A. C. TULENE.

ROUNDABOUT.

APPLICATION FILED OCT. 13, 1909.

954,482.

Patented Apr. 12, 1910.

3 SHEETS—SHEET 1.

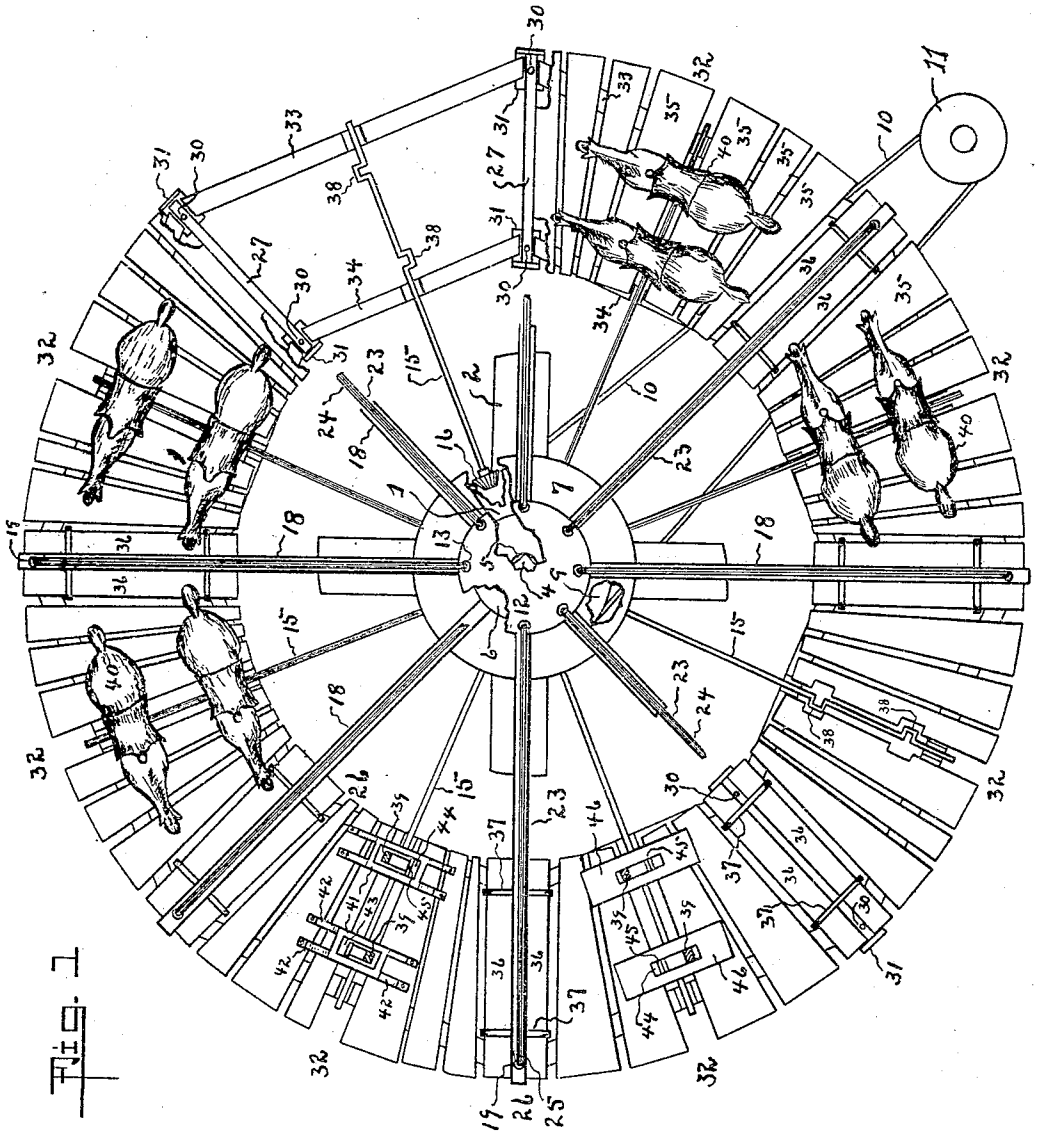

FIG. 1

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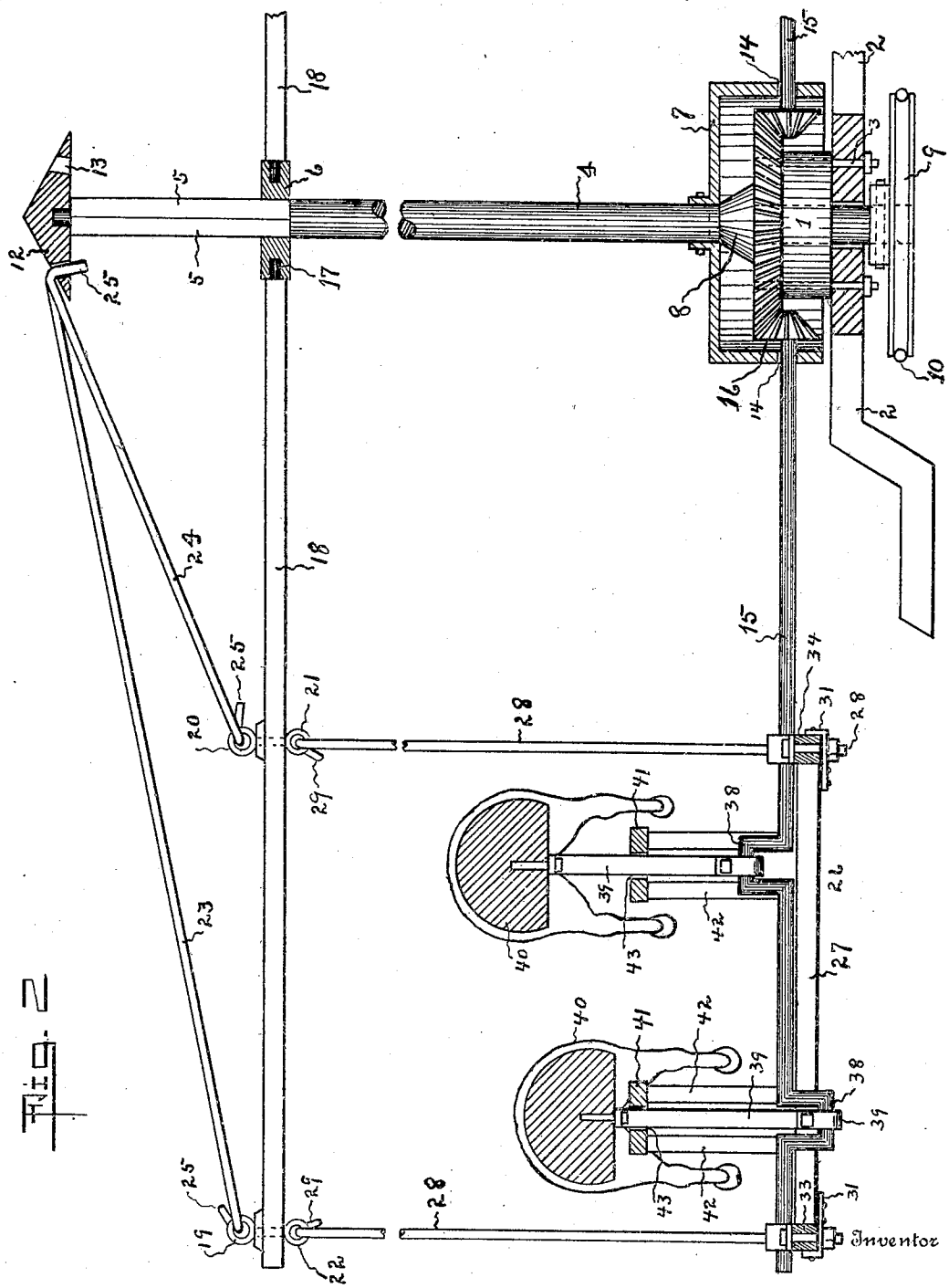

