

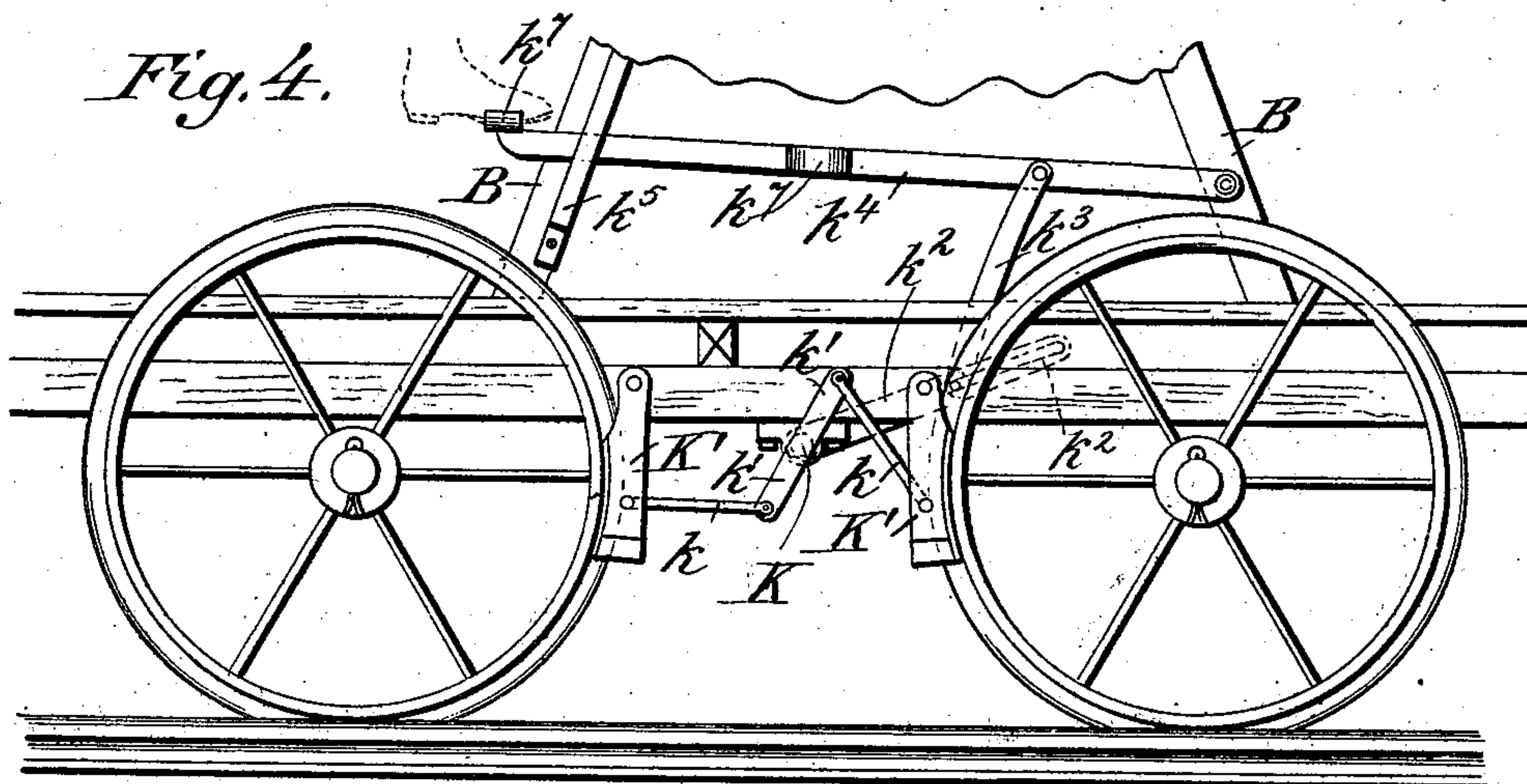
