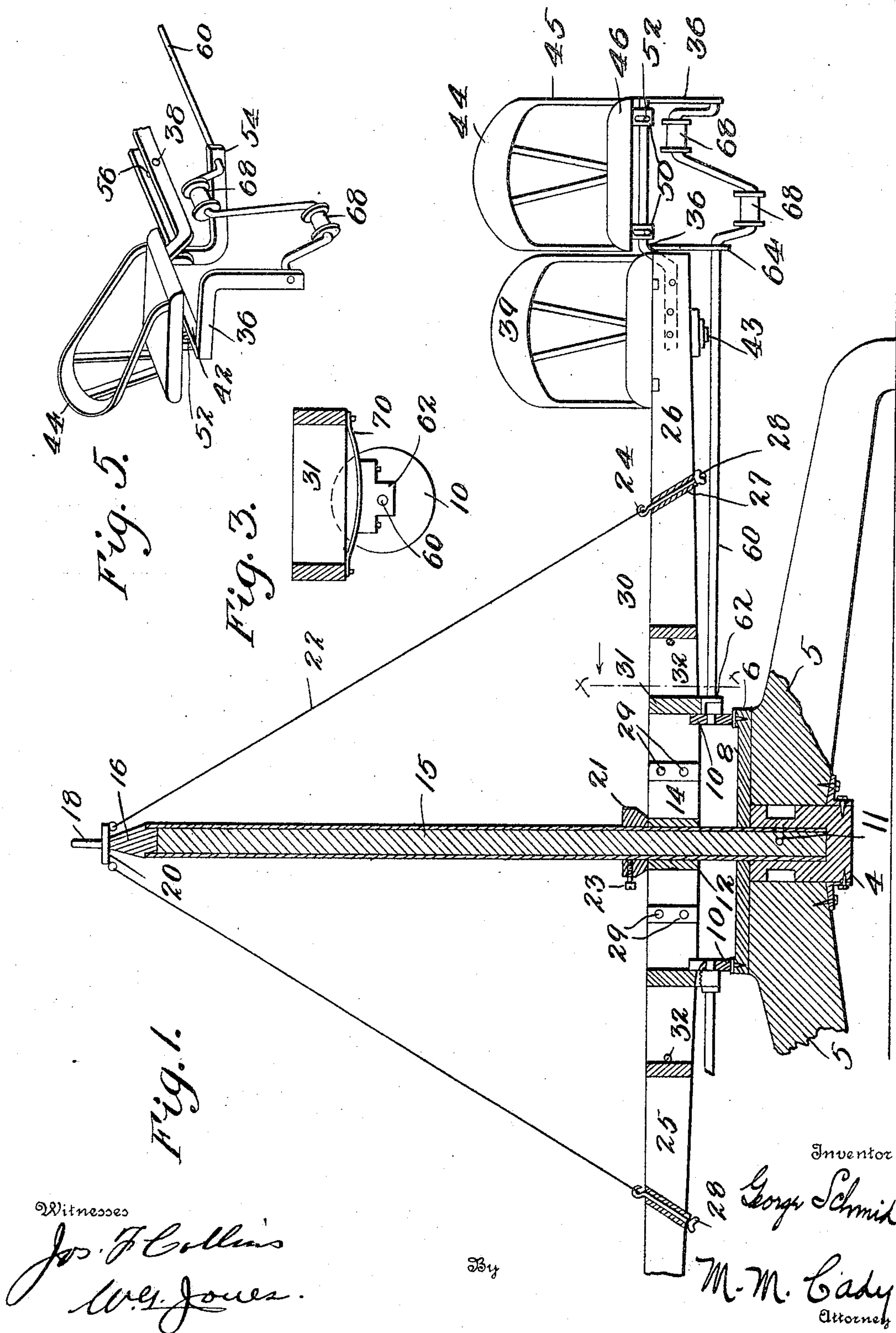


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Patented Dec. 14, 1909.

2 SHEETS—SHEET 1.



942,937.

G. SCHMID.
MERRY-GO-ROUND.
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2 SHEETS—SHEET 2.

Fig. 2.

