(No Model.) 2 Sheets—Sheet 1.

A. KOEHLER.

CAROUSEL.

No. 593,177. Patented Nov. 2, 1897.

FIG. 1.

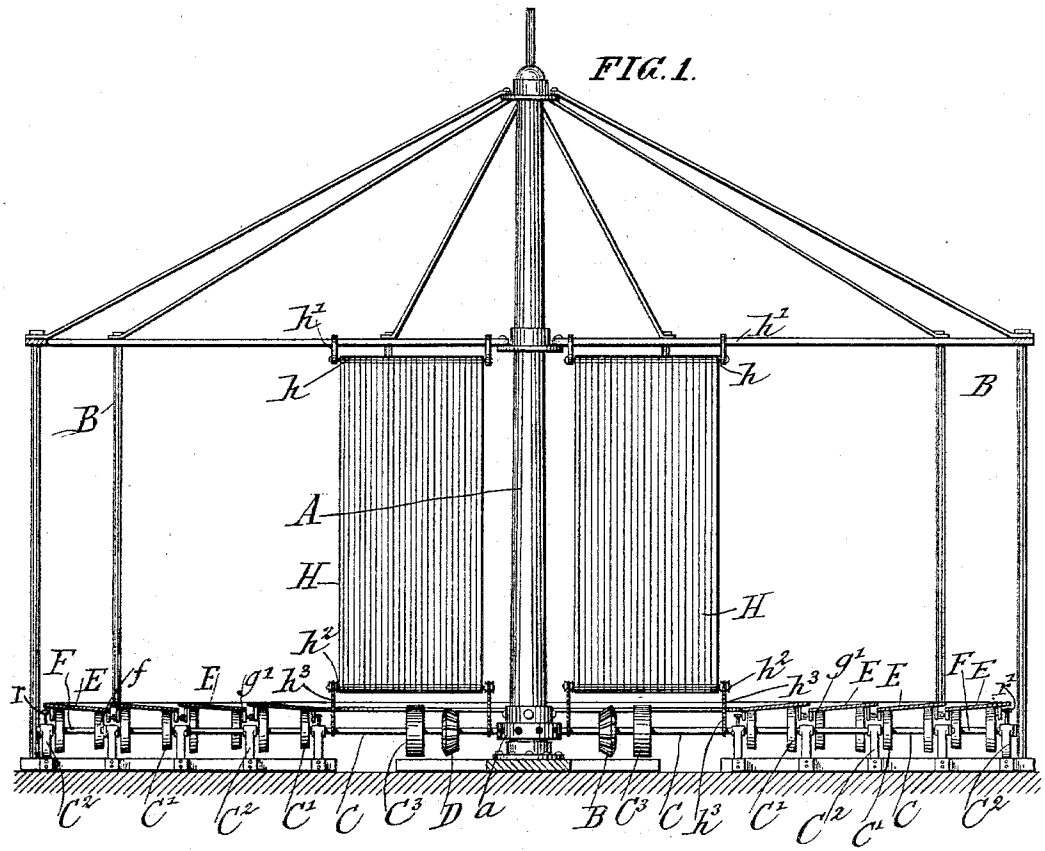
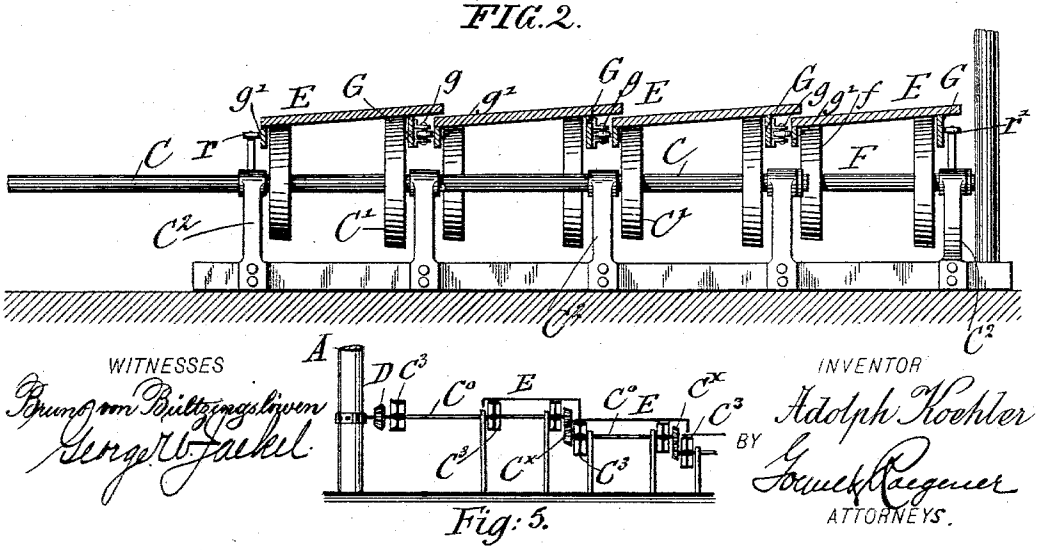


