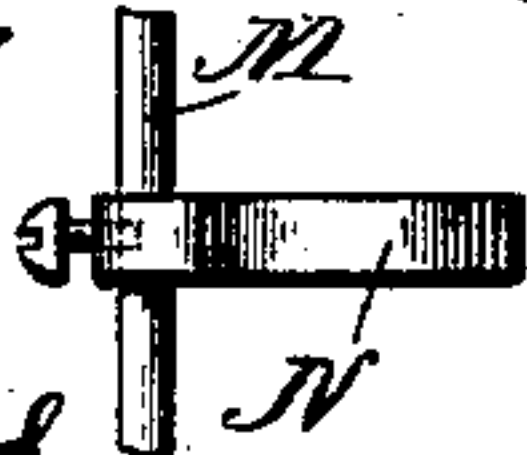


Fig. 6.

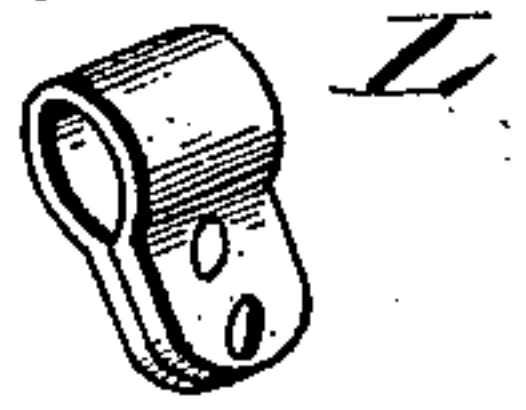


Fig. 7.

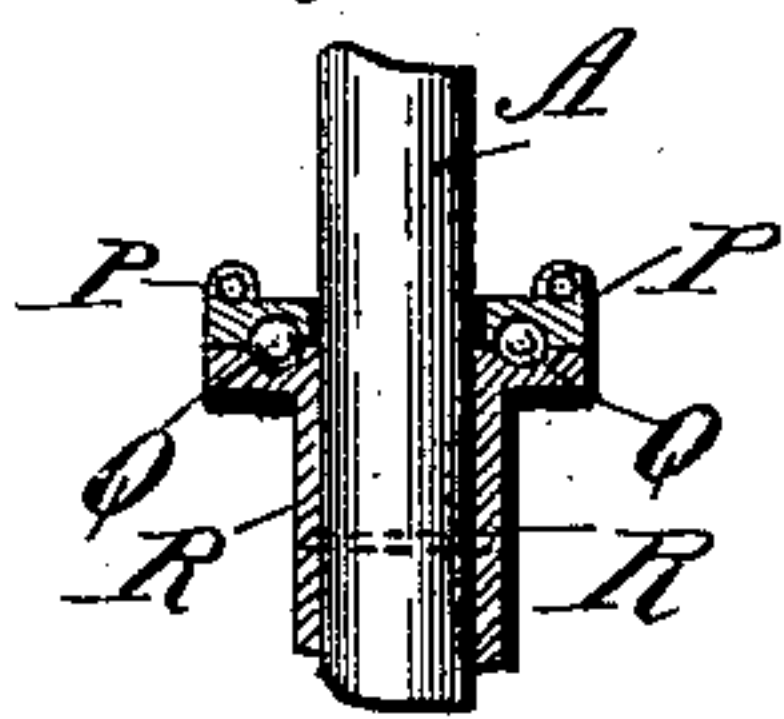
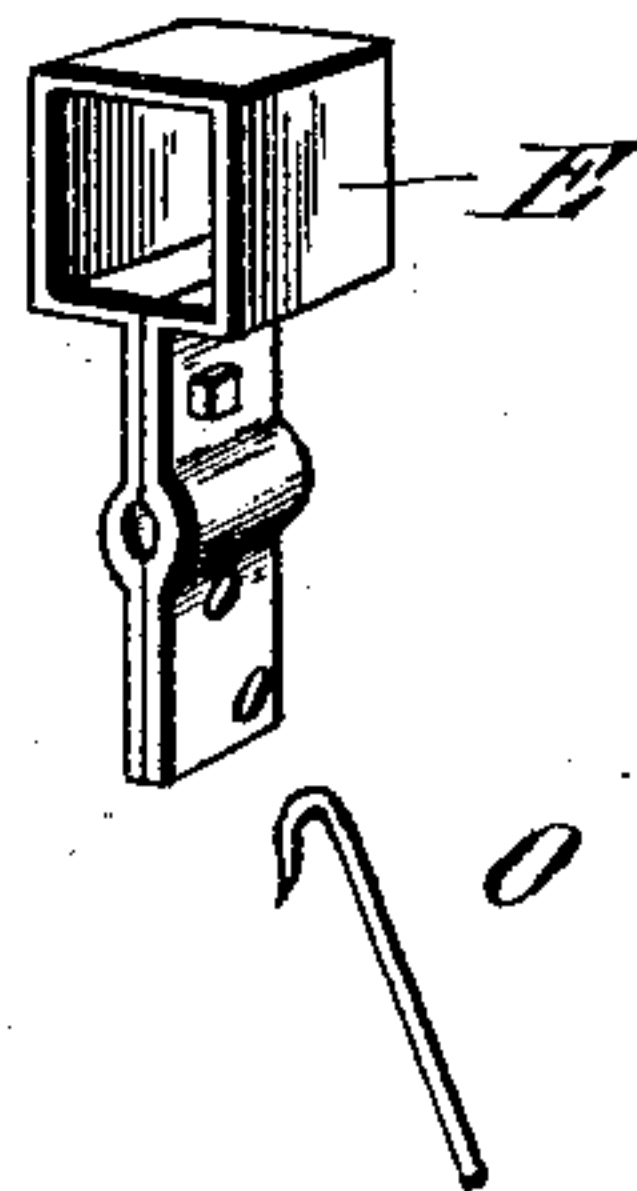