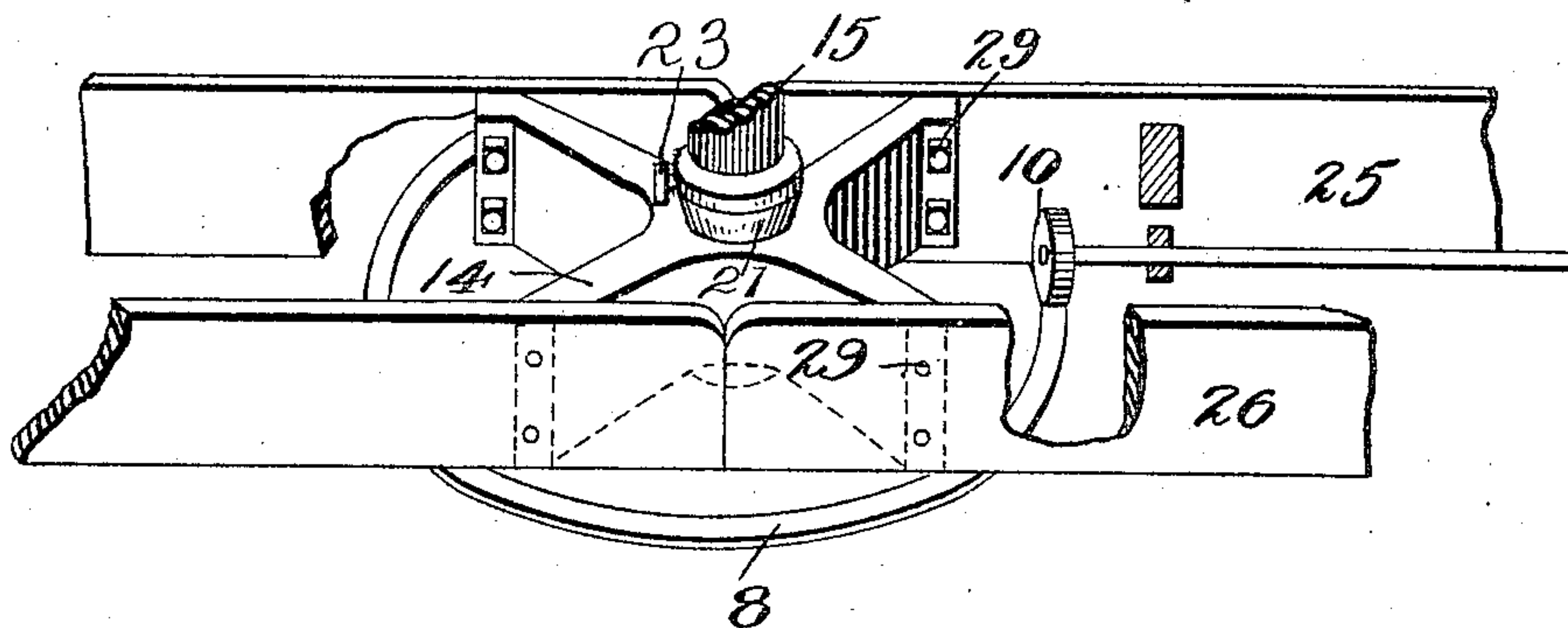


Fig. 4.