FIG. 2

Witnesses

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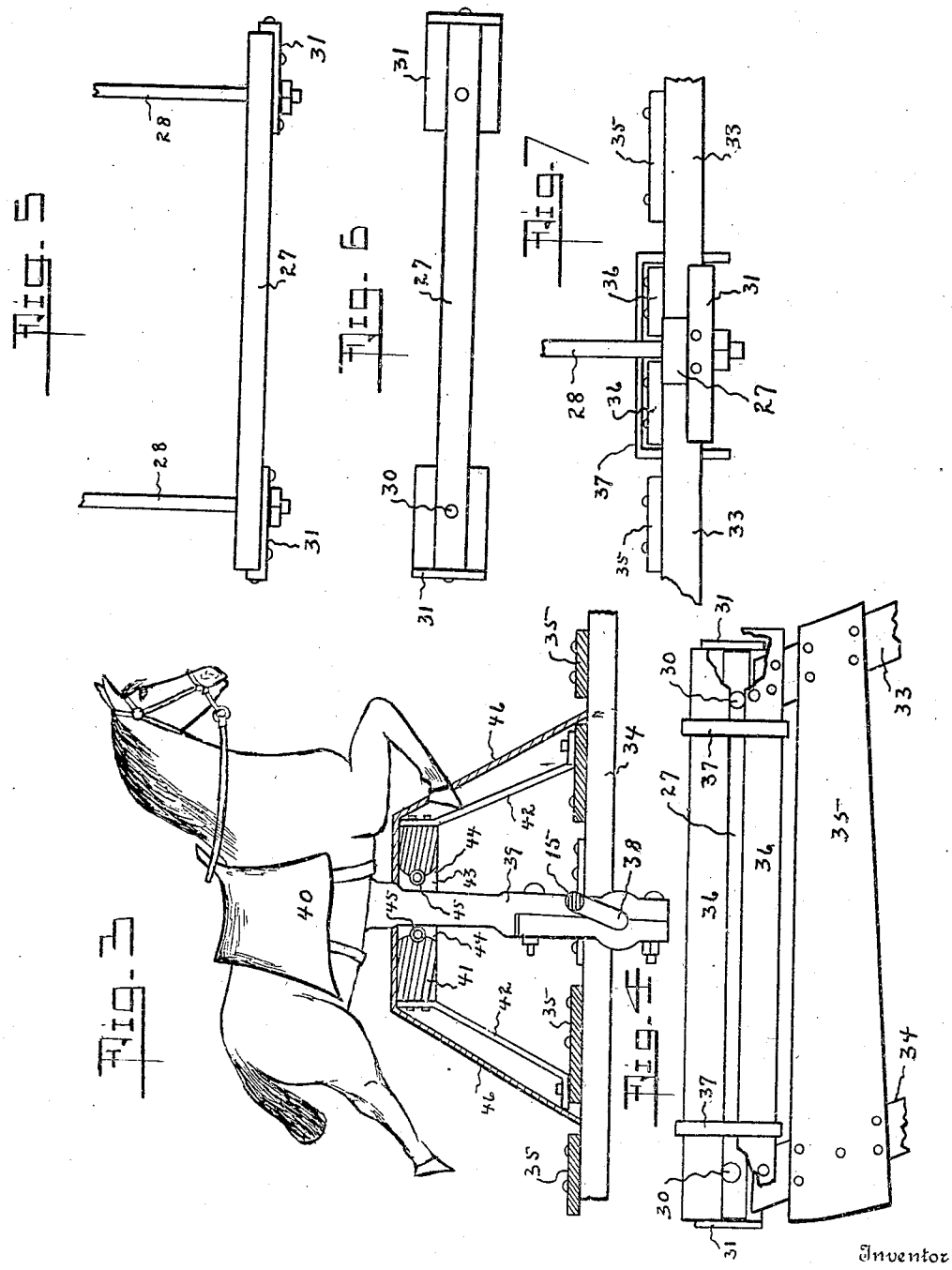

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UNITED STATES PATENT OFFICE.

ALBERT C. TULENE, OF PLATTSMOUTH, NEBRASKA.

ROUNDABOUT.

954,482. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed October 13, 1909. Serial No. 522,490.

To all whom it may concern:

Be it known that I, ALBERT C. TULENE, a citizen of the United States, residing at Plattsmouth, in the county of Cass and State of Nebraska, have invented certain new and useful Improvements in Roundabouts, of which the following is a specification.

This invention relates to an improved merry go round, amusement device or apparatus, whereby a circular, horizontal platform with seats for passengers is moved by a vertical, central, rotatable post or shaft support, and has for its object to provide a portable apparatus of this class which will consist of few and simple parts so that it may be economically manufactured, and will be convenient for assembling, and will be reliable and durable in use.

