

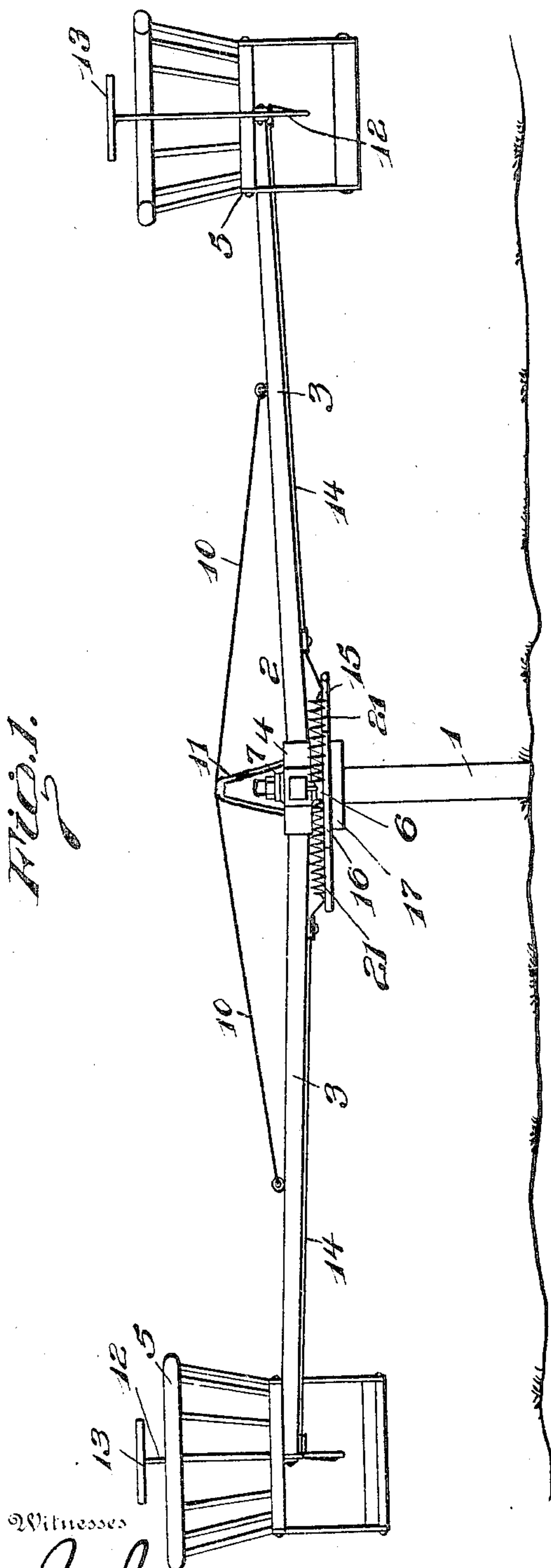
No. 822,435.

PATENTED JUNE 5, 1906.

B. W. DAVENPORT.
MERRY-GO-ROUND.

APPLICATION FILED FEB. 21, 1905.