Fig. 8.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

BRUNO KIPPELS, OF MOORHEAD, MINNESOTA.

## MERRY-GO-ROUND.

SPECIFICATION forming part of Letters Patent No. 698,294, dated April 22, 1902.

Application filed August 27, 1901. Serial No. 73,462. (No model.)

*To all whom it may concern:*

Be it known that I, BRUNO KIPPELS, a citizen of the United States, residing at Moorhead, in the county of Clay and State of Minnesota, have made certain new and useful Improvements in Merry-Go-Rounds, of which the following is a specification.

My invention is an improvement in that class of merry-go-rounds or carousels which are propelled by the exertions of the occupants. I have provided an improved arrangement of seats for the occupants and propelling mechanism adapted for utilization of both hands and feet.

The details of construction, arrangement, and operation are as hereinafter described, reference being had to accompanying drawings, in which—

Figure 1 is a side view of my improved apparatus. Fig. 2 is a plan view save that the central portion of the top frame is cut away to show the arrangement of gearing. Fig. 3 is a perspective view of a bracket employed for supporting the crank-shafts by which the apparatus is driven. Fig. 4 is a perspective view of a seat and its attachments. Fig. 5 is an enlarged side view of a portion of the pedal attachment. Fig. 6 is a perspective view of attachments of the driving crank-shafts. Fig. 7 is a sectional view illustrating the lower antifriction-bearing on the central post or pillar. Fig. 8 is a perspective view of the seat hangers or clips with hooks forming the suspension members of the seat.

The merry-go-round proper is supported upon and revolves about a fixed central post A. The top frame consists of a series, preferably four, of radial arms B, whose inner ends are fixed in a suitable cap or socket piece, which is pivoted upon the top of said post in the well-known manner. From the outer ends of such arms B is suspended a series of seats C, which may be constructed of boards or other light material. The means of suspension are forked rods D, (see Fig. 4,) having hooks at their upper ends which engage clips E, (see Fig. 8,) secured to the arms, as shown. A radial shaft F is arranged directly under and parallel to each of the radial arms B, and supported at its inner end by a hanger b and at the outer end by the clips E. A bevel-pinion G is fixed on the inner end of