Another object is the provision of undulating movements for the carriers or horses while moving forward, the seatings for passengers being in pairs, the horses or seats of a pair moving upward or downward in alternation, whereby the weight will be counterbalanced upon the radially disposed crank shafts upon which the pairs of seats are mounted. In an apparatus for this purpose a certain amount of force is required for moving the platform, the remainder of the power being employed for rotating the radial shafts.

One of the objects of the invention is to provide a construction whereby all of this power may be applied at the base of the apparatus, thereby avoiding the overhead machinery, and reducing vibrations, as compared with structures which employ upper driving shafts.

The invention also has reference to the construction of the circular platform, whereby the segmental sections may be conveniently assembled and reliably secured as a unit; and to the means of supporting the platform, the object in this respect being to provide parts which may be readily connected or disconnected and will be portable; also to convenient and reliable means for mounting the horses or passenger seats.

With these and other objects in view, the invention discloses a novel combination and arrangement of parts, as described herein, pointed out by the appended claims and as illustrated in the accompanying drawing, it being understood that changes in size, form, proportion and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing which forms a part of the application, Figure 1 is a plan view of a merry go round embodying my invention, parts thereof being partly broken away to more clearly show construction. Fig. 2 is a vertical side view, partly broken away to show mounting of the radial crank shafts and their supporting connections, the hood of the central, vertical, driven shaft or supporting post, together with certain other parts, being in section. Figs. 3, 4, 5, 6, and 7 are detail views. Fig. 3 is a vertical end view, partly broken away, of one of the segmental sections of the platform, and showing the mounting and connections of the pitman. Fig. 4 is a plan view of part of one of the segmental sections of the platform, illustrating use of the angular tie bars or yokes employed. Figs. 5 and 6 are, respectively, side and plan views of one of the sustaining bars and supporting plates. Fig. 7 is an end view of a supporting plate or shoe and two end-portions of platform-sections seated thereon, and held by a removable yoke.

Referring now to the drawing for a more particular description, numeral 1 indicates a stationary, annularly toothed block member or rack secured upon the base 2 as by means of bolts 3; and at 4 is indicated a vertical, rotatable, central shaft, preferably having transverse facets 5 near its upper end, upon which may be secured the collar 6, the lower end of the shaft being provided with the hood 7.

That part of shaft 4, intermediate the mounting of the hood and the annular rack is formed as an expanded part 8 to provide a suitable bearing surface. At 9, rigidly mounted on shaft 4, is shown a sheave wheel which may be connected, by cable 10, with drum or sheave wheel 11, the latter being actuated or rotated by any suitable power.

Upon the upper terminal of the central, vertical shaft is seated the rotatable cap 12 having spaced apertures 13 therein, adjacent to its angular edge. The cap may be readily removed when it is desired to disconnect the parts; also collar 6 may be easily removed since it is slidably seated upon the top of the post. The weight of the central vertical shaft, as thus described, is supported upon the stationary annular rack. The hood is apertured at spaced intervals as indicated at 14, near its lower edge, and provides bear-

ings therein for the crank shafts 15, the inner ends of these shafts being provided with pinions 16 which mesh with the teeth of the annular rack, said hood overhanging the rack and said pinions.

In the periphery of collar 6, and at spaced intervals are provided recesses 17, and I provide horizontal, radially disposed platform supporting-bars 18, their inner ends being supported in these recesses; and upon their outer terminals upon their upper sides are provided loops or rings 19. Upon the upper and lower sides of these bars, intermediate its terminals, are provided the respective holders or loops 20 and 21, loops 22 being also provided and secured upon the lower sides, at the outer ends of said bars.

I provide for each of supporting bars 18, the inclined upper and lower sustaining rods 23 and 24. They are preferably formed with terminal hooks 25, so that the parts may be readily connected or disconnected when desired, and the hooks at the inner ends of said bars may engage within apertures 13 of cap 12, their outer ends engaging within loops 19 and 20.

It will be understood that the horizontal supporting bars thus described are for the purpose of sustaining the circular platform 26. At 27 are indicated section supporting bars.

