May 24, 1927. 1,630,229

C. F. THUSS

AUTOMOBILE SPEEDWAY DEVICE

Filed May 27, 1926 4 Sheets-Sheet 1

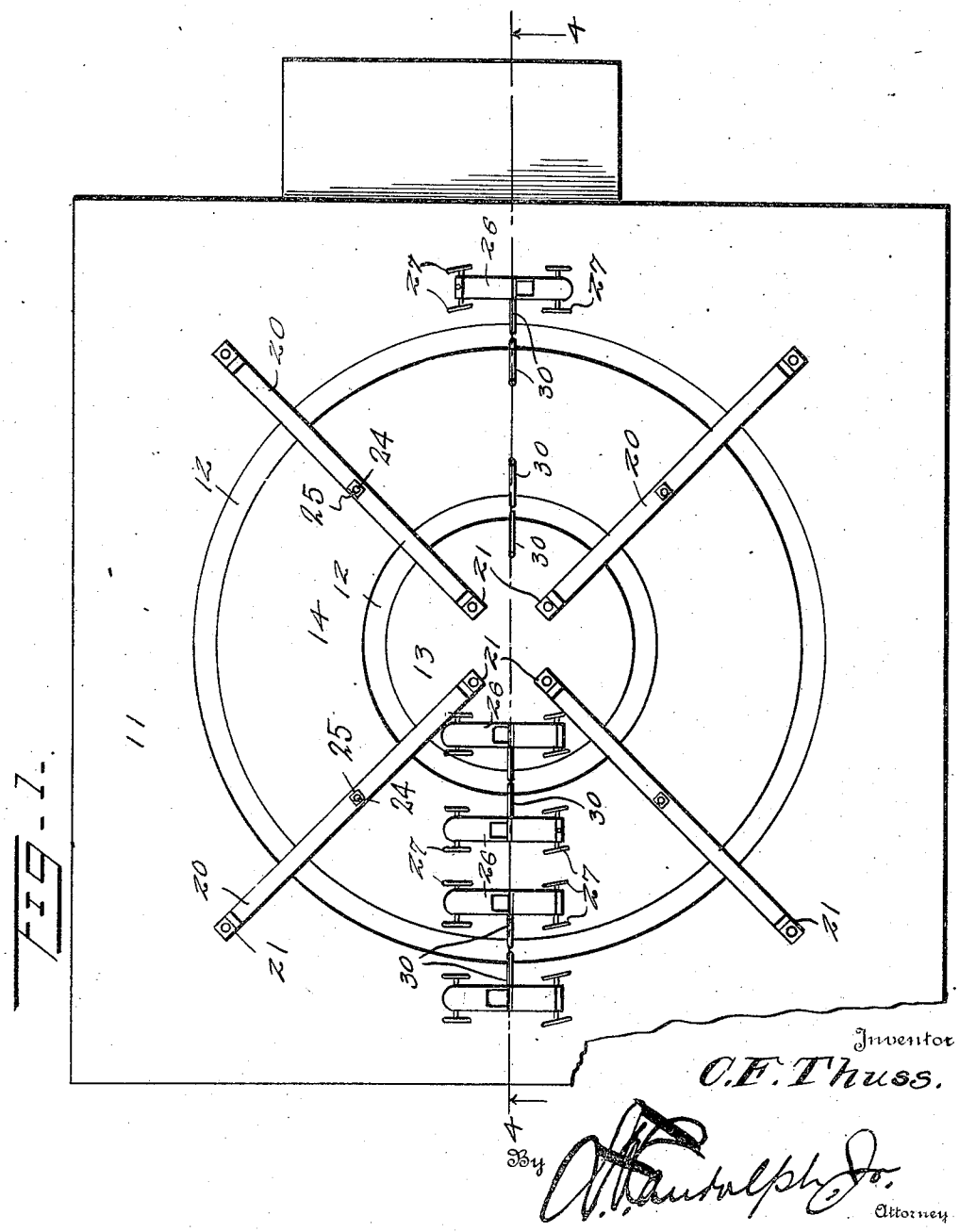


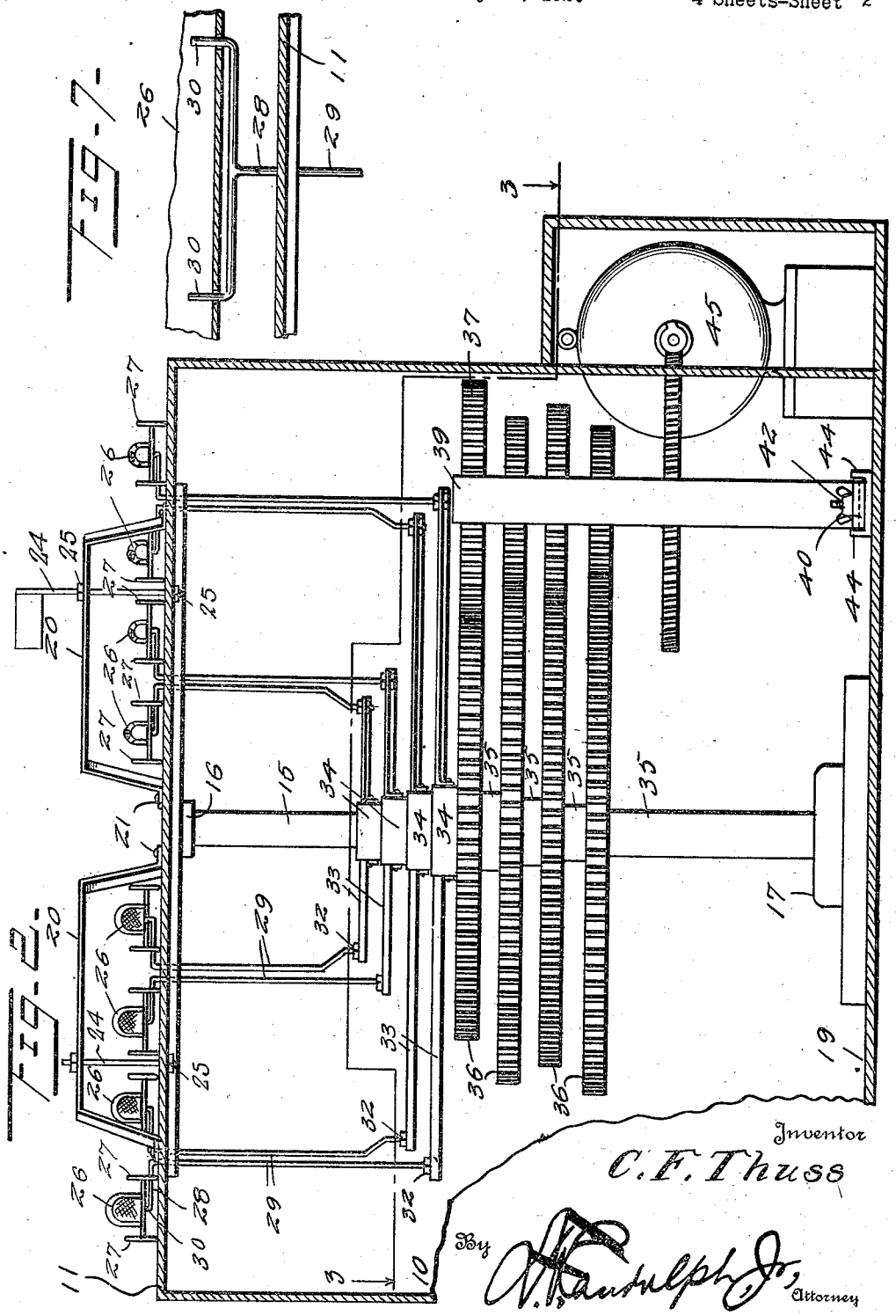
Fig. 1.

