

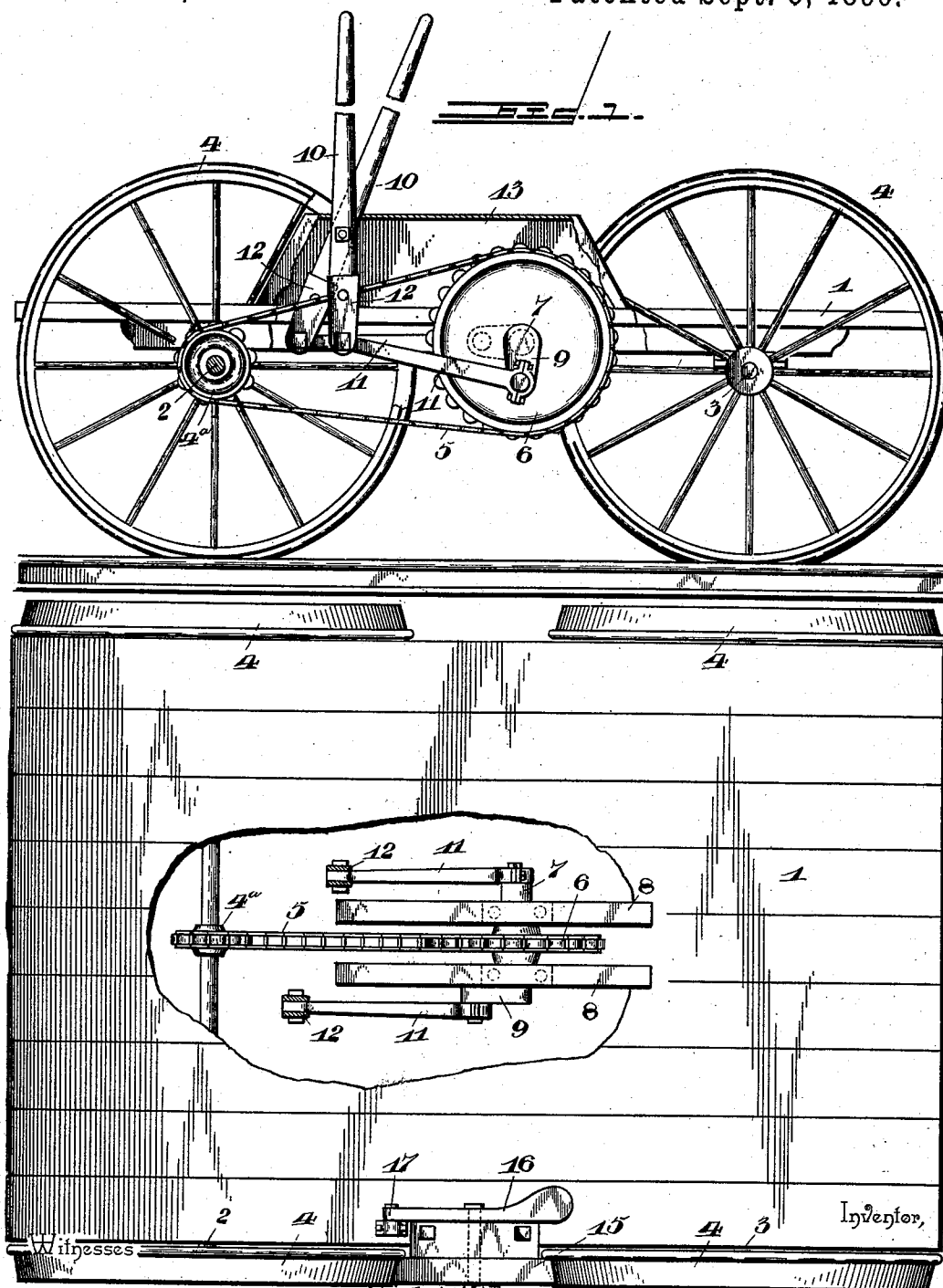
(No Model.)

2 Sheets—Sheet 1.

H. SMALL.
HAND CAR.

No. 567,362.

Patented Sept. 8, 1896.



Witnesses
H. B. Doyle
J. H. Wiley

by *H. B. Doyle* Attorneys,

Inventor,
Henry Small,
C. A. Snow & Co.