A bar 27 is disposed radially near the outer end and in the vertical plane of each supporting bar 18 at an altitude below crank shafts 15; and they are held in a horizontal position by a pair of vertical supporting rods 28. Rods 28, at their upper ends, are preferably formed with hooks 29 which may engage within loops 21 and 22, their lower ends traversing openings 30 (Fig. 1) formed in and near the ends of bars 27; they are passed through and are suitably connected with supporting plates or shoes 31, said plates or shoes having a width greater than that of bars 27.

Platform 26 is formed by a plurality of segmental sections 32, and each section may be formed with an outer and inner supporting bar 33 and 34, upon which may be secured cross strips 35 and terminal cross strips 36.

The construction thus described is very convenient for readily assembling the parts, since, after rods 28 have been mounted in loops 22, sections 32 may be placed in position by simply placing the ends of bars 33 and 34 upon supporting plates 31; and the sections may be conveniently and reliably secured together by use of yokes 37, said yokes resting upon and engaging the terminal strips 36 of the sections.

Crank shafts 15 have suitable bearings upon and midway between the ends of supporting bars 33 and 34, their cranks 38 being between these bars. Upon each of the cranks may be mounted a pitman 39, and rigidly mounted upon the opposite end of each pitman at a suitable distance above the platform is disposed a suitable seating for a passenger, as the horse 40.

Two of cranks 38 are provided for each shaft 15, and since the cranks are disposed radially 180 degrees apart, the horses of each pair will be moved upward in alternation, as is obvious, and this is a desirable result, since the weight or momentum of one, when descending, will provide a force tending to elevate the other, of the pair.

In order that the movement of each pitman may be properly directed, I provide therefor at a suitable altitude above the section a guide or head block 41, sustained by legs 42 suitably secured to the section. Blocks 41 are apertured as indicated at 43 for mounting the pitmen therein and the blocks are chamfered to provide reduced portions 44 adjacent to their upper and lower edges and opening upon apertures 43 so that the pitmen will not be obstructed in their upward and downward movements and at 45 are indicated rollers mounted midway between the upper and lower sides of blocks 41 and disposed in apertures 43, which the pitmen may engage during their movements, and which tend to reduce vibrations.

Head 41 and legs 42 preferably are inclosed by covering 46 so that the pitman will not be visible from the platform.

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

1. In a seat-riding amusement apparatus, the combination with a support provided with a stationary annular rack; a vertical rotatable shaft traversing said annular rack and provided with radially disposed horizontal supporting arms; a hood carried by said vertical shaft intermediate the support and said horizontal supporting arms and having a rim disposed outwardly of the annular rack; a plurality of radially disposed horizontal crank shafts sustained by said hood and said supporting arms, each having a pinion upon its inner end engaging said annular rack, and an upright pitman mounted upon each crank of a crank shaft sustaining one of said riding seats.

2. In a seat-riding amusement apparatus, a suitable base provided with a stationary annular rack; a vertical shaft traversing the annular rack and provided with horizontal supporting arms; a hood rigidly mounted upon the vertical shaft intermediate said base and the horizontal supporting arms and provided with a rim disposed in the horizontal plane of the annular rack; a plurality of horizontal crank shafts connected with said horizontal supporting arms and traversing the rim of said hood, each of said shafts having a pinion engaging said an-

nular rack; upright pitmen mounted upon the cranks of the crank shafts sustaining the riding seats, and means to cause a rotation of said vertical shaft.

3. In a seat-riding amusement apparatus, the combination with a base provided with a stationary annular rack, a vertical, rotatable shaft traversing said annular rack; a supporting-frame comprising radially-disposed horizontal arms having bearings upon said vertical shaft, vertical rods connected with said horizontal arms and provided with shoes upon their lower terminals; a platform comprising segmental sections having their ends supported upon the shoes of said vertical rods and disposed in the vertical plane of said annular rack; a hood mounted upon the vertical shaft intermediate said base and said radially-disposed horizontal arms of the supporting-frame and having a rim disposed outwardly of the annular rack; a plurality of radially disposed, horizontal crank shafts sustained by said hood and supporting-frame, each having a pinion upon its inner end engaging said annular rack, and an upright pitman mounted upon each crank of a crank shaft, its upper end having a riding-seat mounted thereon.

In testimony whereof I have affixed my signature in presence of two witnesses.

ALBERT C. TULENE.

Witnesses:
HIRAM A. STURGES,
GEORGE GARDNER.