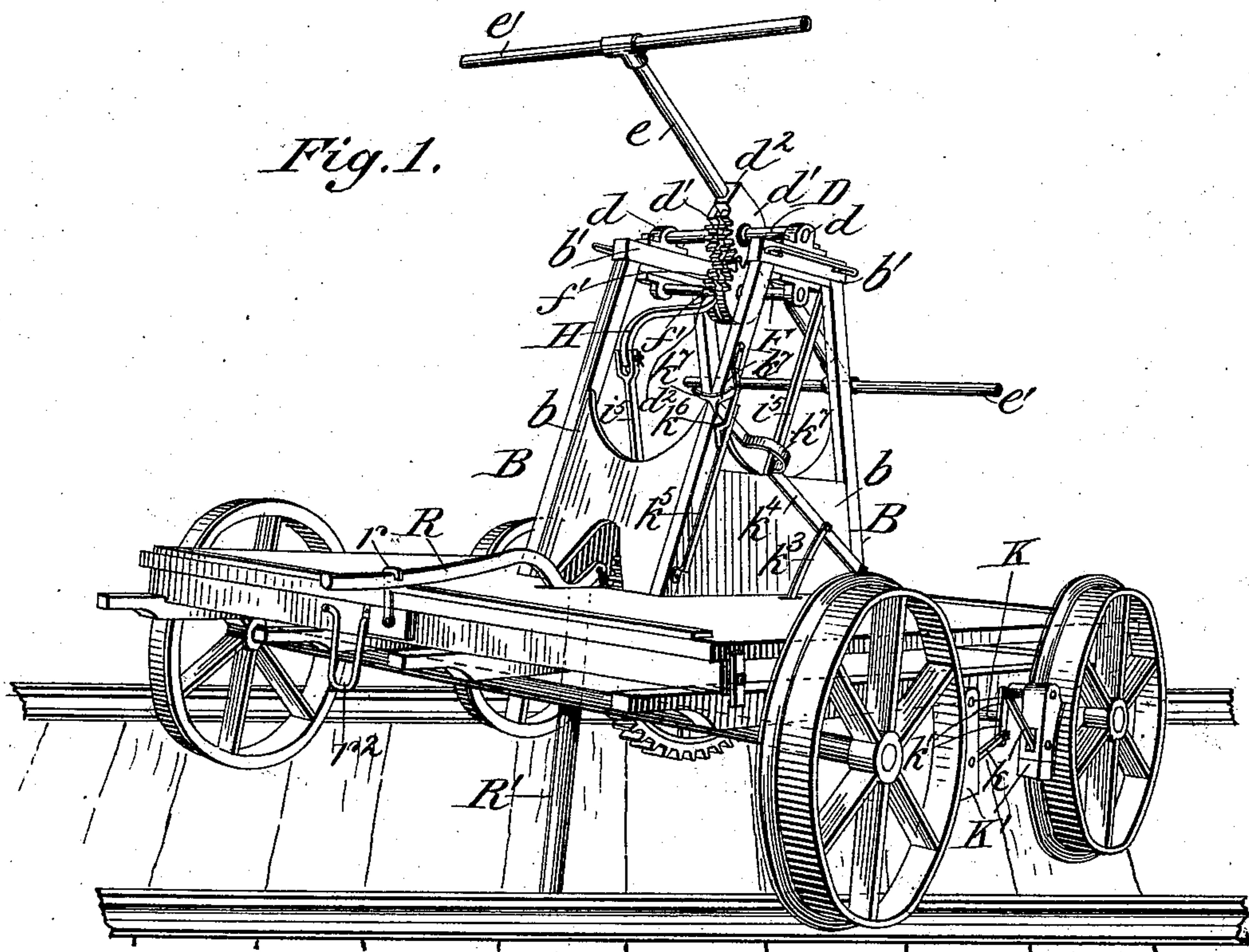
(No Model.)

