

(No Model.)

J. I. CONKLIN.
ELECTRIC LOCOMOTIVE.

No. 507,997.

Patented Nov. 7, 1893.

Fig. I

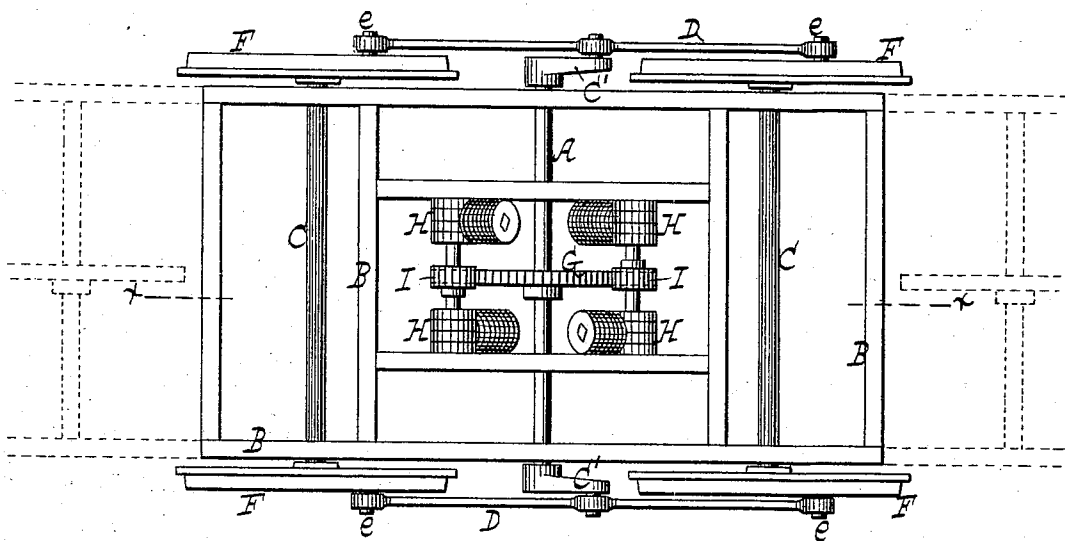
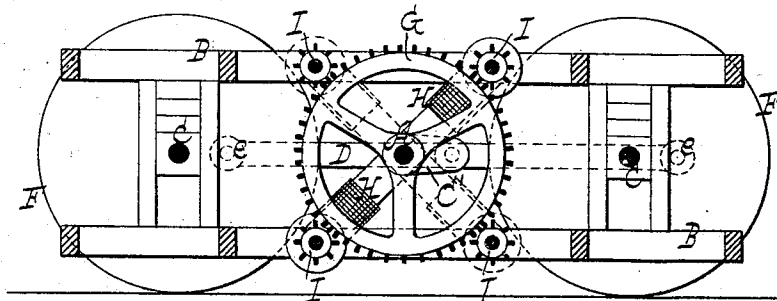


Fig. II



WITNESSES:

Chas. Wahlers
R. L. Conklin

INVENTOR

J. I. Conklin

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH I. CONKLIN, OF BROOKLYN, NEW YORK.

ELECTRIC LOCOMOTIVE.

SPECIFICATION forming part of Letters Patent No. 507,997, dated November 7, 1893.

Application filed December 8, 1892. Serial No. 454,430. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH I. CONKLIN, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Electric Locomotives, of which the following is a specification.

My invention relates to electric motors for cars, also known as electric locomotives, and especially that class thereof for which Letters Patent of the United States were granted to me April 26, 1892, No. 473,693. In the locomotive shown in my said patent, two shafts are employed, one vertical and the other horizontal, and the horizontal shaft is geared with the car axles.

The general object of my present invention is to dispense with one of the shafts referred to, and furthermore to arrange the remaining or "driving" shaft to act on the car wheels instead of the axle; to which end it consists of the novel features of construction hereinafter described.

In the accompanying drawings: Figure 1 represents a plan view of a locomotive embodying my invention. Fig. 2, represents a vertical longitudinal section thereof on the line $x-x$ Fig. 1.

Similar letters of reference indicate similar parts.

The letter A, indicates the driving shaft, which is mounted in the car frame B, at a point about midway between the car axles C, horizontally and parallel to the axles. The opposite ends of this shaft A, project from the frame B, and on such ends are cranks C', of uniform radius, which are connected by means of rods D, to eccentric wrist-pins e , on the car-wheels F; that is to say, each of the cranks C', is connected by one of the rods D, to the pins e , of two wheels on either side of the structure. The wrist pin e , of each car-wheel F, corresponds in its position to that of the remaining wheels, and also to the radius of the cranks C'; and hence it will be apparent that when a rotary motion is imparted to the driving shaft, such motion is properly transmitted to the car wheels. At a point about cen-

tral thereto, the driving shaft A, carries a gear wheel G, which is vertical in position; and lying around said shaft is a series of electric motors H, each of which has, on its armature shaft, a gear wheel I, engaging with said wheel G, of the driving shaft, in such a manner that the several motors are adapted to act simultaneously on the driving shaft, for producing the desired motion thereof. The gear wheels I, of the motors, are of uniform diameter and less than that of the gear wheel G, of the driving shaft; and when, as in this example, four motors are used, they are preferably disposed in pairs on opposite sides of the wheel G, and diametrically opposite each other, as more clearly shown in Fig. 2. The bodies of the motors H, are mounted on suitable girders of the frame B, for supporting the same in the required positions.

It will be observed that by the construction herein described, only a single driving shaft need be employed, while the action thereof is on the car wheels, instead of the axles. If desirable the driving shaft and concomitant parts, may be duplicated or trebled, as indicated by dotted lines in Fig. 1.

What I claim as my invention, and desire to secure by Letters Patent, is—

In an electric locomotive, the combination with the car-frame, wheels, and axles, of the driving shaft mounted in said frame parallel to the axles, cranks on the opposite ends of the driving shaft, eccentric wrist-pins on the car-wheels, rods connecting the cranks to said pins of the wheels, the gear wheel on the driving shaft, a series of motors mounted in the frame around the driving shaft, and a gear wheel on the armature shaft of each of said motors, engaging with said wheel of the driving shaft, all substantially as and for the purpose herein described.

Signed at New York, in the county of New York and State of New York, this 6th day of December, A. D. 1892.

JOSEPH I. CONKLIN.

Witnesses:

R. L. CONKLIN,
F. L. LOVELL.