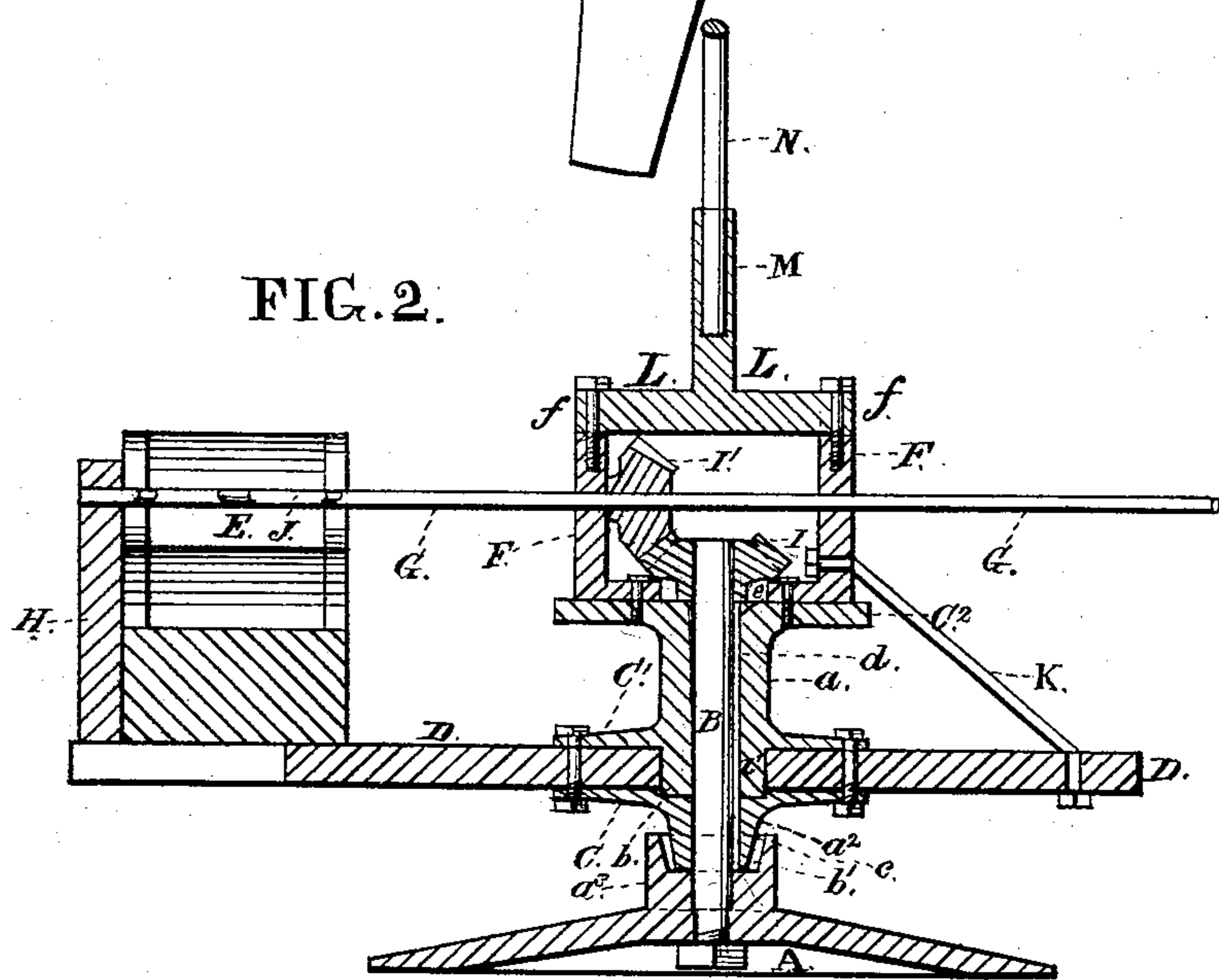
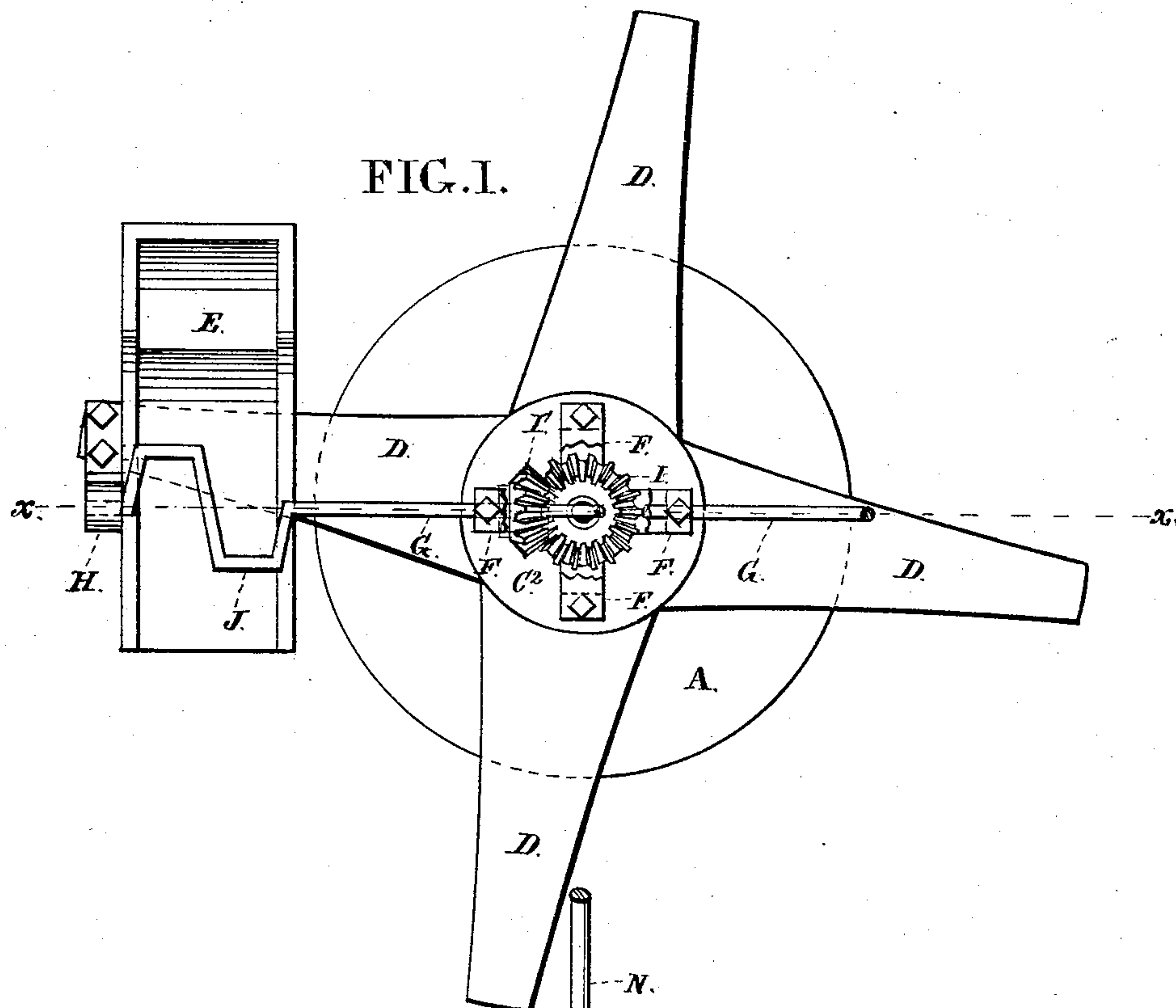


