

S. W. BRUNDAGE & H. L. MILLER.

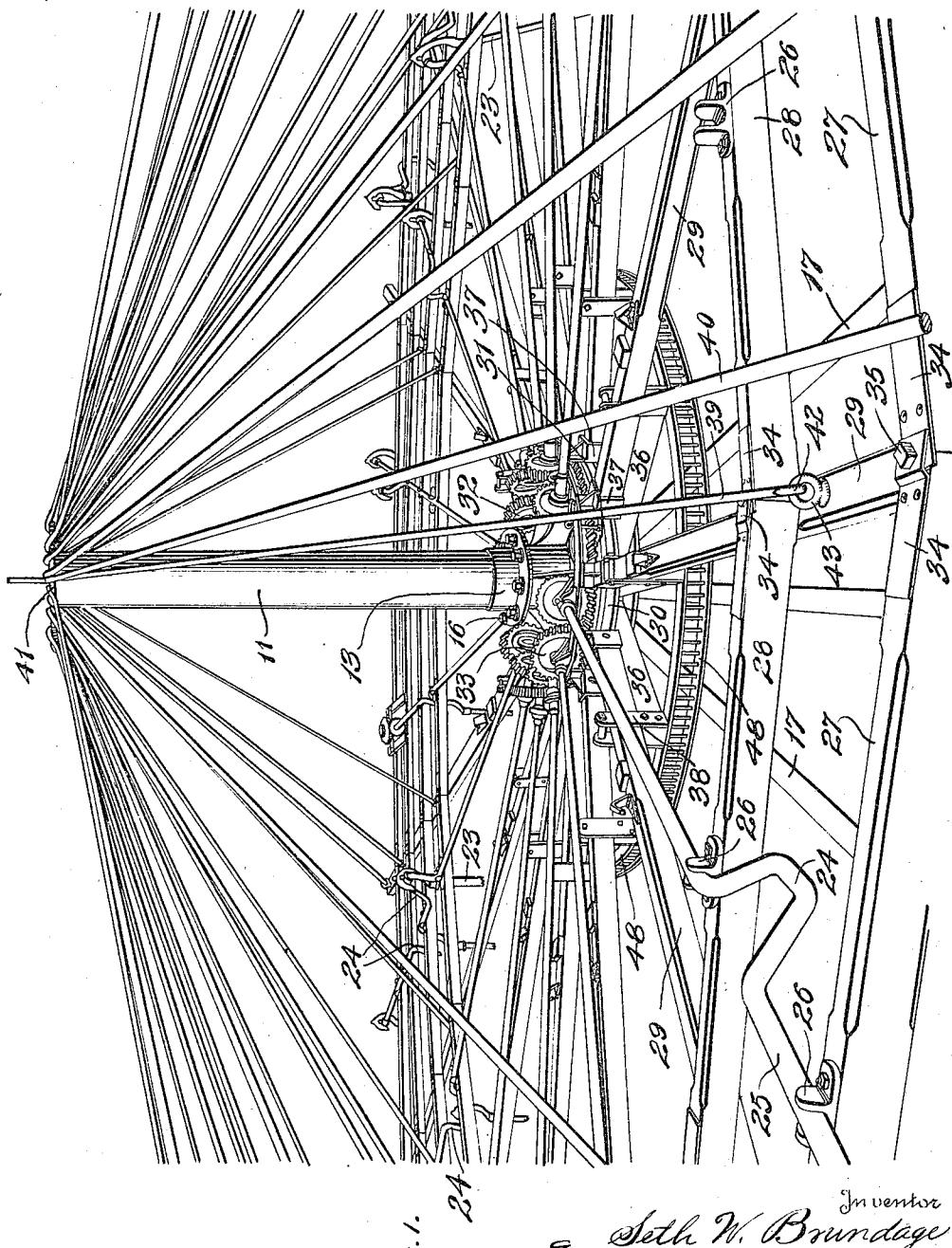
CAROUSEL,

APPLICATION FILED APR. 21, 1914.