2 SHEETS—SHEET 1.



Witnesses

Johnnie
W. H. Woodson

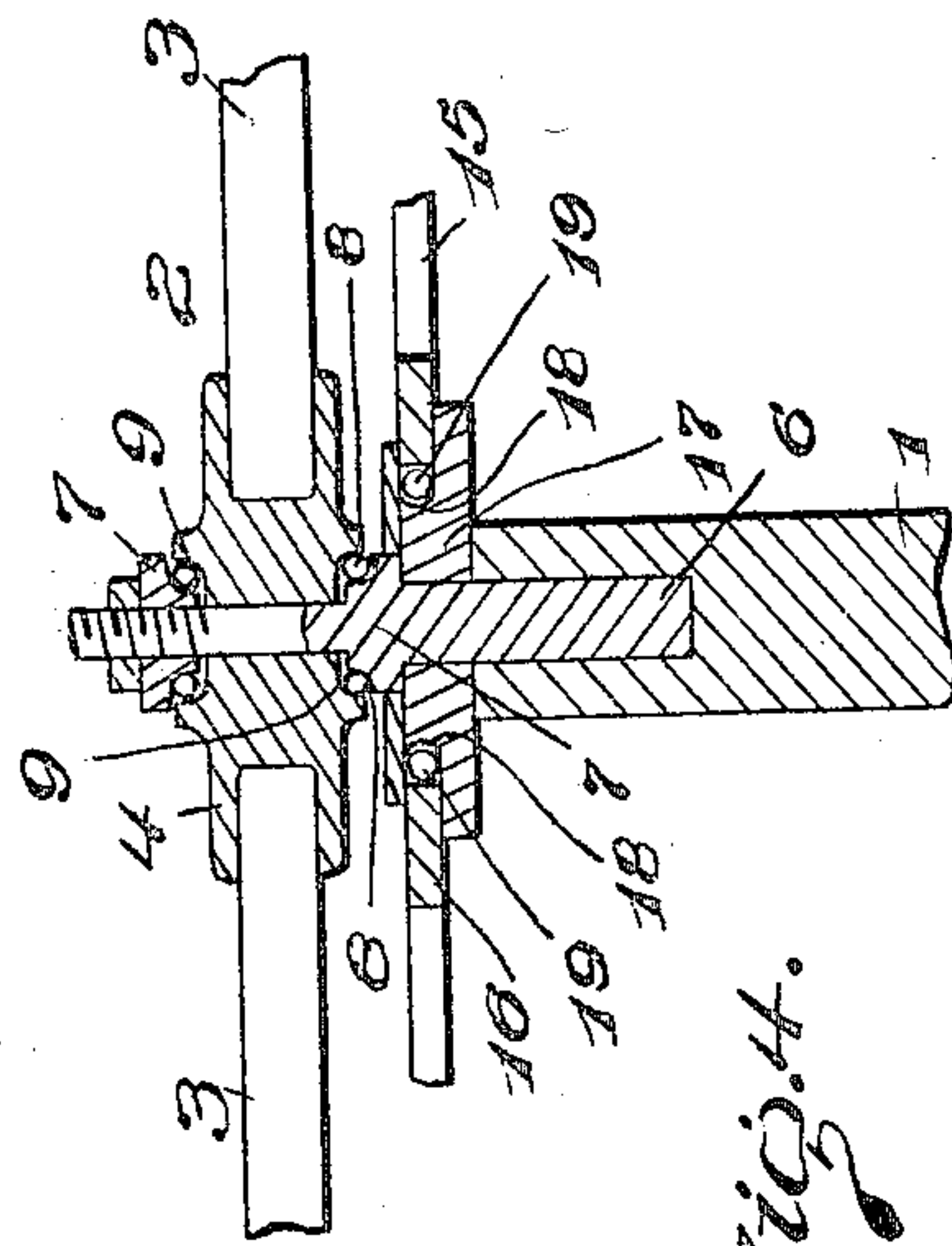
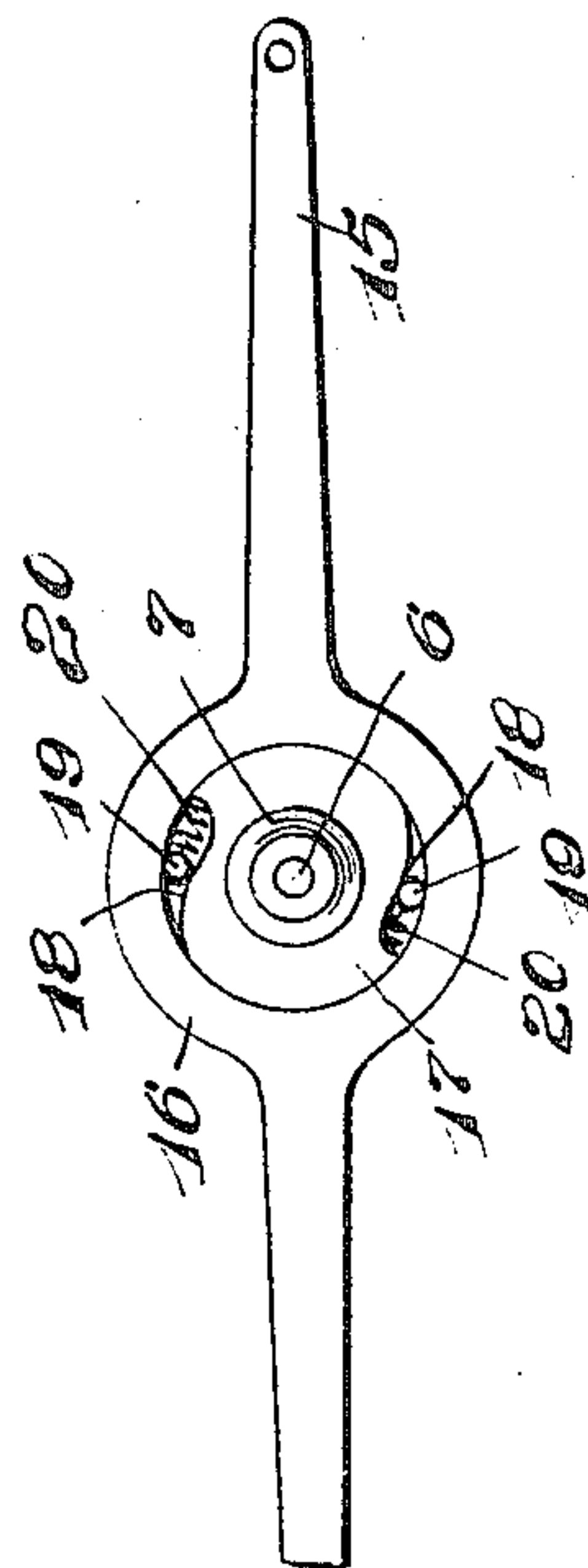