J. C. CLIME.
Revolving Pleasure-Carriages.

No 157,311.

Patented Dec. 1, 1874.



Witnesses:
Thomas F. Dewley.
Joseph S. Chahoon.

Inventor:
John C. Clime
By His Attorney
Stephen Ustick

UNITED STATES PATENT OFFICE.

JOHN C. CLIME, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO CHARLES K. BULLOCK, OF SAME PLACE.

IMPROVEMENT IN REVOLVING PLEASURE-CARRIAGES.

Specification forming part of Letters Patent No. **157,311**, dated December 1, 1874; application filed September 3, 1874.

To all whom it may concern:

Be it known that I, JOHN C. CLIME, of the city and county of Philadelphia, in the State of Pennsylvania, have invented an Improvement in Revolving Pleasure-Carriages, of which the following is a specification:

My invention, in the first place, relates to the combination of the arms, to which the carriage-seats are attached, with clamping-hubs that revolve on a vertical shaft, the hubs being so constructed as to provide for the oiling of their bearings, as hereinafter described. The invention, in the second place, relates to a central vertical tube of the carriage for the support of a shaft for holding an awning.

In the accompanying drawings, Figure 1 is a plan view of my improved pleasure-carriage. Fig. 2 is a vertical section on the line *x x* of Fig. 1.

Like letters of reference in both figures indicate the same parts.

A is a central bed-plate, provided with a central stationary shaft, B. C and C¹ are disks, between which the inner ends of any desirable number of arms D are bolted, or otherwise firmly secured, for the support at their outer ends of seats E. Above the disk C¹ is the disk C², which is connected with the former by means of the hub *a*. A hub, *a*¹, on the lower side of the disk C¹ projects into a recess, *b*, in the upper side of the disk C. The hub *a*² on the lower side of the disk C extends into the recess *b*¹ in the hub *a*³ of the bed-plate A. The recess is of larger diameter than the hub, so as to form an annular space, *c*, for the collection of oil, which passes down the channel *d* from the receiving recess *e* in the upper side of the disk C². The hub *a*¹ should have a close fit in the recess *b* of the disk C, to prevent the lateral escape of oil from said channel. On the disk C² are bolted standards F F F, for the support of the middle portion

of the crank-shafts G, whose outer ends are supported by means of standards H, which project upward from the arms D. The central shaft B has a stationary bevel-wheel, I, into which a pinion, I', on each crank-shaft G gears, so that as said shafts are revolved by the riders by means of the cranks J at the outer ends of the shafts, the carriage is revolved at any desired speed. With a four-armed carriage, as represented, two crank-shafts crossing each other may be used, in which case the uppermost shaft must, of course, be provided with a larger pinion than the other. To avoid the unequal diameters of the pinions, the shafts may be separated in the middle, each having a pinion, and terminating therewith at their inner ends. To prevent the sagging of the outer ends of the arms D they have braces K, which connect at their inner ends with the standards F. L is a cap-plate, whose arms *f* are bolted fast on the upper ends of the standards F, to give firmness thereto. Projecting upward from said cap-plate there is a central tube, M, to hold a vertical shaft, N, for the support of an awning.

I claim as my invention—

1. The combination, in a revolving pleasure-carriage, of the hub *a*¹ of the disk C¹ with the recess *b* of the disk C, making a close connection therewith, and forming a continuous oil-channel, leading from the recess *e* of the disk C² to the annular oil-space *c*, substantially as set forth.

2. The combination of the vertical tube M with the cap-plate L, for the support of the awning-shaft N, when constructed substantially as described.

JOHN C. CLIME.

Witnesses:

THOMAS J. BEWLEY,
STEPHEN USTICK.