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AUTOMOBILE SPEEDWAY DEVICE

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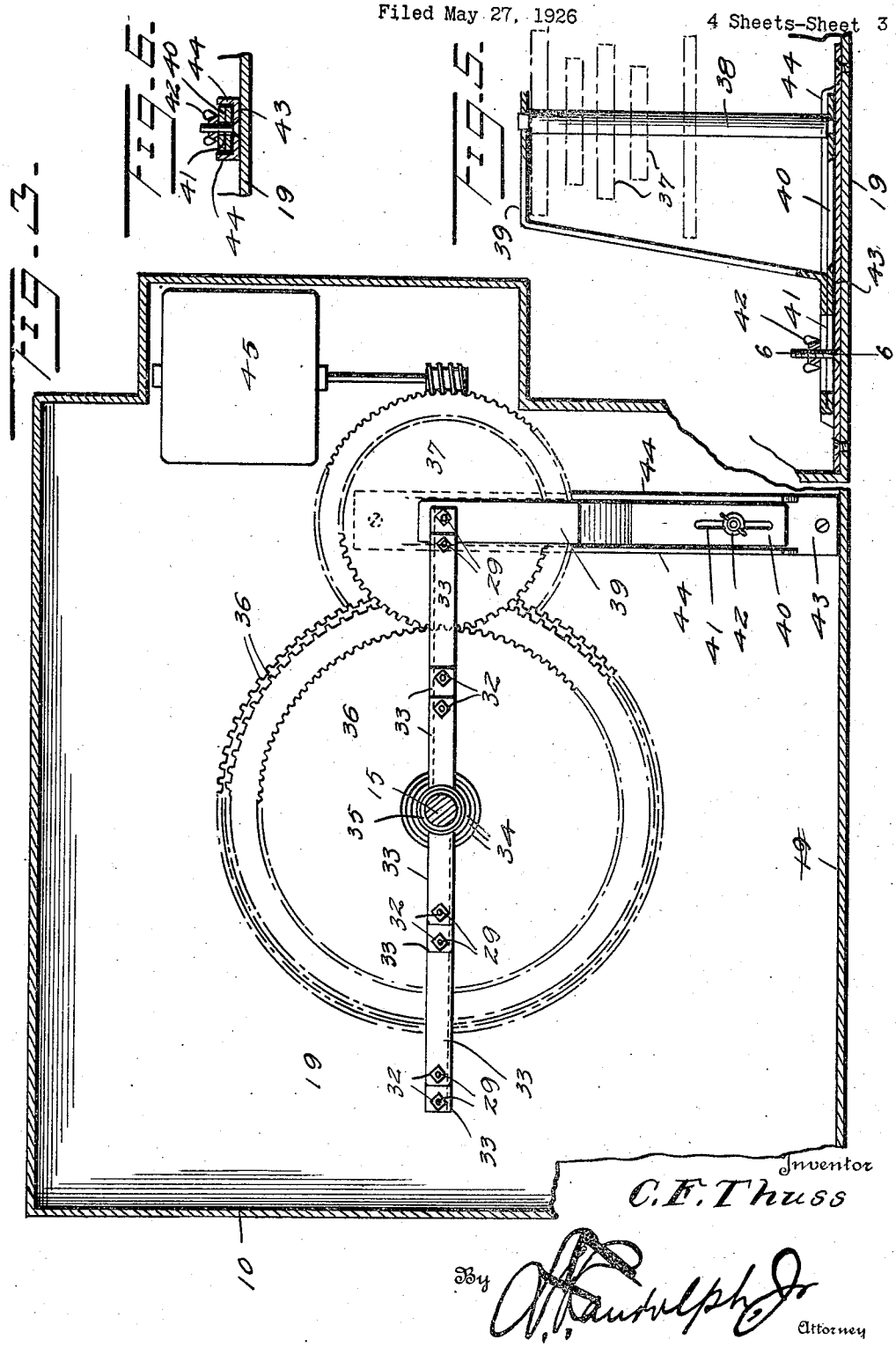
C. F. THUSS