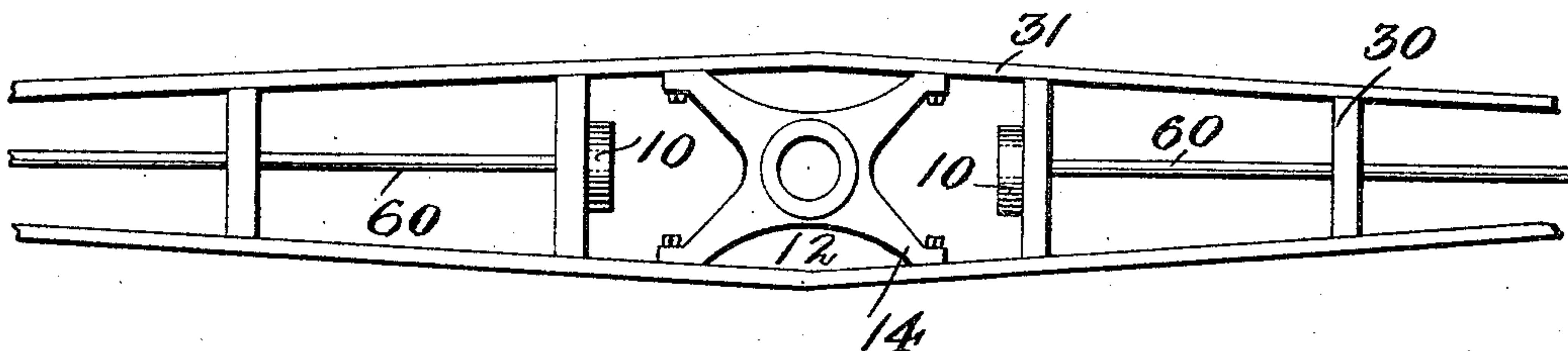
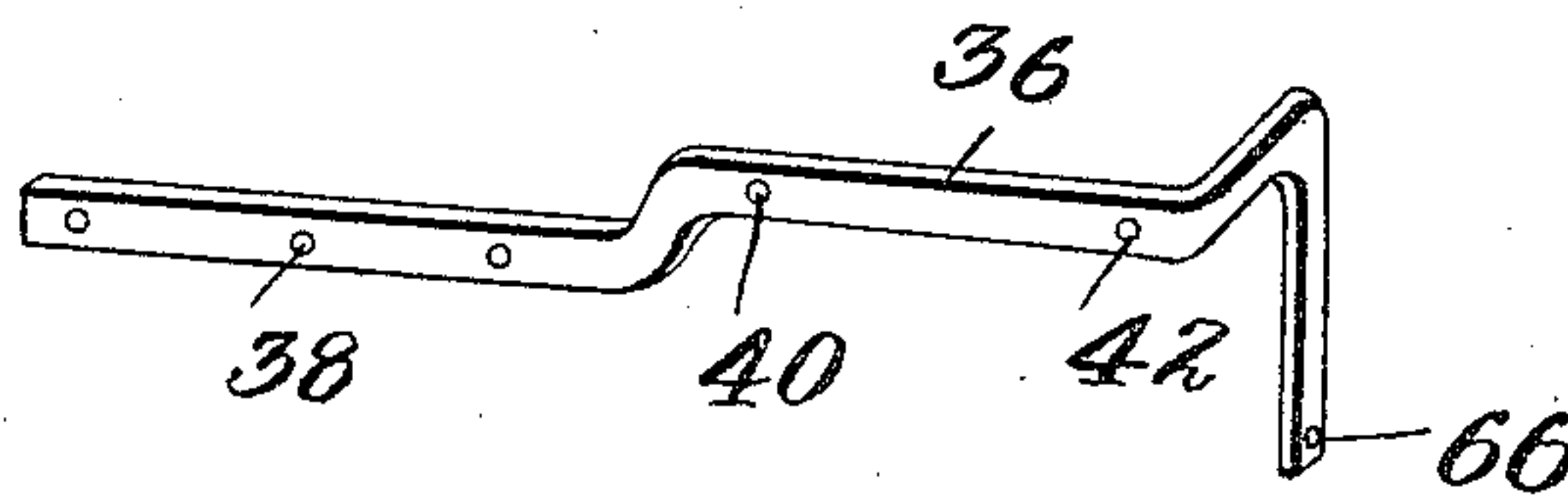


Fig. 6.



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UNITED STATES PATENT OFFICE.

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MERRY-GO-ROUND.

942,937.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE SCHMID, citizen of the United States, residing at Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Merry-Go-Rounds, of which the following is a specification.

My invention relates to merry-go-rounds, more especially such as children can operate by their feet, and the object is to so simplify the construction that they can be made economical in cost, reliable in use and can be operated by very small children with perfect safety.