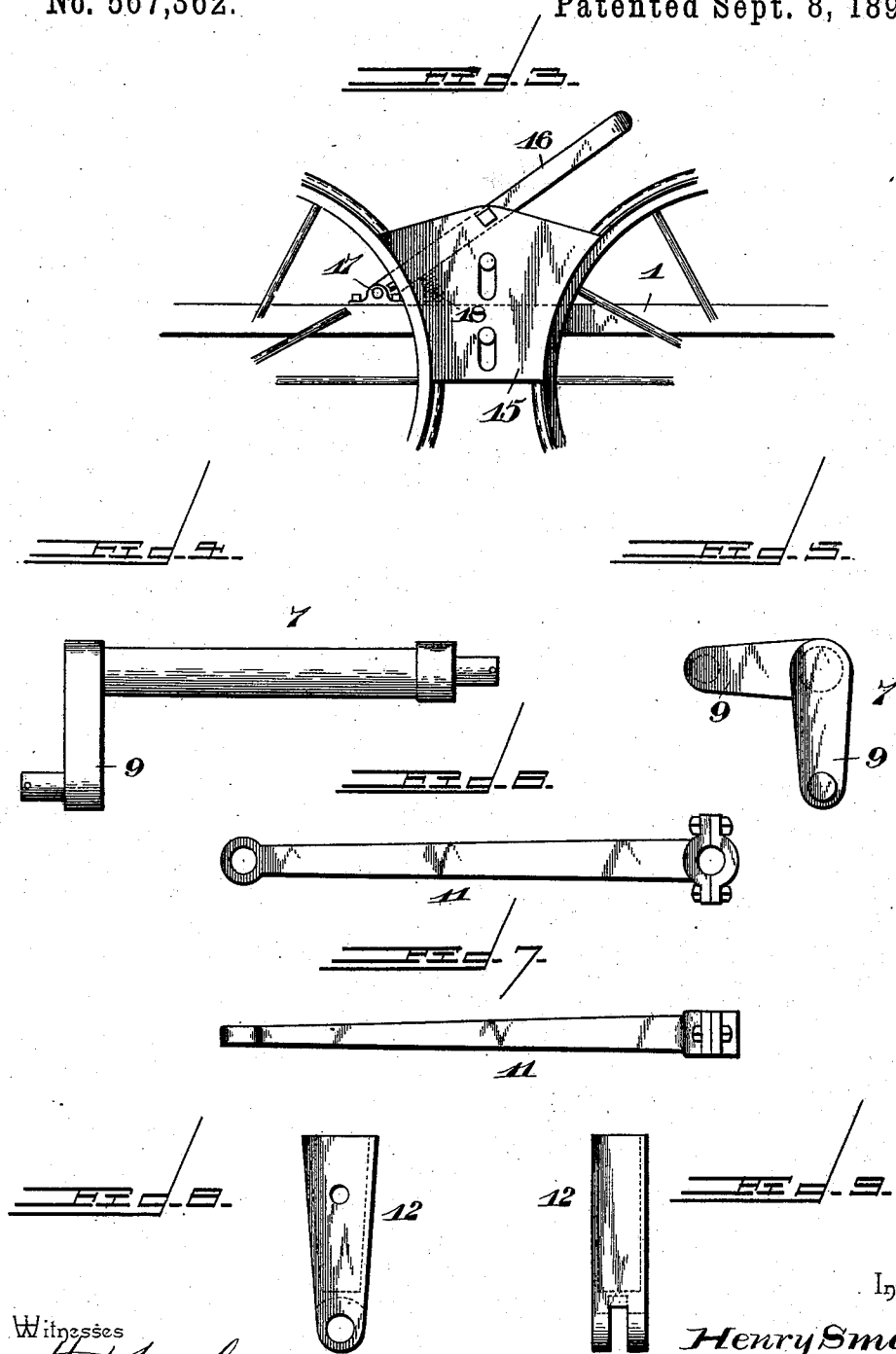
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UNITED STATES PATENT OFFICE.

HENRY SMALL, OF SAN ANTONIO, TEXAS.

HAND-CAR.

SPECIFICATION forming part of Letters Patent No. 567,362, dated September 8, 1896.

Application filed May 22, 1896. Serial No. 592,593. (No model.)

To all whom it may concern:

Be it known that I, HENRY SMALL, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented a new and useful Hand-Car, of which the following is a specification.

The invention relates to improvements in hand-cars.

The object of the present invention is to improve the construction of hand-cars, more especially the driving mechanism for propelling them, and to provide a simple and effective brake for the same.