2 Sheets—Sheet 1.

T. TALBOT.
HAND CAR.

No. 522,438.

Patented July 3, 1894.



Attest:

F. H. Schott

M. H. Chandler.

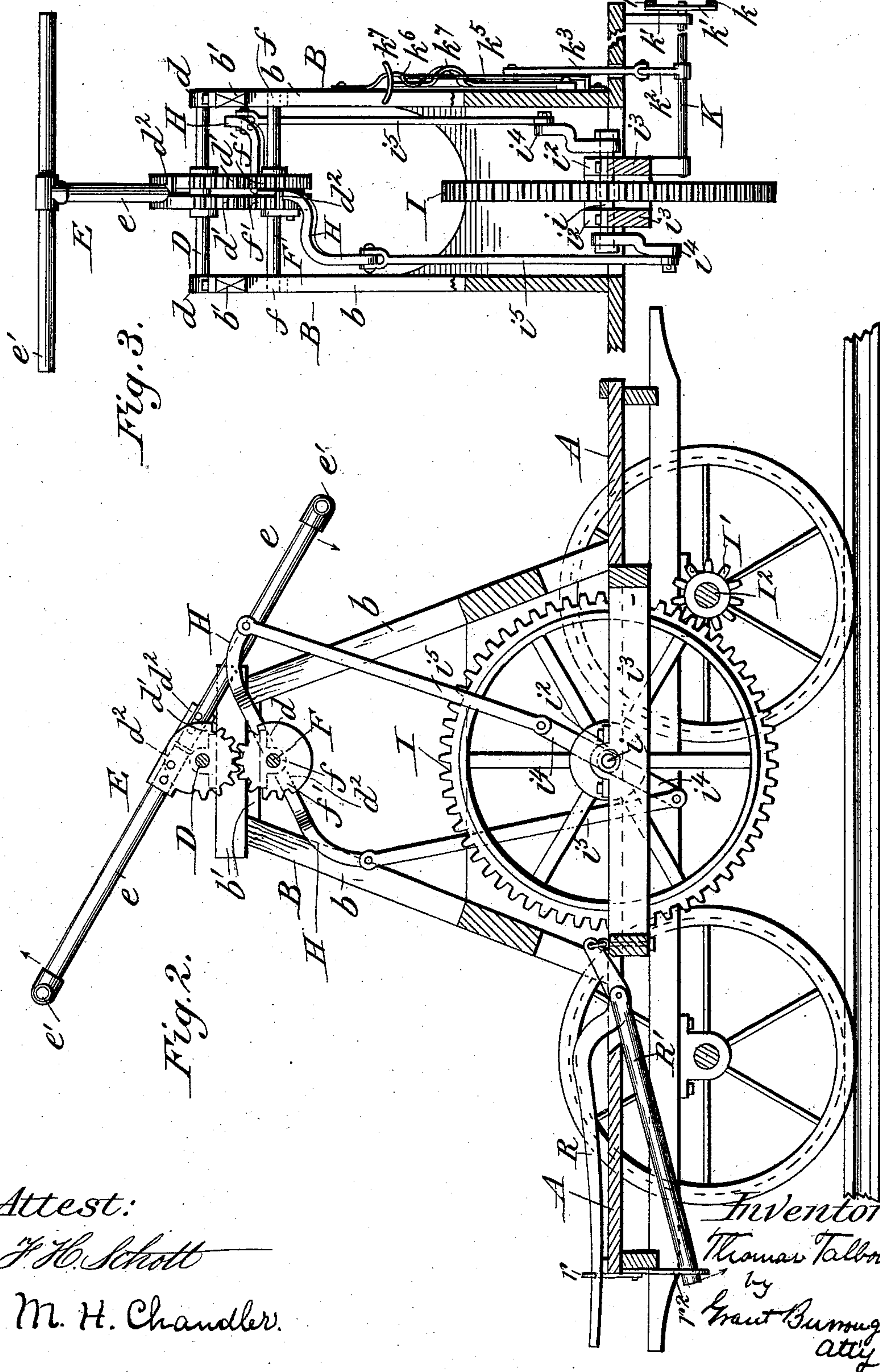
Inventor

Thomas Talbot
by Grant Burroughs
att'y.