With these objects in view my invention consists in the peculiarities of construction and novelties of combination all of which will be set out in detail in the following specification when taken and read in connection with the drawings accompanying the same and forming a part hereof in which:—

Figure 1, is a side elevation of my device. Fig. 2, is a perspective view of the track, with wheels on the track and frame to which the arms are attached and in which the central post or mast is secured. Fig. 3, is a vertical section through lines $x-x$ of Fig. 1. Fig. 4 is a top view of Fig. 1 with the mast, chairs and legs removed, and parts of both ends cut away. Fig. 5, is a side elevation of the chair and showing its attachments. Fig. 6, is a side elevation of the member for attaching the end chairs to the arms.

Like characters of reference denote corresponding parts in each of the drawings.

Referring to the drawings, 2 represents the base, which consists of a rectangular block 4 into which are secured by tenon and mortise four legs 5 at right angles to each other and upon the tops of this block 4 and legs 5 is secured a plate 6 forming with the legs 5 and block 4, a circular head. On the top of the head around near the outer edge is a circular track 8 having a flat and smooth upper surface upon which the wheels 10 travel.

The periphery of the drive wheel 10 is made smooth and also the track 8 smooth and flat for the purpose of allowing the wheels to slide upon the track whenever the pedals 68 are from any cause prevented from rotation. This is important, for if the feet or legs of the operator become entangled with the pedals they might be broken if

the wheels were not permitted to slide upon the track and besides if the operator sees danger he can stop the pedals with his feet and cause the wheels to slide on the track and thus almost immediately stop the car. There is also a vertical hole or opening in the head and through or partly through the block 4 into which the mast or stay pole hereinafter to be described is rigidly and removably fixed and held by a stay bolt 11 passing through the block 4 and through the mast.

Within the track 8 on the head is secured a frame 12 having the four stay arms 14. The frame is provided with an opening at its center through which the mast 15 passes and also through the head and through or partly through the block 4 where it is secured both from being drawn out and from rotation therein.

The mast consists preferably of a gas pipe and into its top is inserted a solid cone 16 terminating in a pivot stem 18. Upon this cone and around the stem is a flat plate 20 having openings at opposite sides in which are attached the guy rods or hangers 22. The other ends of the hangers 22 are secured to hooks 24 which are adjustably secured to the arms 25 and 26 by a bolt passing through the stay blocks 27 and adjusted by thumb nuts 28. To prevent the central portion of the arms from rising, there is set a collar 21 around the mast provided with a set screw 23.

The arms 25 and 26 are each formed of two plates slightly tapering from one end to the other and are removably secured at their inner ends to the arms 14 of the central frame by bolts and nuts 29 and are stayed by vertical stay plates 27, 30 and 31 to which both of these side plates are secured. A cheap and convenient mode of manufacturing these arms is to prepare the sides and stays of wood boards and nail the sides to the stays and for further strengthening, bolt the two side plates together near the stay plates 27, 30 and 31 by the bolts 32. Also to prevent splitting at the inner end there is provided a stay 34 which may be held by the bolt 29 that secures the side plates to the central frame at one end and another bolt 35 at the other end of the plate 34. These plates 34 may be fastened at an angle to the side of the arms and when the merry-go-round is in action the strain on the side

plates of the arms will prevent the boards forming the arms from splitting.

At the outer end of each arm is secured a member 36 which consists of an iron plate bent as shown in Fig. 6 and provided with bolt or screw holes 38 through which it is secured to the rear side of the outer end of the arms. It is also provided with two other bolt holes 40 and 42.

The chair 44 which is attached at each end of the arms is provided with a back 45, seat 46 and arms 48 and with plates 50 projecting down from the underside. The plates each have a vertical slot 52. Through these slots 52 and the holes 40 and 42 in the member 36 the chairs are secured to the arms and are adapted to be adjusted in height to accommodate the length of the legs of the child that operates the device.

The chair is further stayed and rigidly secured to the arm by a strap 54 bolted at one end to the front side of the arm by bolts 56 passing through the strap 54, the arm and the holes 38 in the member 36, and at the other end by a bolt passing through the strap 54, the slot 52 and the hole 40 in the member 36. Near each end another chair 39 similar to the chair 44 may be removably set upon the arm near the chair 44 by a bolt passing through the seat of the chair 39 and between the two sides of the arms and through a plate 41 and drawn up with a nut 43 thus rigidly but removably securing the seats 39 on the arms near the seats 44.