Fig. 3.



Inventor

B. W. Davenport

By

R. H. R. Racy, Attorneys

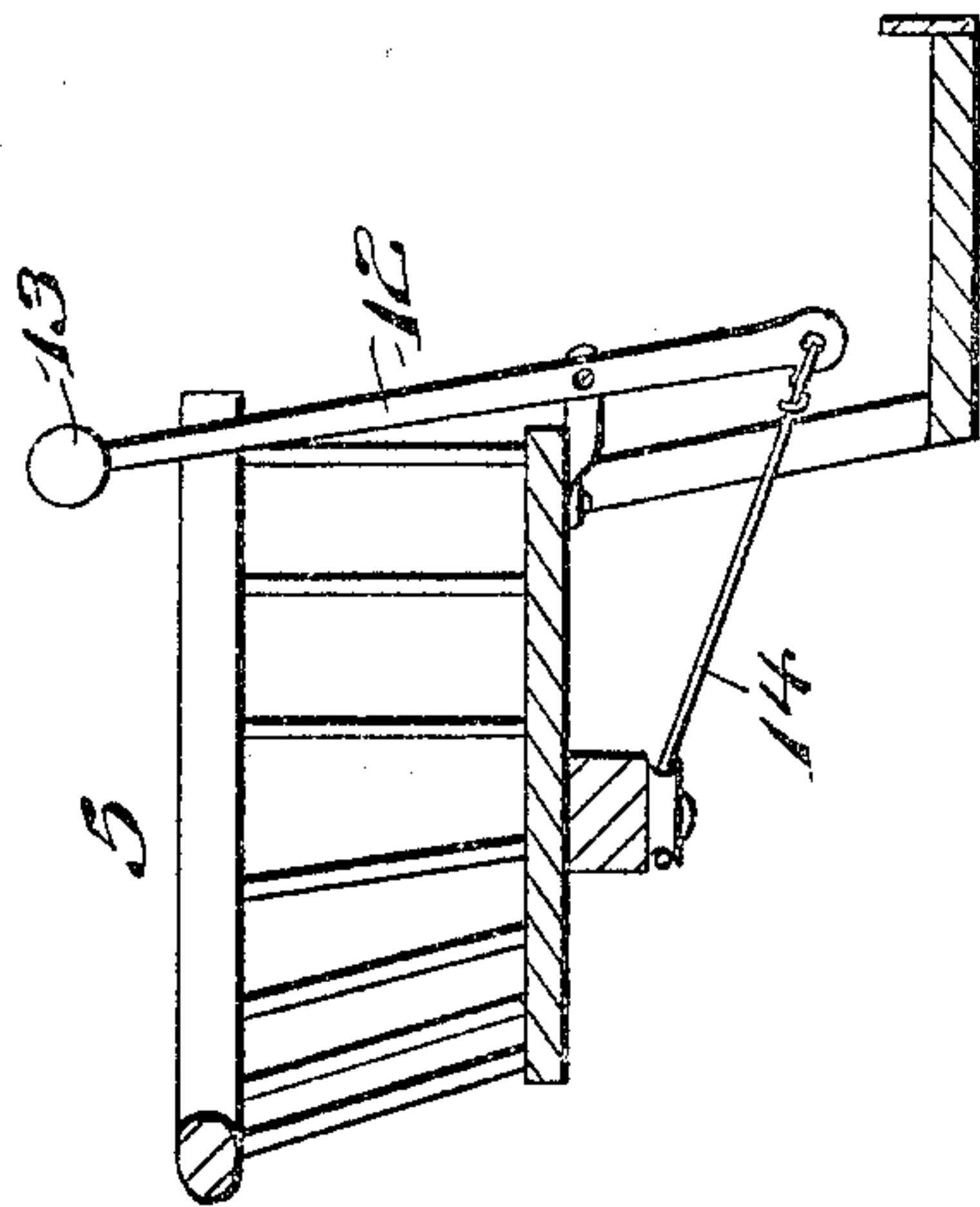
