

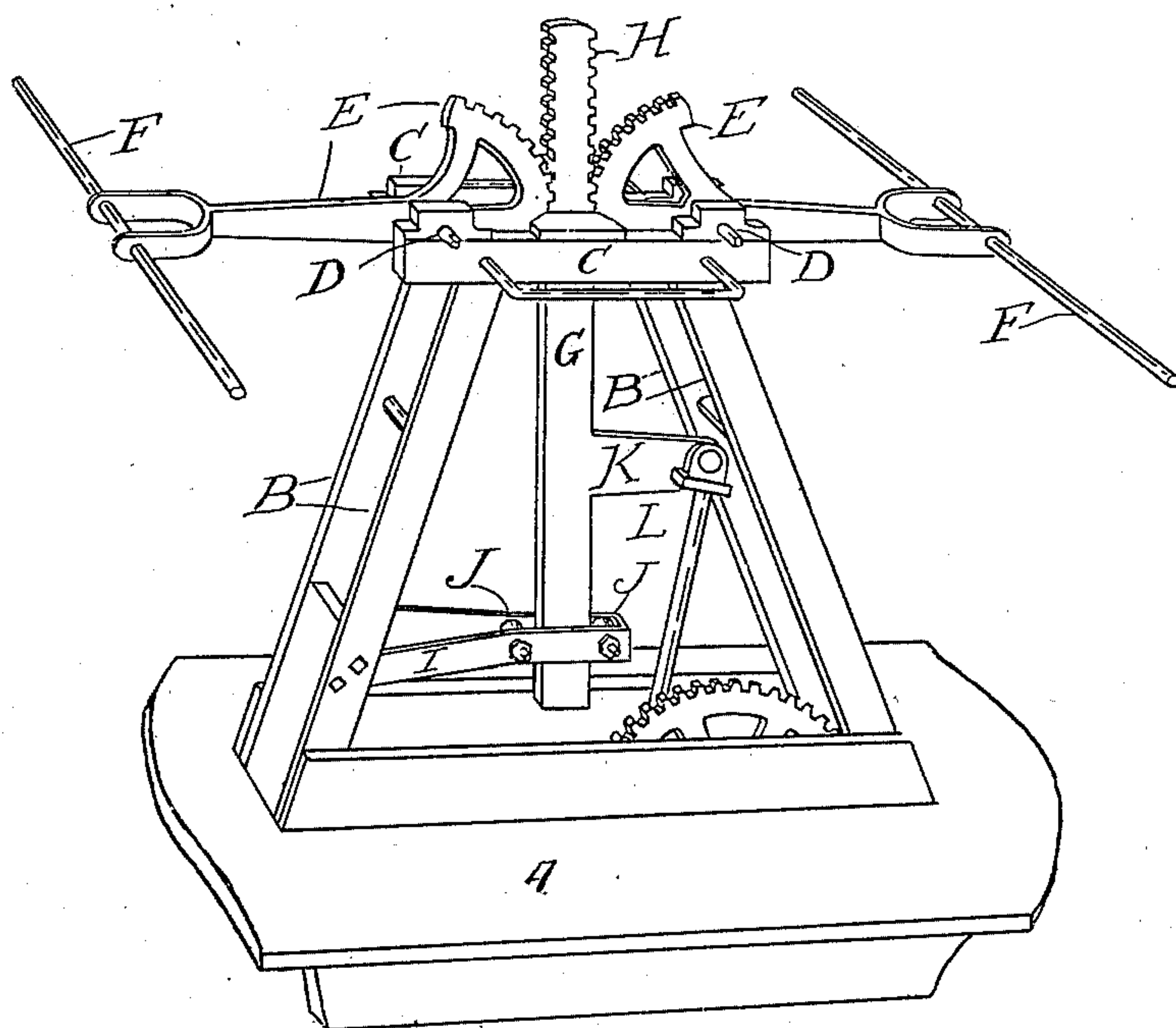
No. 662,563.

Patented Nov. 27, 1900.

N. HALL & C. P. GRAY.
HAND CAR DRIVING MECHANISM.

(Application filed July 16, 1900.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

NED HALL AND CHARLES P. GRAY, OF SAN MARCOS, CALIFORNIA.

HAND-CAR DRIVING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 662,563, dated November 27, 1900.

Application filed July 16, 1900. Serial No. 23,833. (No model.)

To all whom it may concern:

Be it known that we, NED HALL and CHARLES P. GRAY, citizens of the United States, residing at San Marcos, in the county of San Diego, State of California, have invented new and useful Improvements in Hand-Car Driving Mechanism, of which the following is a specification.

Our invention relates to the manner in which the power is transmitted to the usual crank-shaft to propel the car; and the object thereof is to provide mechanism of simple construction having great power. We accomplish this object by the mechanism described herein and illustrated in the accompanying drawing, forming a part hereof, which is a perspective of the upper part of a hand-car containing our invention applied thereto, with parts broken away, the lower part being of ordinary construction.

A is the platform or top part of the car, partly broken away, to which are attached the stanchions B, arranged in pairs, as shown. The upper ends of the stanchions on opposite sides are united by cross-timbers C, between which are pivotally mounted at D toothed sectors E, the free ends of which are provided with handles F. Between sectors E is bar G, provided at its upper end with racks H, one on each side, which mesh with sectors E. The lower end of bar G passes through yoke I, affixed to the stanchions B, as shown, in which are mounted guide rollers or pulleys J, which, with the yoke, guide the lower end of bar G and keep its movement vertical. Any other suitable guide may be used instead of the yoke and rollers. Bar G is provided with an arm K, to which is pivotally connected the usual driving-pitman L. The other parts being of usual construction, they

are not described or illustrated herein. By this construction we are able to construct a driving mechanism for hand-cars in which the full weight of all the men operating thereon to propel the car can be applied at the same time and in the same direction and when the pitman and driving-crank are at their most advantageous position for the application of power thereto.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A hand-car driving mechanism, comprising stanchions affixed to the car-platform, as shown; cross-timbers affixed to the oppositely-disposed stanchions; sectors pivotally mounted in said cross-timbers, having handles at their free ends; a double rack-bar between, meshing with said sectors; an arm affixed to said rack-bar; a pitman connected to said arm; and a yoke affixed to the stanchions; rollers mounted in said yoke, said rollers and yoke adapted to keep the movement of the rack-bar vertical.

2. A driving mechanism for hand-cars, comprising sectors having handles on the ends opposite the teeth, pivotally mounted in bearings affixed to the car; a double rack-bar between the sectors, meshing therewith, and having an arm; a pitman connected to said arm, and a guide adapted to keep the movement of the rack-bar vertical.

In witness that we claim the foregoing we have hereunto subscribed our names this 9th day of July, 1900.

NED HALL.
CHARLES P. GRAY.

Witnesses:

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