1,263,370.

Patented Apr. 23, 1918.

3 SHEETS—SHEET 1.



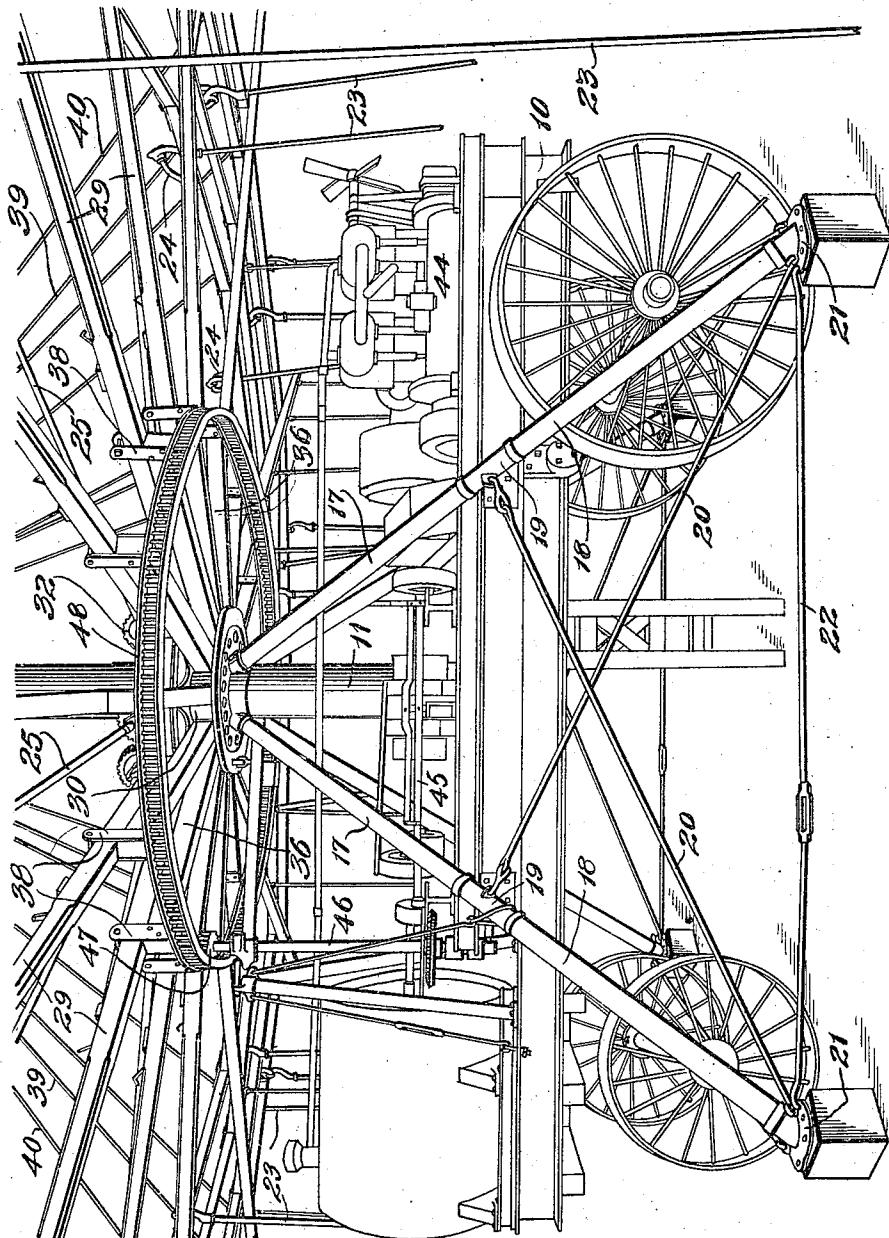
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3 SHEETS—SHEET 2.