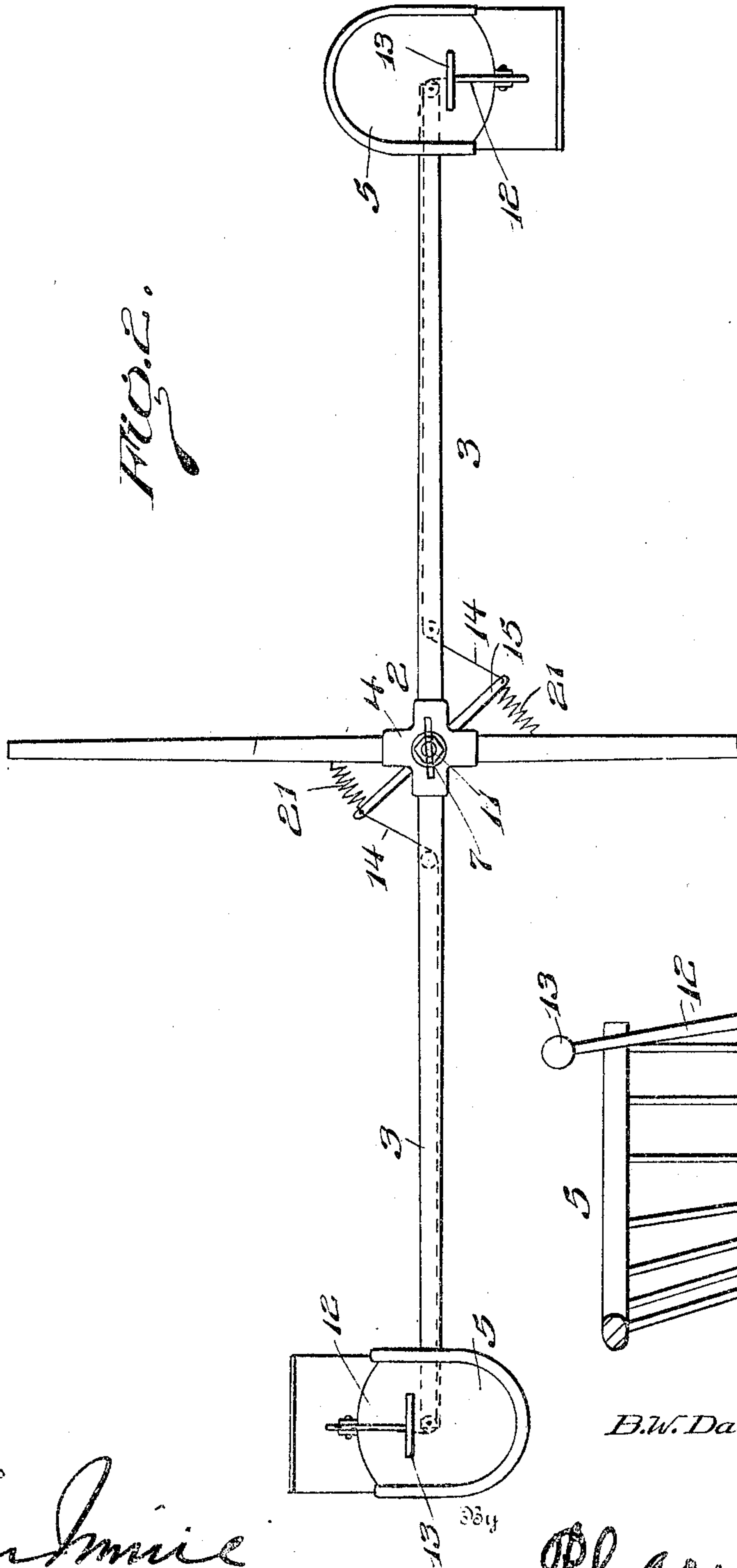
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Witnesses

