No. 609,881. Patented Aug. 30, 1898.

P. FLESHER.

HAND CAR.

(Application filed Feb. 10, 1898.)

(No Model.) 2 Sheets—Sheet 1.

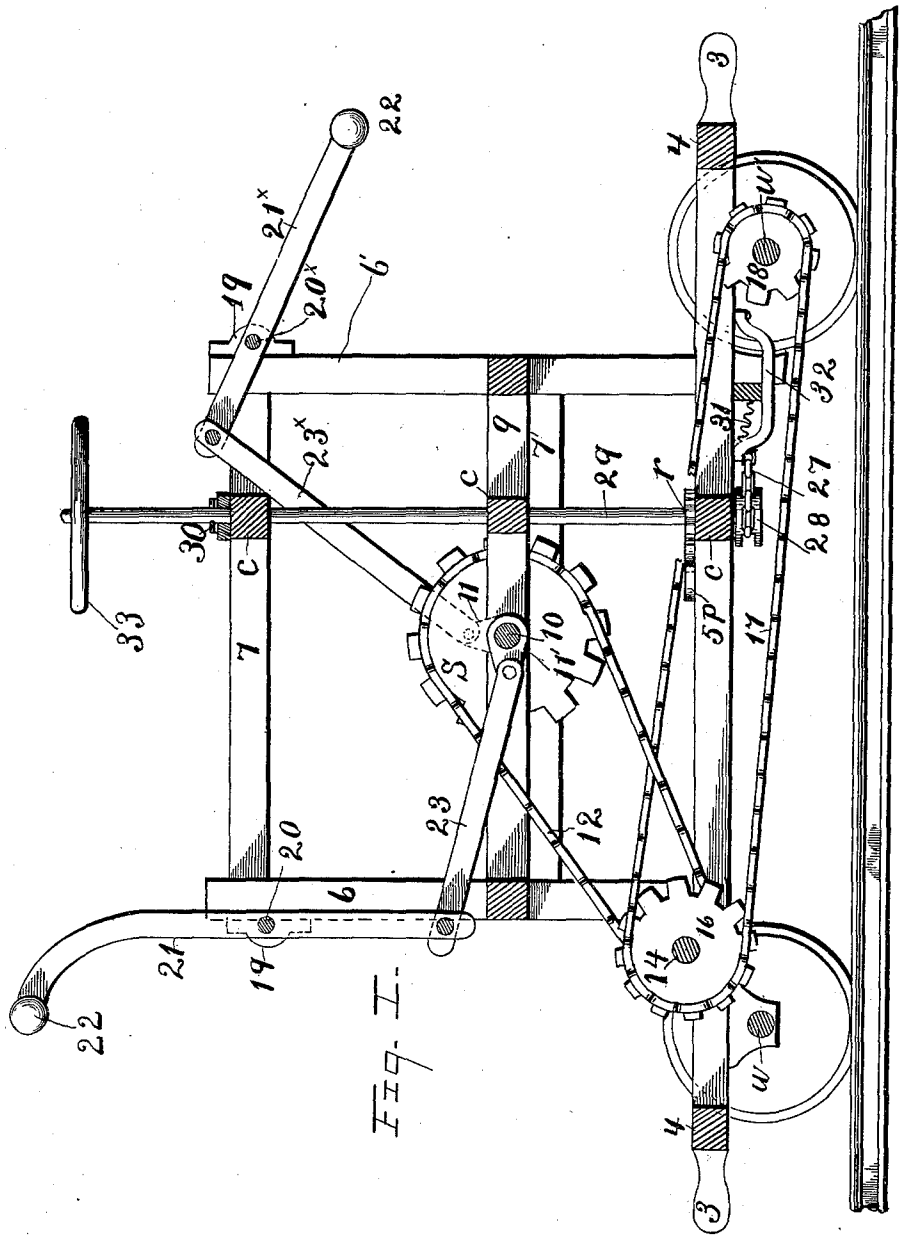

Fig. 1.