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UNITED STATES PATENT OFFICE.

THOMAS TALBOT, OF MATTAWA, CANADA, ASSIGNOR OF ONE-THIRD TO
BRUNO CHARRON, OF SAME PLACE.

HAND-CAR.

SPECIFICATION forming part of Letters Patent No. 522,438, dated July 3, 1894.

Application filed February 23, 1894. Serial No. 501,252. (No model.)

To all whom it may concern:

Be it known that I, THOMAS TALBOT, a subject of the Queen of Great Britain, residing at Mattawa, in the Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in Hand-Cars for Railways, of which the following is a full, clear, and exact description, such as will enable those skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

The invention consists in the novel construction, combination and arrangement of parts, such as will be hereinafter fully described, pointed out in the appended claims, and illustrated in the accompanying drawings.

In the accompanying drawings, in which similar letters of reference designate corresponding parts, Figure 1 is a perspective view of a hand-car embodying the invention. Fig. 2 is a longitudinal vertical section. Fig. 3 is a transverse vertical section. Fig. 4 is a detail view, showing the brake mechanism.

Referring to the drawings by letter, A designates the platform of a car of any construction suitable in the premises, mounted in the usual manner upon wheels.

B, B, designate the standards which support the driving mechanism, and each consists of the inclined uprights b , b , connected at their upper ends by the cross-piece b' . Between the upper ends of the standards, is the shaft D journaled at its ends in the journal boxes d , d , respectively secured to the cross-pieces b' , b' , of the said standards. On this shaft is mounted the walking-beam E. The latter consists of the main lever e pivoted at an intermediate point, on the shaft D and the handles e' e' , respectively secured transversely to the ends of the main lever. The main lever and handles are formed of sections of pipes suitably connected by T-couplings. Mounted on the shaft D, at an intermediate point, are the rock-gears d' , d' , between which and above the shaft, the lever e is secured. Immediately below the shaft D, a second shaft F is mounted with its ends journaled in the boxes f , f , respectively secured to the under sides of the cross-pieces b' , b' , of the standards. On this shaft are

mounted the rock-gears f' , f' . The rock-gears f' , f' , mounted on the shaft F, and the rock-gears d' , d' , mounted on the shaft D, have substantially the same constructions. Each consists of a body, circular in form, and for a considerable distance, has gear teeth formed in its periphery, and it has a socket or seat d^2 formed in one of its sides. The gears which are used on the upper shaft are shown as having a construction slightly different from that of the lower, inasmuch as the portion forming the socket is extended to give a longer bearing to the lever e . The gears of each pair are mounted so that their respective sockets, d^2 , d^2 , will extend in opposite directions and open toward each other. Between the upper gears, in the sockets formed therein, are secured the inner ends of the sections forming the main lever of the walking-beam E. It is to be observed that the main lever can be formed of a single section without requiring any change in the construction of the gears, and the gears themselves may be bolted together to secure greater stability.

Immediately below the rock-gears d' , d' , on the shaft D, are the rock-gears f' , f' , on the shaft F and meshing with the former. To these gears, are respectively connected the inner ends of the intermediate levers H, H. These levers have somewhat of an S-shape and have their inner ends seated in sockets formed in the rock-gears to which they are respectively attached.

I designates the main driving wheel. It is a toothed wheel mounted upon a shaft i journaled at its ends in journal-boxes i^2 , i^2 , mounted on the longitudinal supports i^3 , i^3 , attached to the cross-beams of the car. The ends of the shaft project beyond their bearings and have attached thereto the crank arms i^4 , i^4 . The outer ends of the latter are provided with wrist-pins upon which the lower ends of the rods i^5 , i^5 , are respectively journaled. These rods are connected at their upper ends with the outer ends of the intermediate levers H, H. The latter are so bent as to allow their outer ends to move in the same vertical planes as the wrist-pins of the crank arms i^4 , i^4 . The gear wheel l meshes with a similar wheel l' mounted on the axle l^2 of the forward truck. The relative sizes of the gears l and l' is "five"

to one, which has been found to be the preferable arrangement.