W. H. Hudson
W. H. Hudson

Inventor
B. W. Davenport

Phelan & Macay
Attorneys

UNITED STATES PATENT OFFICE.

BIRGE W. DAVENPORT, OF MINNEAPOLIS, MINNESOTA.

MERRY-GO-ROUND.

No. 822,435.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed February 21, 1905. Serial No. 246,678.

To all whom it may concern:

Be it known that I, BIRGE W. DAVENPORT, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Merry-Go-Rounds, of which the following is a specification.

This invention relates to that type of amusement devices commonly called "merry-go-rounds," and aims to provide a simple construction of device of this class especially designed for use by children.

The invention comprises, primarily, a suitable central support upon which is mounted a revolving support ordinarily consisting of carrying-arms having seats thereon and means for propelling the revolving support.

The propelling means utilized comprises an essential feature of the invention, as will be noted more fully hereinafter.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a merry-go-round embodying the invention. Fig. 2 is a plan view of the invention. Fig. 3 is a plan view of the central support, the revolving support being removed therefrom to show clearly the construction of the clutch mechanism. Fig. 4 is a vertical longitudinal sectional view.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Generally describing the device, the same comprises a central support 1, which may consist of a post of suitable size for the purposes of the invention, and mounted upon this post is a revolving support 2, which is composed of a plurality of carrying-arms 3, the inner ends of which are mounted in a head 4 and the outer ends of which may be provided with seats 5. The head 4 of the revolving support is preferably provided with sockets in which

to receive the arms 3, and this head is formed with a central opening, through which passes a journal stud or pin 6, carried by the upper end of the post or central support 1. The pin 6 is threaded at its upper portion and has cones 7, between which and the upper and lower sides of the head 4 are mounted ball-bearings 8, suitable ball-races 9 being formed in the head to receive the balls or bearings aforesaid. The mounting of the revolving support is such as to facilitate ease of operation of the device in its movement. The carrying-arms 3 are braced or trussed by means of truss-rods 10 of suitable form, said rods being connected at a point between their ends to a standard 11, projecting upwardly from the head 4 adjacent to the inner ends of the arms 3 above described.

It is designed that the persons who are carried by the arms 3 may operate or propel the revolving support from their positions thereon, and to accomplish this novel means have been devised. The propelling means includes, essentially, an actuating-lever 12, pivoted at a point between its ends to each of the seats 5 and provided at the upper end thereof with a conveniently-disposed handle 13. The lower ends of the levers 12 extend below the seats 5 and are adapted for operative connection with the central support whenever desired in order to accelerate the motion thereof whenever desired or necessary. The means for operatively connecting the propelling mechanism with the central support consists of a cord or flexible connection 14, having connection at one end with the lower extremity of a lever 12, the opposite end of each connection 14 being connected with an arm 15, projected from an annulus 16, mounted upon the upper portion of the post or central support 1. The annulus 16 constitutes one of two clutch members carried by the support 1 for connecting the propelling means operatively and intermittently with the central support in order to communicate motion to the revolving support upon which the persons riding on the merry-go-round are carried. Beneath the lower cone 7 and stationary upon the support 1 is carried a plate 17, which is of approximately circular formation and is provided with an upper portion extending upwardly through the annulus 16 and surrounding the stud 6, such portion being recessed at opposite portions, as shown at 18. The lowermost cone 7 provides on the stud 6 a downwardly-facing shoulder abut-