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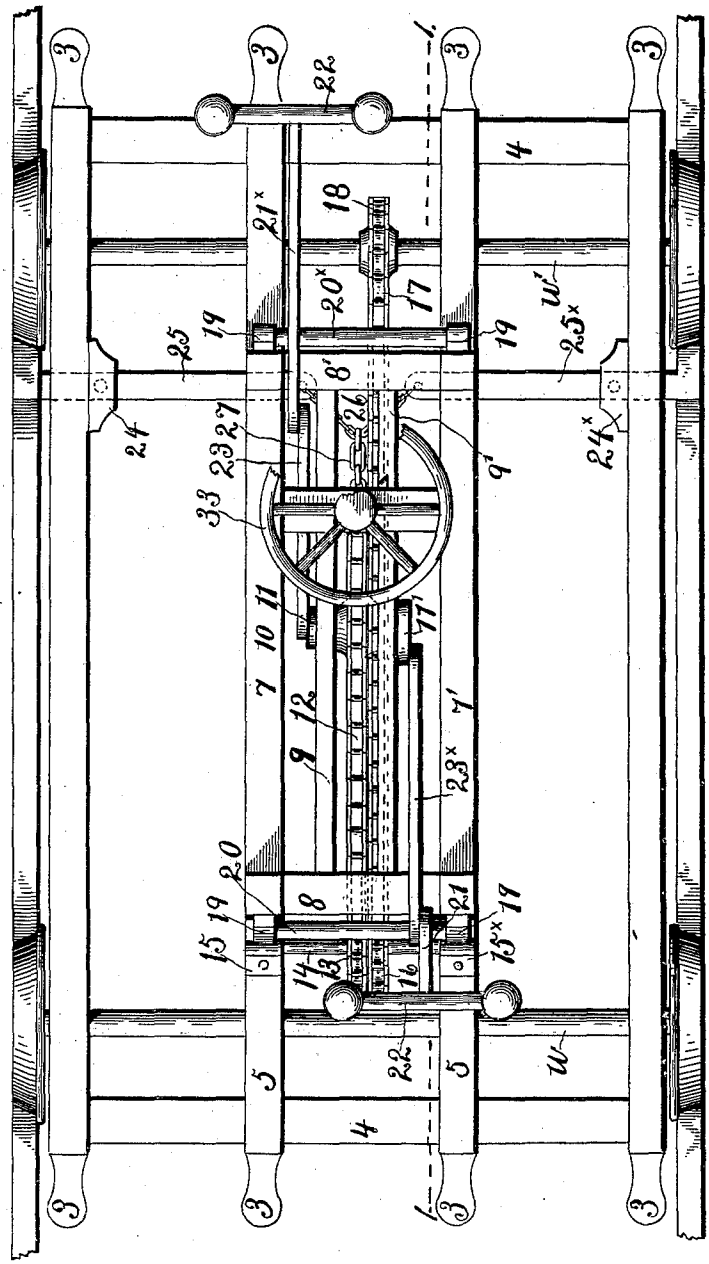
Fig 2.



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UNITED STATES PATENT OFFICE.

PAUL FLESHER, OF HOYT, KANSAS.

HAND-CAR.

SPECIFICATION forming part of Letters Patent No. 609,881, dated August 30, 1898.

Application filed February 10, 1898. Serial No. 669,771. (No model.)

To all whom it may concern:

Be it known that I, PAUL FLESHER, a citizen of the United States, residing at Hoyt, in the county of Jackson and State of Kansas, have invented certain new and useful Improvements in Hand-Cars for Railways; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in hand-cars for railways; and the objects are to provide such a car or vehicle which is simple in construction, powerful in operation, of increased progression, convenient in general arrangement, and durable in operative parts.

I accomplish the objects of my invention by means of the construction, arrangement of parts, and mechanism illustrated in the accompanying drawings, wherein—

Figure 1 is a longitudinal section on the line 1 1 of Fig. 2. Fig. 2 is a plan view of the car.