each shaft F and engages a large bevel-gear H, fixed on the upper end of the post A. A spur-gear I is keyed on the outer end of each shaft F and meshes with a smaller gear keyed upon a short crank-shaft K. Each of the crank-shafts K is supported by hangers b', (see Fig. 3,) which are right angular in form and secured by bolts to the under side of the radial bars B, intermediately of the clips E. The crank-shafts K are supported in the outer horizontal ends of these brackets b', as shown in Fig. 1, and the outer ends of the shafts are bent in opposite directions, so as to form reversed cranks. To the crank-journals thus formed I attach clips L, (see Figs. 1 and 6,) which are adapted to rotate free thereon. From these clips L are suspended the pedal-rods M, which work or slide vertically in keepers c, (see Fig. 4,) attached to the front edge of the seat C. As shown in Figs. 4 and 5, pedals proper, N, are secured adjustably upon the rods M by means of a clamp-screw. The rods M are likewise provided with handles or loops m at a suitable distance above the seat C.

It is apparent that in operating the merry-go-round one person seats himself upon each of the seats C, his legs projecting between the rods M and his feet resting upon the pedals N. Then by pressing alternately with his feet the operator rotates the shaft K, which through the medium of the gears J and I rotates the shaft F, whose bevel-pinion G is thus caused to travel around upon the fixed bevel-gear H. It is apparent that by this means the frame comprising the radial arms B and its attachments may be rotated at various speeds. It is further apparent that the loose attachment of the seat-hooks D to the keeper E and of the pedal-rods M to the clips L of the crank-shafts K allows the seats, with their occupants, to swing outward by centrifugal action without preventing or seriously impeding the operation of the crank-shafts through the medium of the pedal attachment. It is further apparent that the occupant of a seat C may manually assist the propulsion—that is to say, the reciprocation of the pedal-rods M—and that for this purpose he will grasp the handles m. He may even effect propulsion by his hands alone or without the aid of his feet. A series of



diagonal braces O (see Fig. 1) extend from the inner clips E down to a loose collar P, (see Fig. 7,) which is adapted to rotate about the post A, it being for this purpose supported upon a series of balls Q, resting in a groove upon a fixed collar R, the whole being secured to the post in any approved manner. These braces O are in practice to be suitably connected by a series of cross ties or braces. (Not shown.)

As shown in Fig. 2, a series of wires S extend from one radial bar B to another, the same being arranged in squares, whereby they are adapted to support clothes for drying. In other words, by means of these wires S the merry-go-round is adapted for use as a clothes-drier, and the said wires also as braces for holding the arms or bars B firmly in position.

The post A may be made of any desired height; but it is preferable that the seat C shall be but a short distance above the ground, and it is also desirable that the top frame B shall be placed low enough to be conveniently reached in hanging out clothes.

By arranging the driving-shafts F directly beneath the radial arms B, I am able to gear them with the post-gear H in the simplest and most convenient manner, and by supporting the crank-shafts K at a point laterally removed from the arms they are also adapted to be geared with the shafts F in a very simple manner.

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

1. In a merry-go-round, the combination, with a central support having a beveled gear fixed thereon, and a horizontal frame having radial arms and adapted to revolve on said support, of drive-shafts suspended from said arms and having gears meshing with that on the support, a series of short independent crank-shafts geared with said drive-shafts and supported in bearings attached to the frame-bars, a series of seats, and rods suspending the same which are loosely connected with said arms, and propelling-rods provided with pedals and connected with the short crank-shafts and arranged vertically in front of the seats, substantially as shown and described.

2. In a merry-go-round the combination, with the horizontal rotatable frame, a central support for the latter having a master-gear, a series of drive-shafts hung from the frame and having gears meshing with the master-gear, short crank-shafts geared with the drive-shafts, a series of seats, and supporting-rods therefor, which are loosely connected with the frame and adapted to swing freely outward, and a series of pairs of propelling-rods having pedals which are vertically adjustable, the said propelling-rods being loosely connected with the short crank-shafts and slidable in keepers secured to the seats as shown and described.

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Witnesses:

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