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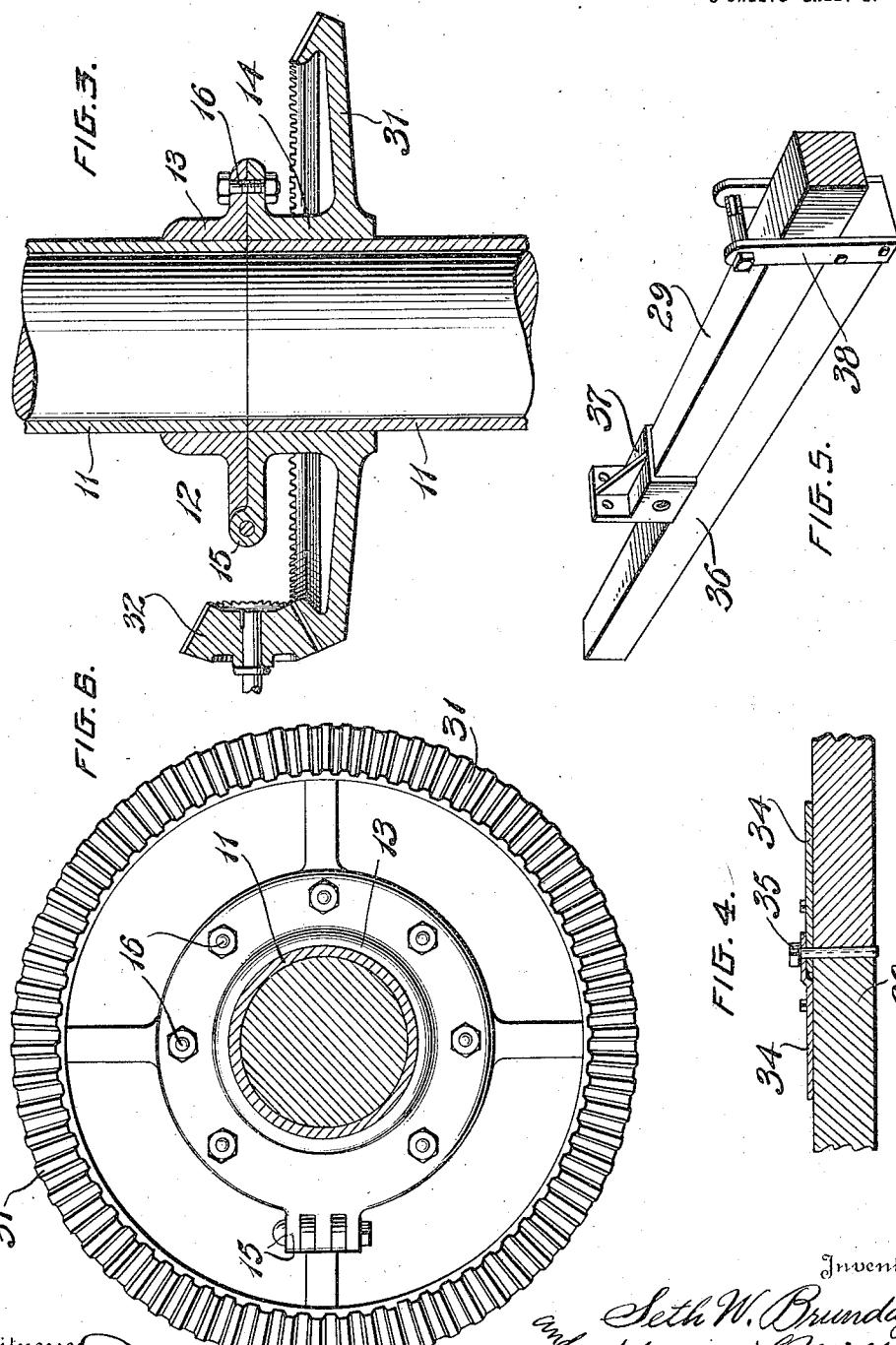
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UNITED STATES PATENT OFFICE.