FIG. 2.



WITNESSES

Bruno von Biltzingslöwen

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Fig. 5.

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BY Church & Wagner

ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

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FIG. 3.

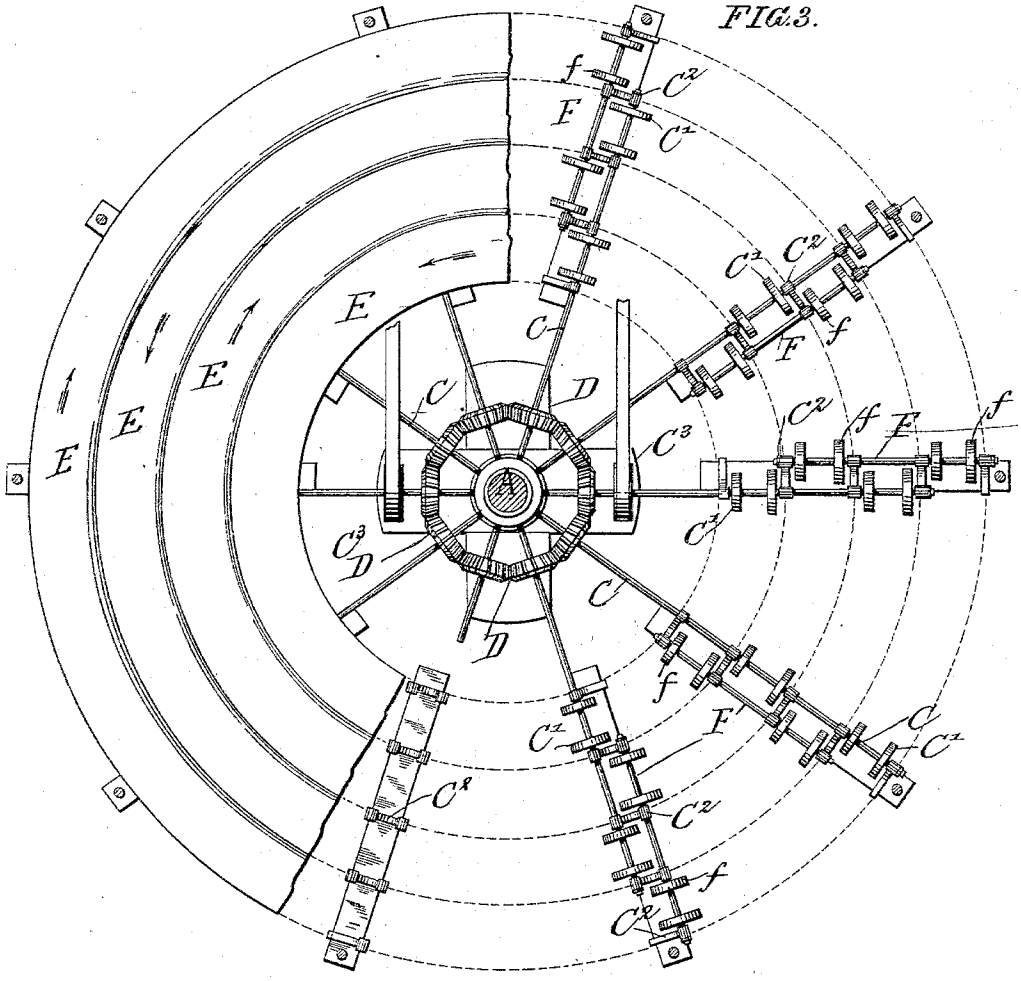
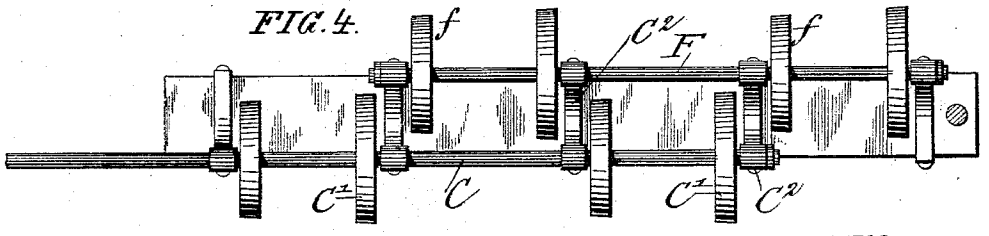