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

In the drawings, Figure 1 is a side elevation of a hand-car, partly broken away to show the gearing. Fig. 2 is a plan view, partly broken away to show the gearing. Fig. 3 is a detail view of the brake. Figs. 4 and 5 are detail views of the crank-shaft. Figs. 6 and 7 are detail views of the connecting-rod. Figs. 8 and 9 are detail views of the sockets of the operating-levers.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a hand-car frame, constructed in any suitable manner, forming a platform and provided with suitable bearings for the reception of axles 2 and 3, which have wheels 4 fixed to them in the usual manner. The axle 2 has mounted on it a sprocket-pinion 4^a, on which is arranged an endless sprocket-chain 5, which extends from the sprocket-pinion 4^a to a sprocket-wheel 6, fixed to a crank-shaft 7, and the latter is journaled at the center of the main frame in bearing-boxes or suitable supports 8. The crank-shaft, which is disposed transversely of the frame of the hand-car, is provided with crank-arms 9, arranged at right angles and connected with a pair of operating-levers 10 by rods 11. The operating-levers, which are located at a point between the sprocket-wheel and the sprocket-pinion, consist of sockets 12 and suitable bars 50 secured in the sockets by pins or other suitable fastening devices, and the sockets are

bifurcated for the reception of the adjacent ends of the connecting-rods.

The gearing is housed in a tool box or casing 13, which extends beyond the operating-levers and which forms a fulcrum or support for the same, the operating-levers being fulcrumed on pins or bolts 14, mounted on the tool box or casing at the sides thereof.

The gearing is simple, strong, and durable and enables a hand-car to be conveniently and rapidly propelled, and the parts are not liable to get out of order.

If desired, any suitable shifting device may be employed for throwing the sprocket-pinion into and out of gear by enabling the axle to turn freely within it, so that the driving mechanism will not be operated when the hand-car is descending an incline. When such shifting mechanism is employed, it will enable the sprocket-pinion to be readily keyed or otherwise fixed to the axle when it is desired to propel the hand-car; but as such shifting mechanism does not form a part of the present invention, and as it is well known in the art, illustration of it is unnecessary.

The hand-car is provided at one side with a brake consisting of a brake block or shoe 15, located between the adjacent wheels and provided with inclined sides forming a wedge, and a lever 16, fulcrumed at its lower end on the frame of the hand-car and pivotally connected at 17 at a point intermediate of its ends to the brake-block, at the top thereof. The lever extends above the brake-block and is adapted to be depressed to force the same downward into contact with the car-wheels, and the inclined sides which engage the car-wheels are curved to conform to the configuration thereof. The brake-block is normally supported out of engagement with the car-wheels by a spiral spring 18, mounted on the platform or frame of the hand-car and supporting the lower edge of the foot-lever 16.

It will be seen that the hand-car is simple and comparatively inexpensive in construction, that the driving mechanism is positive and reliable, and that a simple and effective brake is provided.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or

sacrificing any of the advantages of this invention.

What I claim is—

1. In a hand-car, the combination of a frame, 5
axles supporting the frame and provided with
wheels, a sprocket-pinion fixed to one of the
axles, supports 8 mounted on the frame and
provided with bearings, a transversely-dis-
posed crank-shaft 7 journaled in the bearings 10
of the supports 8 and provided at its ends with
crank-arms, a sprocket-wheel fixed to the
crank-shaft, an endless sprocket-chain ar-
ranged on the sprocket-pinion and the
sprocket-wheel, a box or casing receiving the 15
gearing, operating-levers located between the
sprocket-wheel and the sprocket-pinion and
fulcrumed on the box or casing, and connect-
ing-rods extending from the operating-levers
to the crank-arms, substantially as described. 20
2. In a hand-car, the combination of a frame,
axles supporting the same and provided with
wheels, means for propelling the hand-car,
and a brake comprising a brake-block located
at one side of the frame between the wheels 25
at a point above the axles, said brake-block
having curved side edges and adapted to be
moved downward into engagement with the

wheels, an inclined foot-lever fulcrumed at
its lower end on the frame and pivotally con-
nected at a point intermediate of its ends with 30
the brake-block, and a spring supporting the
lower edge of the foot-lever and holding the
brake-block normally out of engagement with
the car-wheels, substantially as described.

3. In a hand-car, the combination of a frame, 35
axles supporting the frame and provided with
wheels, a sprocket-pinion fixed to one of the
axles, a transversely-disposed crank-shaft 7
provided at its ends with crank-arms, a
sprocket-wheel fixed to the crank-shaft, an 40
endless sprocket-chain arranged on the
sprocket-pinion and the sprocket-wheel, op-
erating-levers located between the sprocket-
wheel and the sprocket-pinion, and connect-
ing-rods extending from the operating-levers 45
to the crank-arms, substantially as described.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses.

HENRY SMALL.

Witnesses:

L. BENEDICT,
H. G. MEYER.