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AUTOMOBILE SPEEDWAY DEVICE

Filed May 27, 1926

4 Sheets-Sheet 3

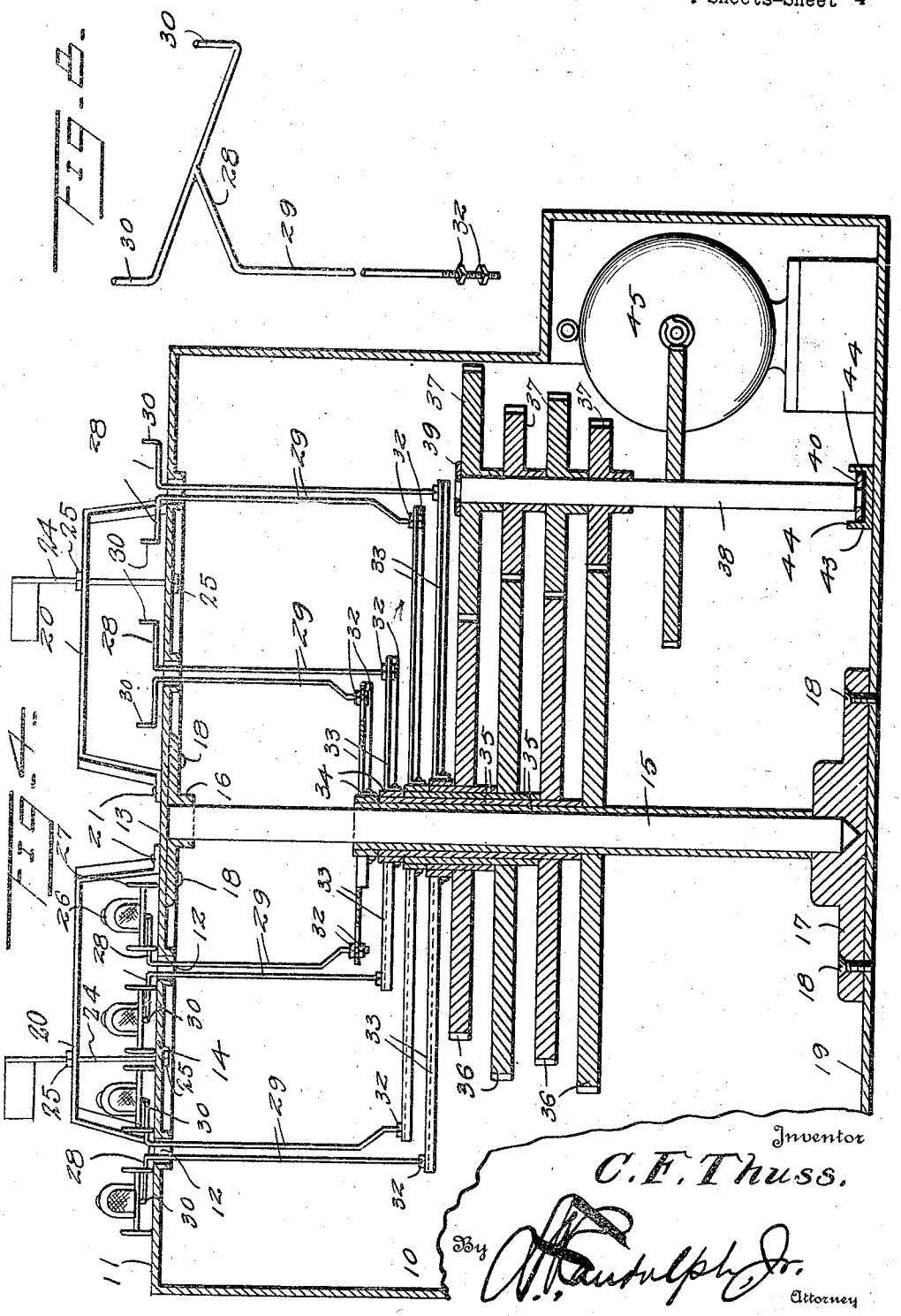


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C. F. THUSS

AUTOMOBILE SPEEDWAY DEVICE

Filed May 27, 1926 4 Sheets-Sheet 4



Patented May 24, 1927. 1,630,229

UNITED STATES PATENT OFFICE.

CHARLES F. THUSS, OF GREAT CACAPON, WEST VIRGINIA.

AUTOMOBILE SPEEDWAY DEVICE.

Application filed May 27, 1926. Serial No. 112,053.

This invention relates to an apparatus or device adapted for operation to simulate the racing of automobiles or other bodies on a speedway.

It is aimed to provide a novel construction which will give maximum pleasure and enjoyment and which at the same time is comparatively simple in construction, relatively inexpensive, durable, compact and efficient.

One definite object is to provide a construction accommodating the automobiles or racing elements in pairs with the cars of each pair capable of being run at a different speed in order to pass each other while running.

Additional objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawings illustrating an operative embodiment.

In said drawings:

Figure 1 is a view of the improved apparatus in plan;

Figure 2 is a view primarily in elevation to show the working parts but with the casing in section and broken away to disclose details;

Figure 3 is a plan view taken on the plane of line 3—3 of Figure 2 and essentially being of the device with the top of the casing removed;

Figure 4 is a vertical sectional view taken on the line 4—4 of Figure 1, and centrally, to disclose the driven gears and their bushings;

Figure 5 is a sectional view illustrating the mounting of the counter shaft;

Figure 6 is a transverse sectional view taken on the line 6—6 of Figure 5;

Figure 7 is a detail sectional view showing the connection between one of the racing cars and its driving bracket or arm, and

Figure 8 is a perspective view of a complete driving bracket or arm.

Referring specifically to the drawings, 10 designates a suitable casing, which may be made up of sheet metal, wood or any other appropriate material. The top of said casing is designated 11 and is provided with two or more concentric ways or slots 12 formed by a central disk 13 and a ring 14. Within the casing 10, a central staff 15 is provided, being fastened to or carried by flanges or plates 16 and 17, respectively, fastened as by screws or the like at 18 to the disk 13 and the bottom 19 of said casing. In this manner, the disk 13 is mainly held in place.