ting against the upper surface of the said upper portion of the plate 17. The plate 17 and the annulus 16 are clutch members in their relative coöperation, and the recessed portions of the plate 17 receive clutch devices in the form of rollers or balls 19, with which springs 20 coöperate to normally cause the balls to move against or toward the annulus 16. The recesses 18 are sufficiently deep at one extremity to admit of the rollers or balls 19 being forced therein, so as not to frictionally bind against the annulus and clutch the same to the member 17. In other words, the annulus 16 is free to revolve in one direction, (indicated by the arrow,) but when forced in the other direction the balls 19 will be forced outwardly and will bind against the parts 16 and 17 in such a manner as to clutch the same together.

Under normal conditions or service the revolving support is free to turn upon the post 1, and in so doing the annulus 16 is also revolved about the plate or clutch member 17 because of the connections 14, which pass over suitable pulleys attached to the under sides of the carrying-arms 3. As the member 16 revolves the balls 19 in the recesses 18 are forced inwardly toward the deeper extremities of the recesses against the tension of the springs 20. Should the speed of the merry-go-round diminish, it is only necessary to pull the levers 12, whereupon the connections 14 will be actuated and the annulus or member 16 will be pulled in a direction opposite to that in which it is normally revolving with the merry-go-round. The reverse movement of the member 16 clutches the same with the central support in a manner which will be obvious, and sufficient purchase is thus gained to impart new impetus to the revolving support, so as to propel the same forward at an accelerated speed. After the lever or levers 12 have been pulled upon they are released, and the member 16 is restored to its normal position, with the clutch devices 19 at the inner or deeper portions of the recesses 18, by means of springs 21, which connect the arms 15 of the annulus 16 with one of the carrying-arms 3 adjacent that to which the connection 14, secured to the said arm 15, is attached, and the springs 21 coöperate in restoring the member 16 to the position above mentioned with reference to the re-

volving support. The levers 12 are of course pulled away from the seat some distance to their original or normal positions, and the annulus 16 continues to revolve with the revolving support under normal conditions of service.

From the foregoing it will be noted that the device is very simple in operation and can be readily governed by children. Further, there is no need of application of constant power in order to operate the device, since the propelling means used may be actuated at intervals in order to accelerate the speed according to the desires of the persons who may be riding upon the merry-go-round.

Having thus described the invention, what is claimed as new is—

A merry-go-round, comprising a central supporting-post 1, a journal stud or pin 6 mounted on the upper end of said post, a stationary plate 17 supported on the upper end of the post 1 and encircling the stud 6 and provided with an upper portion formed with opposite recesses 18 containing clutching devices 19 and springs 20 designed to press the clutching devices outwardly, an annulus 16 encircling the upper portion of the stationary plate 17 which latter is provided with an outwardly-extending lower portion forming a support for the said annulus, an upper and a lower cone mounted on the upper end of stud 6 and provided with ball-races, the lowermost cone forming on the stud 6 a downwardly-facing shoulder abutting against the upper surface of the upper portion of the plate 17, the head 4 provided with radial socketed arms, the carrying-arms 3 secured in said sockets and provided at their outer ends with carrying-seats or the like, arms 15 projecting from the annulus 16, means carried by the seats or the like for moving the arms 3 around toward the arms 15, and springs 21 connected at one end with the arms 15, and at the opposite end with a carrying-arm 3 adjacent, as and for the purpose set forth.

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

BIRGE W. DAVENPORT. [L. S.]

Witnesses

T. F. KORRS,
FRED T. KRAFFT.