The means whereby the device is propelled consists of a driving shaft 60 one beneath each arm, which is journaled at one end in a box 62 yieldingly secured to the stay 31 and at the other in a bent hanger 64 and in a hole 66 in the member 36. In front of the chair 44 the shaft 60 is doubly bent in opposite directions and supplied with two pedals 68. Upon the inner end of the shaft is rigidly fixed the drive wheel 10 that is adapted to travel on the track 8.

To the base of the block 31 is secured a spring 70. This spring is provided with a hole in one end through which it is rigidly fastened to one end of the block and with a slot in the other end in which also is a screw but not brought up so tightly as to prevent the spring from yielding longitudinally. To this spring is rigidly attached the journal box 62 the object of which will presently appear.

The manner of operating my device is substantially as follows: An operator takes his seat in one of the chairs 44 with his feet upon the pedals 68. The chair is then adjusted in height as before set out till the pedals are in such relation to the seat that the occupant can exert the most power with the least exertion. As he works the pedals the wheels 10 travel around on the track 8 and carry with them the arms with the chairs

and their occupants. As the arms are revolved the plate 20 will revolve around the pivot stem 18 by reason of the attachment of the guy-rods 22 with the plate and arms and the arms with their burdens will be partly sustained upon the plate 20 by the guy-rods 22 and partly sustained on the wheels 10, but the pressure on the wheels will not be released for both arms are connected together by their attachment to the arms 14 of the frame 12 and also because the collar 21 is secured to the mast 15 over the frame 12 and in contact therewith by the set screw 23. As these arms and the weight therein are cushioned by the springs 70 there will be no jar or discomfort of the riders, and this construction and use of the spring will permit the wheels to slide upon the track if for any reason they are prevented from rotation.

It will be seen that there will be little or no danger of any accident caused by tanglement of the feet of the riders with the pedals for if the feet are caught, the wheels, since they are cushioned by the springs 70 and since the track is smooth and the wheels smooth will stop their revolution and slide on the track. In this manner there will be almost absolute safety to the rider and it will require but small power to operate it.

To fold the merry-go-round for shipping it is only necessary to remove the lower bolts 29 and remove the guy-rods 22 and turn the arms parallel with the mast and the chairs at the ends will nest together over the top of the mast. The stay-bolt 11 is then withdrawn and the mast lifted out of its socket when the device is ready to be shipped.

It will be noticed that the inner ends of the arms are hung in such a way as to form a rule joint, that is the abutting ends of said arms prevent them from dropping lower than a certain point, in this case supporting them in substantially a straight line. In this way a considerable portion of the weight of the arms is taken off the wheels 10, thus permitting said wheels to slide more easily, if a child's foot becomes caught in the driving crank arms. Furthermore, by means of the wing nuts 28 the guys 22 may be made to carry more or less of the load as desired.

Having now described my invention what I claim and desire to secure by Letters Patent is:

1. In a merry-go-round, a base, a mast removably secured in said base, sustaining arms adapted to travel around the mast, connections between said mast and arms for partially sustaining the arms, a track upon the base having a smooth upper surface, wheels provided with smooth peripheries adapted to travel on the track, means for permitting said wheels to yield away from

said track, and means for driving said wheels.

2. In a merry-go-round, a base, a frame upon the base, a mast secured in the base, a circular track provided with a smooth upper surface set on the base, sustaining arms secured to the frame, a shaft yieldingly attached to each arm, a wheel on each shaft provided with a smooth periphery and adapted to travel on the smooth track, and means secured to the shafts for manually rotating the wheels on the track.

3. In a merry-go-round, a base, a head thereon, a track provided with a smooth upper surface upon the head, a frame on the head within the track, a mast rigidly secured in the base and passing through the frame, sustaining arms secured to the frame, connections between the arms and the mast, a driving shaft for each arm, spring connections between the arms and the shaft bearings, a wheel upon each shaft provided with a smooth periphery and adapted to travel on the track, and means connected with the shafts for manually operating the shafts to cause the wheels to travel around on the track and carry with them the merry-go-round.