The operation of the driving mechanism is as follows: By oscillating the walking-beam 5 E, the intermediate arms H, H, through the connecting rock-gears, are also oscillated, but in opposite directions, that is, when one end of the walking-beam is moving in one direction, the intermediate lever on that side is 10 moving in an opposite direction, and thereby the connecting rods i^5 , i^5 , are reciprocated. By this movement of the connecting rods the gear wheel l is rotated, through the crank arms i^4 , i^4 , and through the gear l' the shaft 15 of the forward truck is also rotated, and in consequence the car is propelled.

A novel mechanism is provided whereby a powerful operation of the brakes can be secured. K designates a shaft mounted transversely of the car in suitable bearings, and 20 provided at its ends with crank arms. To the latter brake shoes K' , K' , of any suitable construction are attached. In the present instance the brake shoes are formed of blocks 25 of wood provided with metal faces, pivoted at their upper ends to the longitudinal side beams of the car frame. They are respectively connected at their lower ends by links k , k , with the crank arms k' , k' , attached to 30 the ends of the shaft K. The shaft K at a suitable point is provided with a crank arm k^2 , which is connected by the link k^3 , which passes upwardly through the platform, with the foot lever k^4 pivoted at one end to one of the 35 standards B. The free end of the foot lever moves in the loop k^5 attached to the standard. A spring catch k^6 is provided to engage with the free end of the foot lever to hold it in an elevated position when the brake is not in 40 use. The foot lever is easily accessible from either side of the supports B, B, by means of the threads k^7 , k^7 .

The operation of the brake is as follows: By pressing upon the foot lever, the shaft K 45 is rotated through the link k^3 and the crank arm k^2 . This movement of the shaft will cause a corresponding turning of the crank arms on the end of the shaft, and through the connecting links will force the shoes against 50 their respective wheels.

A novel mechanism is also provided to aid in turning the car and in displacing the same from the tracks. A lever R is pivoted at one end to a substantial part of the car frame at 55 a central point back of the supports B, B. To this lever, near its pivoted end, the pivoting bar R' is hinged at one end. This bar hangs beneath the platform and is of such a

length that when it is held in a vertical position and the lever depressed the rear end 60 of the car will be elevated so as to completely clear the tracks. In this way the car is pivoted, almost at its center, and the opposite end can easily be raised and turned. To hold the lever in its depressed position, a catch r is provided. The lever is so bent near its pivoted 65 end, at the point where the rod is hinged, as to allow the latter to be turned up against the bottom of the platform when not in use, where it can be held by the bail r^2 . 70

The construction herein described can be departed from to a considerable extent without departing from the spirit of the invention, as for instance, a single pair of rock gears one 75 on each shaft can be used instead of two.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a hand car, the combination of the rock-gears mounted one above the other and mesh- 80 ing with each other, the walking-beam attached to the upper of the said rock-gears, the intermediate levers attached to the lower of the said rock-gears, and the driving gear connected with the said levers, substantially as 85 described.

2. In a hand car, the combination of the supports, the shafts journaled therein one above the other, the rock-gears mounted on the same and meshing with each other, the walking- 90 beam attached to the upper of the said rock-gears, the intermediate levers attached to the lower of the said gears, the shaft journaled in the frame of the platform of the car, the main driving gear mounted thereon, the crank 95 arms attached to the ends of the last mentioned shaft, and the rods connecting the ends of the intermediate levers with the crank arms, substantially as described.

3. In a hand car, the combination of the rock- 100 gears, arranged in pairs, one pair above the other, and each upper gear meshing with the one immediately below, the walking-beam secured between the gears forming the upper pair, the intermediate levers respectively at- 105 tached at their inner ends to the gears forming the lower pair, and the driving mechanism connected with the said levers, substantially as described.

In testimony whereof I affix my signature in 110 the presence of two witnesses.

THOMAS TALBOT.

Witnesses:

I. A. LÉVESQUE,
P. A. C. LA ROSE.