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CAROUSEL.

1,263,370.

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To all whom it may concern:

Be it known that we, SETH W. BRUNDAGE and HARVEY L. MILLER, citizens of the United States, residing at Leavenworth, in the county of Leavenworth and State of Kansas, have invented certain new and useful Improvements in Carousels, of which the following is a specification.

The object of the invention is to provide a portable carousel or merry-go-round, adapted to be conveniently moved from place to place and requiring the minimum amount of adjustment or re-arrangement in order to permit of such movement and readjustment, when set up for operation, and with this general object in view, the invention consists essentially in mounting the revolute vehicle-carrying element upon a truck of the wheeled or other variety, and providing means for effectively anchoring and bracing such truck, and supporting means for the revolute element, to minimize vibration and prevent displacement in use.

Further objects and advantages will appear in the following description, it being understood that changes in the form, proportions and details of the construction may be resorted to without departing from the spirit of the invention.

In the drawings in which a preferred embodiment of the invention is illustrated,—

Figure 1 represents a perspective view of the upper portion of the apparatus;

Fig. 2 is a similar view of the lower portion thereof;

Fig. 3 is a detail sectional view of the joint in the folding mast, with related parts;

Fig. 4 is a detail sectional view of the joint between two elements of the main braces for the removable frame;

Fig. 5 is a detail view in perspective of the means for mounting the removable spider arms;

Fig. 6 is a plan view of the master gear.

In the construction illustrated, the truck 10, in addition to suitable operating mechanism, which may be of any approved type, including an engine or its equivalent, carries a mast 11, preferably collapsible in construction, as for example, being constructed

in upper and lower sections connected by a joint 12, which, as illustrated, may consist of elements 13 and 14 hinged together, as at 15, and adapted to be secured in their normal relative positions with the mast sections in alinement, by a bolt 16, or its equivalent. The stability of the mast is insured by braces 17 disposed radially and permanently attached at their lower ends to convenient portions of the truck, while the anchoring and bracing of the truck itself, when the apparatus is set up for use, are provided for by removable struts 18, preferably disposed respectively in alinement with the braces 17 and fitted at their upper ends in sockets 19 to which may be connected the upper ends of tie rods 20, which extend to and are engaged with the feet 21 of the struts. These feet may be blocked up, as shown, and are connected transversely and longitudinally in pairs by the horizontal braces 22. When the apparatus is to be moved, these struts may be dismounted and conveniently stowed on the truck.

As with other devices of this type, any suitable or preferred vehicles may be employed, such as horses or other animals, chairs, arks or the like, and for the support of the same, there is employed a revolute frame of folding or knock-down construction, said vehicles, which for convenience have not been illustrated, being suspended by rods 23 or the equivalent thereof connected with cranks 24 formed in radial shafts 25. These crank shafts are removably mounted on the revolute frame in open seats or bearings 26 arranged upon spaced annularly arranged brace members 27 and 28 of the above mentioned supporting frame, these brace members being disposed to connect the radial or spider arms 29 of said frame, and which radial arms are removably seated upon and engaged with a hub 30 revolvably mounted on the mast beneath a master gear 31, which, as illustrated in the drawing, may be formed integral with or rigidly secured to the lower element of the mast joint. The crank shafts carry pinions 32 meshing with said master gear and held in operative relation therewith by 100

bearings 33, which may be of any preferred construction designed to permit the dismounting of the shafts, as for example, having removable or displaceable caps, as 5 shown.

The elements of the annular braces are 10 detachably secured together at their meeting extremities, and to the radial or spider arms 29 by any suitable means, such as the overlapping plates 34, secured respectively to said elements and engaged by a through bolt 35 or its equivalent, whereby the removal of said bolts provide for disconnecting said bracing elements and releasing the 15 spider arms, which, in turn, are removable, by reason of being demountably supported by hub arms 36, radiating from the hub, said hub arms carrying seats 37 for the reception of the inner ends of the spider arms 20 and stirrups 38 for engaging the intermediate portions of said spider arms. Said bracing elements, crank shafts, and spider arms are adapted to be conveniently stowed upon the truck, while the mast is adapted to 25 be folded through the means heretofore described.