4. In a merry-go-round, a base, a track on the base provided with a smooth upper surface, a mast secured in the base, sustaining arms, connections between the mast and the arms, a shaft for each arm, a spring attached to each arm and to each shaft whereby the shafts are yieldingly connected to the arms, a wheel having a smooth periphery attached to each shaft, and means connected with the shaft for manually operating the shaft to cause the wheels to rotate upon the track.

5. In a merry-go-round, a base, a track upon the base provided with a smooth upper surface, a frame upon the base within the track, a mast rigidly secured in the base and passing through the frame, arms secured to the frame, a collar around the mast to hold down the frame with the arms attached thereto, guy-rods rotatably connecting the mast with the arms, a shaft yieldingly connected to each arm, a wheel provided with a smooth periphery attached to each shaft and adapted to slide or travel on the track and carry with them part of the weight of the arms with their burdens, and means secured to the shafts whereby the operator causes the wheels to travel upon the track and carry with them the arms and the burdens thereon.

6. In a merry-go-round, a base, provided with a head, a circular track on the base having a smooth upper surface, a frame, a mast rigidly secured in the base and passing through the frame, sustaining arms secured to the frame, connections between the mast and the arms, a member secured to the outer

end of each arm, chairs at the outer ends of the arms adjustably secured to the member, a shaft beneath each arm pivoted in the member, a spring for yieldingly connecting the shafts to the arms, a wheel on each shaft having a smooth periphery adapted to travel and slide upon the track, and pedals upon the shafts by which the riders can cause the wheels to travel and slide on the track and carry around with them the arms of the merry-go-round.

7. In a merry-go-round, a base, a frame upon the base, a track provided with a smooth upper surface set on the base and around the frame, a mast removably fixed in the base and passing through the frame, arms secured to the frame, a chair secured to the outer ends of the arms, guy-rods attached to the plate upon the mast and adjustably connected to the arms, a shaft yieldingly connected to the arms, a wheel on each shaft having a smooth periphery adapted to rotate on the track, and pedals connected with the shaft whereby the operator can rotate the wheels on the track and revolve the arms with the chairs thereon.

8. In a merry-go-round, in combination, a base, a mast in said base, a frame rotatable on said mast, arms secured to said frame the inner ends of said arms abutting against each other, a portion of the connections between said frame and arms serving as a pivot upon which said arms may be swung alongside said mast, and means for causing said arms to revolve about said mast.

9. A merry-go-round, comprising, in combination with a base a mast mounted centrally of said base, a spider mounted for rotation at the base of said mast, oppositely disposed trussed arms secured to the arms of said spider, a horizontal circular trackway formed on said base, shafts carried longitudinally of said oppositely disposed arms, wheels mounted on the inner ends of said shafts and bearing on said trackway, pedals carried by the outer ends of said shafts, and adjustable seats located adjacent said pedals.

10. A merry-go-round, comprising, in combination with a base, a mast mounted centrally of said base, a spider mounted for rotation at the base of said mast, oppositely disposed trussed arms secured to the arms of said spider, a horizontal circular trackway formed on said base, shafts carried longitudinally of said oppositely disposed arms, said wheels having spring bearings below said trussed arms, wheels mounted on the inner ends of said shafts and bearing on said trackway, pedals carried by the outer ends of said shafts, and adjustable seats located adjacent said pedals.

11. A merry-go-round, comprising in combination with a base, a mast mounted on said base, oppositely disposed trussed arms mounted for revolution about said mast, and

means carried by said arms for causing their revolution, said arms being adapted to be folded against the mast for transportation.

12. A merry-go-round, comprising, in
5 combination with a base, a mast mounted on said base, a spider mounted for revolution on said mast, oppositely disposed trussed arms secured to said spider, and being adapted to be swung upwardly against said
10 mast shafts carried below said trussed arms,

wheels bearing on said base and carried by the inner ends of said shafts and pedals carried by the outer ends of said shafts to revolve the same.

In testimony whereof I affix my signature, 15
in presence of two witnesses.

GEORGE SCHMID.

Witnesses:

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C. H. REYNOLDS.