FIG. 4.



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

ADOLPH KOEHLER, OF TICONDEROGA, NEW YORK, ASSIGNOR OF ONE-HALF TO JOHN SCHUMM, OF SAME PLACE.

CAROUSEL.

SPECIFICATION forming part of Letters Patent No. 593,177, dated November 2, 1897.

Application filed March 25, 1897. Serial No. 629,182. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH KOEHLER, a citizen of the German Empire, residing at Ticonderoga, county of Essex, and State of New York, have invented certain new and useful Improvements in Carousels or Merry-Go-Rounds, of which the following is a specification.

This invention relates to a carousel or merry-go-round, the object of the invention being to make the same amusing and entertaining for children and others by causing adjacent or separate lines of horses or animals to move in opposite directions, so that those persons in one line or circle will pass those in the next or adjacent line or circle face to face.

The invention consists of a central post, drive-shafts radiating from said post and journaled at their inner ends in bearings at the lower end of the post and at their outer ends being supported in suitable bearings, drive-rollers mounted on said shafts, supporting-rollers mounted on short counter-shafts arranged parallel with the drive-shafts, and a series of concentric circular platforms arranged, preferably, at an inclination to each other, so as to overlap, and being supported upon the driving-rollers and the supporting-rollers, the driving-rollers of the alternate drive-shafts being arranged to drive the alternate circular platforms, while the intermediate drive-shafts are arranged to drive the intermediate platforms, and the supporting-rollers being correspondingly arranged, all as will be hereinafter more fully described and then claimed.

In the accompanying drawings, Figure 1 is a side elevation of my improved carousel, partly in transverse section. Fig. 2 is an enlarged detail cross-section of one side of the lower portion of the same. Fig. 3 is a plan view of the same, showing the platforms broken out at one side. Fig. 4 is an enlarged detail plan view of one of the driving-shafts and its rollers and the adjacent parallel counter-shaft with its supporting-rollers, and Fig. 5 is a detail sectional view showing a modification.