In order to insure the rigidity of the mast at its upper end, and at the same time support the outer extremity of the spider arms 30 and otherwise brace and unify the structure, particularly with reference to the removable vehicle-carrying feature thereof, one or more sets of radially and diagonally disposed brace rods 39 and 40 may be employed, the upper extremities of the same 35 being connected with a revoluble anchor plate 41 or its equivalent, it being understood that the lower extremities of these brace rods which are provided with hooks 42, engaged with eyes 43, may be disengaged therefrom and folded with the upper mast element when the apparatus is collapsed for transportation or movement from one place of use to another.

The apparatus illustrated in the drawing 45 is designed to be operated by means of an engine 44, illustrated diagrammatically, and having its driving shaft 45 keyed to a countershaft 46, and this countershaft carries a 50 drive pinion 47 meshing, as shown, with a basket gear 48, supported by the hub arms, and therefore adapted to remain permanently in position as a part of the fixed structure.

It will be noted that all of the permanent 55 parts of the apparatus as described, are located within the space above the truck, bounded by the side and end edges of the truck, or, in other words, are located within 60 the area of the truck, whereas those elements of the structure which project beyond the area of the truck when the machine is in use, are demountable or collapsible to provide for folding and stowing the entire ap-

paratus within the area of the truck when 65 the machine is to be moved, whereas when the parts are set up for use, the various elements thereof, including the truck itself are adequately braced to secure the requisite strength, rigidity and permanency. To still 70 further increase such strength and rigidity, it is obvious that additional braces, for example, such as those illustrated as located between the struts, may be employed, to extend, for example, transversely of the truck, 75 but it has been deemed unnecessary to specifically illustrate such obvious modification.

It will be understood also that supplemental conveyances may be employed where the storage space on the truck is found insufficient, and in this connection, it will be noted that by providing the brace rods 39 and 40 with hooks at their upper ends for engagement with the anchor plate 41, said rods may be bodily detached instead of being 85 folded with the mast, as hereinbefore indicated.

It will also be obvious that while engine power may under certain circumstances and with certain sizes of apparatus be found 90 more convenient, the structure disclosed may be driven by any suitable or preferred power.

What is claimed as new is:

1. A portable carousel comprising a truck carrying a revoluble supporting frame and 95 a stationary structure upon which said supporting frame is mounted, said stationary structure including braces secured to the truck, in combination with removable struts to steady the truck respectively arranged in 100 alinement with said bracing elements.

2. A portable carousel having a truck, a mast, a supporting frame mounted upon the mast, a plurality of braces for the mast secured to the truck, and struts arranged 105 respectively in alinement with said mast braces, and detachably connected with the truck to steady the same.

3. A portable carousel having a truck, a revoluble supporting frame, means carried 110 by the truck for carrying the supporting frame, bracing elements for the carrying means mounted upon the truck, and bracing elements for the truck, connected thereto in line with the aforesaid bracing elements, said 115 supporting frame comprising permanent and removable elements, and the permanent elements thereof and of the said carrying means and bracing means being located substantially within the area of the truck. 120

4. A portable carousel having a truck, a mast carried thereby and comprising permanent and foldable members, a supporting frame having a hub structure permanently mounted upon the permanent portion of the 125 mast and having an outer structure demountably connected with the hub structure, bracing means for the permanent portion of

the mast, and removable bracing elements between the folding element of the mast and the demountable elements of the supporting frame, the said permanent portions of
5 said mast, bracing means and hub structure being substantially within the area of the truck.

In testimony whereof we affix our signatures in presence of two witnesses.

SETH W. BRUNDAGE.
HARVEY L. MILLER.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."