w w designate the axles of the car, carried by wheels in the usual manner. The floor or frame of the car is composed of four longitudinally-arranged rails or timbers formed with shaped ends 3, adapted to be conveniently taken hold of by the hand when it is required to lift the car on or off the track. These parallel timbers are firmly connected by cross-pieces 4 4, and the floor (not shown) may be laid and secured on the timbers in any suitable manner. On the intermediate rails 5 5 are erected oppositely-arranged rectangular frames composed of vertical standards 6 6′, united by upper and lower bars 7 7′, and the frames being connected together by cross-pieces 8 8′ and intermediate cross-pieces *c* in vertical alinement, which last named serve as supporting-pieces for the brake-staff. In this frame are supported and rigidly secured two parallel rails or bars 9 9′, in the middle of which, in suitable bearings in or on said rails, is journaled a shaft 10, provided with cranks 11 11′ on its ends, which cranks are arranged to be operated from the opposite ends of the car. On the shaft 10, between the rails 9 9′, is mounted a large sprocket-wheel S, on which is arranged a sprocket-chain 12, carried around a smaller sprocket-wheel 13, mounted on a shaft 14, journaled in bearings 15 15$^{\times}$ on the rails 5. On the shaft 14 is mounted another sprocket-wheel 16, preferably larger than the sprocket-wheel 13, on which is carried a sprocket-chain 17, running around a small sprocket-wheel 18 on the axle *w*′.

At the top of the standards of the frames are secured bearings 19, in which are mounted fulcrum-shafts 20 20$^{\times}$, on which are fulcrumed hand-levers 21 21$^{\times}$, having handpieces 22 on them at their outer ends and connected at their inner ends to the outer ends of connecting-rods or pitmen 23 23$^{\times}$, the lower ends of which are pivotally connected to the wrist-pins on the cranks 11 11′, respectively.

It will now be perceived that by operating the levers rotation will be imparted to the main sprocket-wheel, which imparts increased rotation to the sprockets on the independent shaft 14, journaled on the frame, and that accelerated rotation will be given to the sprocket-wheel on the axle of the car. By arranging the levers at each end of the car I provide convenient arrangement for the application of the power by men on both ends of the car, and the levers being connected to the cranks so that they exert continuous force the inconvenience of applying the power from one end of the car and its consequent dead-points are overcome. The levers are arranged and disposed so that they may be conveniently operated by persons bearing upon one and pulling on the other, the operators at the time standing with their faces toward the line of progression.

To the outer rails of the body or floor of the car are secured blocks 24 24$^{\times}$, to which are fulcrumed brake-levers 25 25$^{\times}$, carrying suitable brake-shoes on their outer ends to contact with and brake the car. The inner ends of the brake-levers are connected by a chain or cable 26, to the middle of which is fastened one end of the brake-chain 27, the other end of which is fastened to a drum 28, carried by and fixed to the lower end of the brake-staff 29, which brake-staff is held in suitable bearings in the cross-pieces *c* and held from slipping downward by a collar or pin 30. A ratchet *r* and pawl *p* are used to hold the brakes locked, and springs 31 are arranged to pull the brakes from the wheels when the

levers are released. The brake-levers slide in keepers 32, secured to the under side of the intermediate rails of the body or floor, as indicated in Fig. 1 of the drawings, and a hand-wheel 33 on the top of the brake-staff is provided to operate the brakes. It will be perceived that by reason of the construction of the car-frame a long brake-staff can be utilized without interfering with the load or occupants of the car, as the staff will project above, substantially as shown, and be accessible from the top of the load or from the floor of the car.

What I claim is—

A hand-car comprising a suitably-mounted car-body, rectangular duplicate frames mounted on the car parallel with each other lengthwise of the car, a shaft carried by and journaled in said frames, oppositely-arranged cranks on the ends of said shaft, a main or driving sprocket-wheel S, on the said main shaft, an independent shaft 14 journaled on the car, a sprocket-wheel 13 on the shaft 14, a sprocket-chain 12 around the sprocket-wheels S and 13, a second sprocket-wheel 16 larger than the sprocket-wheel 13 on the shaft 14, a sprocket-wheel 18 on the car-axle remote from the shaft 14, a sprocket-chain 17 connecting the sprocket-wheels 16 and 18, hand-levers 21, 21′, fulcrumed at opposite upper ends of the rectangular frames, and connecting-rods or pitmen jointed to the inner arms of the said hand-levers and having their other ends operatively connected to the cranks on the main sprocket-wheel shaft, substantially as set forth.

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

PAUL FLESHER.

Witnesses:

GEO. SIMPSON,

WM. MARIS.