Referring to the drawings, A represents the center post, and B represents the framework, of my improved carousel. These may be constructed in any approved manner. Fixed to the lower end of the center post A is a circular collar or sleeve *a*, which is provided with a number of sockets or holes, in which the inner ends of the drive-shafts C, that are provided with driving-rollers C′, are journaled, said drive-shafts radiating from the post and being supported at their outer ends in side bearings of brackets C^2. Two diametrically opposite drive-shafts C are provided with driving-pulleys C^3 and which are operated by suitable power transmission, as by means of belts running from an engine over said pulleys. Arranged at the inner end of each shaft C^3 is a bevel-wheel D, all the bevel-wheels of said shafts intermeshing in circular series, so that when one of said shafts is positively driven the other shafts will also be driven, but the alternate shafts will be driven in opposite direction to the intermediate or adjacent shafts. Advantage of this difference of direction in rotation of the adjacent shafts is taken by providing a series of circular concentric and overlapping platforms E, which are supported upon the driving-rollers C′ of the drive-shafts, so that alternate circular platforms will be revolved in one direction, while the intermediate or next adjacent platforms will be revolved in the opposite direction. The innermost platform, for instance, rests upon the driving-rollers C′ of an alternate series of drive-shafts, while the next platform rests upon and is driven by the supporting-rollers of the intermediate or next drive-shafts.

In order that the platforms may each have a support adjacent to each drive-shaft, (for each drive-shaft only positively drives or supports every other or alternate platform,) there is arranged adjacent to each drive-shaft a parallel counter-shaft F, said counter-shafts F being journaled together with the drive-shafts in bearings of said brackets C^2 and being provided with rollers *f*. The platforms thus receive a support near each drive-shaft, for if the drive-shaft rollers do not support the platform near the drive-shaft the supporting-rollers of each counter-shaft do, and thereby the sagging or deflection of the platforms is prevented. The rollers C′ *f* are all frusto-conical, so that the circular platforms will be inclined inwardly and the rid-

ing-horses thereby tilted slightly toward the center post. In order to reduce the friction, there is arranged on the under side of the outer portion of each of the platforms a concentric supporting-flange G, which is provided with brackets, in which are mounted antifriction-rollers g, which travel or run upon the adjacent concentric track g', which is formed by a flange on the inner edge of each of the platforms. The flange g' of the inner platform and G of the outer platform run, however, against antifriction-rollers $r\,r'$, supported, respectively, upon pivots extending from the end brackets C^2.

By the above-described arrangement it is evident that the horses or animals on one frame will be caused to revolve in the opposite direction to those on the adjacent platform, as shown by the arrows, so that the children or persons seated on the animals of the adjacent platforms will pass each other face to face. In the modification shown in Fig. 5 the platforms are arranged in step-like series and are supported on rollers C^3, which are fixed on the short shafts C^0, that are mounted in suitable bearings and are connected by bevel gear-wheels $C^\times$, said shafts radiating like and corresponding to the drive-shafts C of the main form of the invention.

To furnish entertainment and amusement, there are driven from two or more of the drive-shafts two or more endless bands H, which may be decorated or furnished with pictures in any suitable manner, and which are supported at their upper ends by supporting-rollers h, supported from hangers h', arranged on the upper part of the frame B of the carousel, while the lower portions of the bands pass around rollers h^2, which are driven from endless belts or cords h^3, that pass around the driving-shafts.

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

In a carousel, the combination of a central bearing-piece, drive-shafts radiating from said bearing-piece and supported in suitable bearings, intermeshing bevel gear-wheels arranged upon the inner ends of the drive-shafts, driving means for said shafts, driving-rollers mounted upon said shafts, the driving-rollers of alternate shafts being arranged in one circle, while those of the next shafts are arranged in another concentric circle, counter-shafts provided with supporting-rollers and arranged adjacent to and supported in suitable bearings near the drive-shafts, the supporting-rollers of the alternate counter-shafts being arranged in one circle, while the supporting-rollers of the next counter-shafts are arranged in another and concentric circle, and a series of circular concentric platforms supported upon the driving-rollers and the supporting-rollers, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ADOLPH KOEHLER.

Witnesses:
JOHN SCHUMM,
REINHOLD PHILIPPS.