Upstanding U-shaped brackets 20 have feet 21 respectively secured at 22 and 23 to the top 11 and to the disk 13, thus forming an auxiliary fastening for the disk 13 and increasing the support of the staff 15 against lateral movement. Depending centrally from the brackets 20 are rods 24, projecting through the ring 14 and below the same receiving fastening nuts 25, whereby the ring 14 is securely supported and held in place.

Cars, automobiles or other racing bodies, of any appropriate number are conventionally shown at 26, being provided with wheels 27 to reduce friction incidental to their movement. The wheels of the outer row of cars travel on the top 11, the wheels of the inner row travel on the disk 13, and the wheels of the intermediate rows travel on the ring 14. Suitable carrier arms 28 are provided one for each body 26 and these carrier arms 28 have upright portions 29 adapted to move in the ways or slots 12 and they have spaced lugs 30 extending, preferably removably, into openings 31 provided in the under side of the cars or bodies 26 in longitudinally spaced relation.

The upright portions 29 by means of nuts or the like as at 32, are detachably but rigidly fastened to sweep arms 33. The sweep arms 33 are connected together in pairs by collars or hubs 34 which are detachably but rigidly fastened to sleeves or bushings 35 in independent concentric relation and disposed about and independently of the staff 15, said bushings being of different heights in graduated order, with the highest one innermost whereby the said collars 34 may be fastened to the upper end of the bushing without the collars or sweep arms 33 interfering in rotation with each other.

Keyed or otherwise rigidly fastened to each bushing 35 is a spur or other gear wheel 36. Meshing with each spur gear wheel 36 is a spur gear wheel 37. All of the gear wheels 37 are carried by an upstanding counter shaft 38, which may be driven and mounted in any suitable manner. Said shaft 38, for instance, is journaled in two bearing arms 39 and 40, spaced apart at portions thereof to accommodate the gear wheels 37 between them and being in contact at the

opposite terminals thereof and provided with registering elongated slots 41 therethrough. The bearing arms 39 and 40 may be made in a single piece if desired and as shown. Passing through said slot 41 is a set screw 42 which is threaded into a supporting face 43 rigidly fastened to the bottom wall 19 of the casing. Said base 43 has upstanding side flanges 44 intimately engaging the side edges of bearing arms 40 and portions of the side edges of the bearing arm 39, so that such bearing arms 39 and 40 cannot turn from the screw 42 as a pivot and accordingly will be held rigidly in place. The screw 42 and slot 41, enable the gears 37 to be moved into and out of mesh with the gear wheels 36, when desired.

As shown, the counter shaft 38 may be driven from an electric motor as at 45, through the medium of a worm drive. This showing is conventional since any drive desired may be resorted to and in some instances, particularly in small sizes of the apparatus, even a clock spring motor may be employed.

As a result of the construction described with the counter shaft 38 in motion, the same will drive the spur gear wheels 37 which in turn will drive the spur gear wheels 36. At this stage, it is to be noted that each of the gear wheels 36 and 37 is of a different size or diameter and hence each gear wheel will be driven at a different rate of speed. Accordingly the series of bushings 35 will be driven at varying speeds and likewise the sweep arm 33 as well as the carrier arm 28 and the bodies 26 will be driven or moved at different speeds. As a result of this difference in the speed of travel of the bodies 26, their operation will simulate the racing of automobiles or other bodies.

It is to be understood that the device may be made in various sizes and that changes in the details, combination and arrangement of parts may be resorted to provided they fall within the spirit and scope of the invention.

I claim as my invention:—

1. A device of the class described comprising concentric independently movable bushings, said bushings being of different heights to provide exposed portions, movable bodies, means to move said bodies connected to said exposed portions, and means to drive said bushings comprising gear members each of different diameters, and means to drive the gear members.

2. A device of the class described having a top, a disk coacting therewith to provide a way, a staff supporting said disk, means movable in said way, a body driven by said means, means to drive the first mentioned means surrounding said staff, comprising bushings in concentric relation with said staff, gear members on said bushings, said gear members differing in diameter, and means to drive said gear members.

3. A device of the class described having a track-way, a movable body associated therewith, means to move said body, a counter shaft, means to drive the first mentioned means from the counter shaft, means supporting the counter shaft, and means adjustably mounting the last mentioned means so that it may be moved into and out of operative position.

4. A device of the class described comprising a counter shaft, means thereon to drive work therefrom, bearing arms in which said counter shaft is journaled, said bearing arms having elongated slots therethrough, a base on which said bearing arms are slidably mounted, means passing through said slots and adapted to clamp the bearing arms to the base, and said base having upstanding side flanges engaging the sides of the bearing arms.

In testimony whereof I affix my signature.

CHARLES F. THUSS.