(No Model.) 2 Sheets—Sheet 1.

J. BLANKART.

SLEIGH RUNNER FOR VEHICLES.

No. 418,603. Patented Dec. 31, 1889.

Fig. 1.

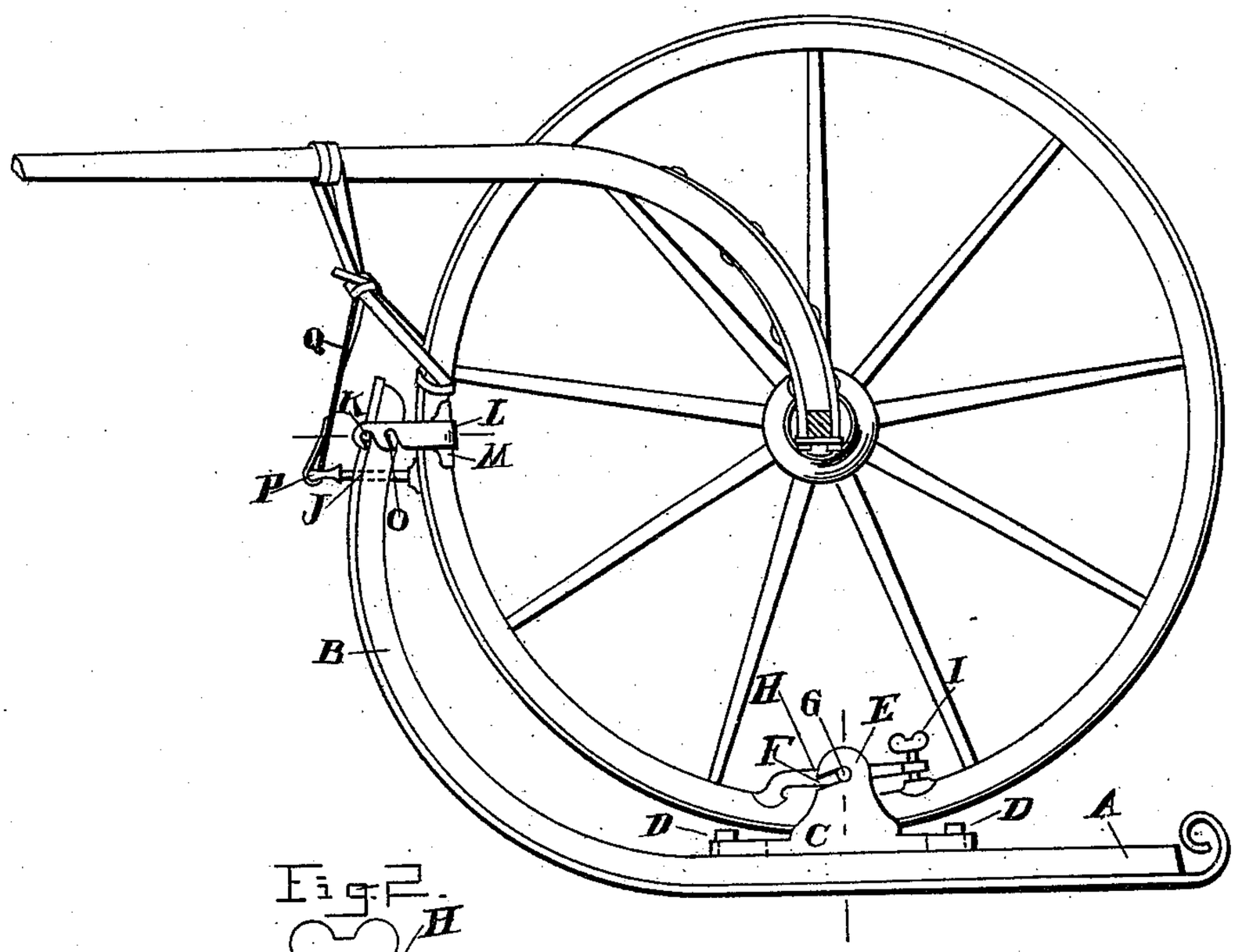


Fig. 2.

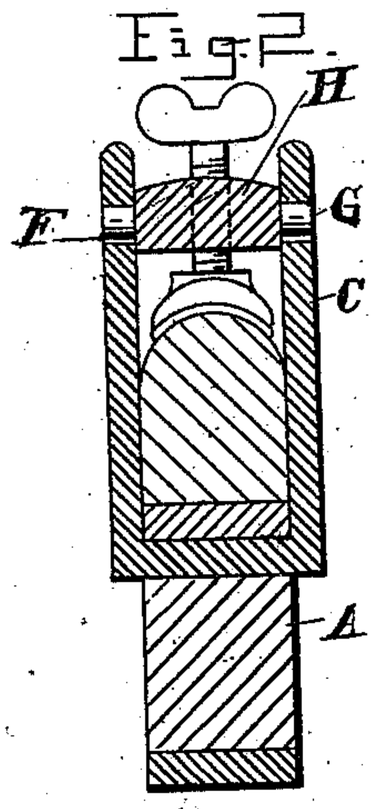
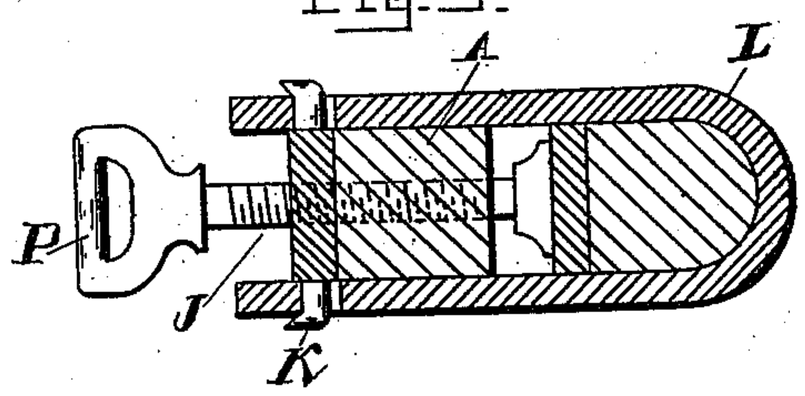


Fig. 3.



Witnesses:
W. E. Gilbert
Edmund Crump

Inventor:
John Blankart
By James Whittemore
Atty

(No Model.) 2 Sheets—Sheet 2.

J. BLANKART.

SLEIGH RUNNER FOR VEHICLES.

No. 418,603. Patented Dec. 31, 1889.

Fig 6

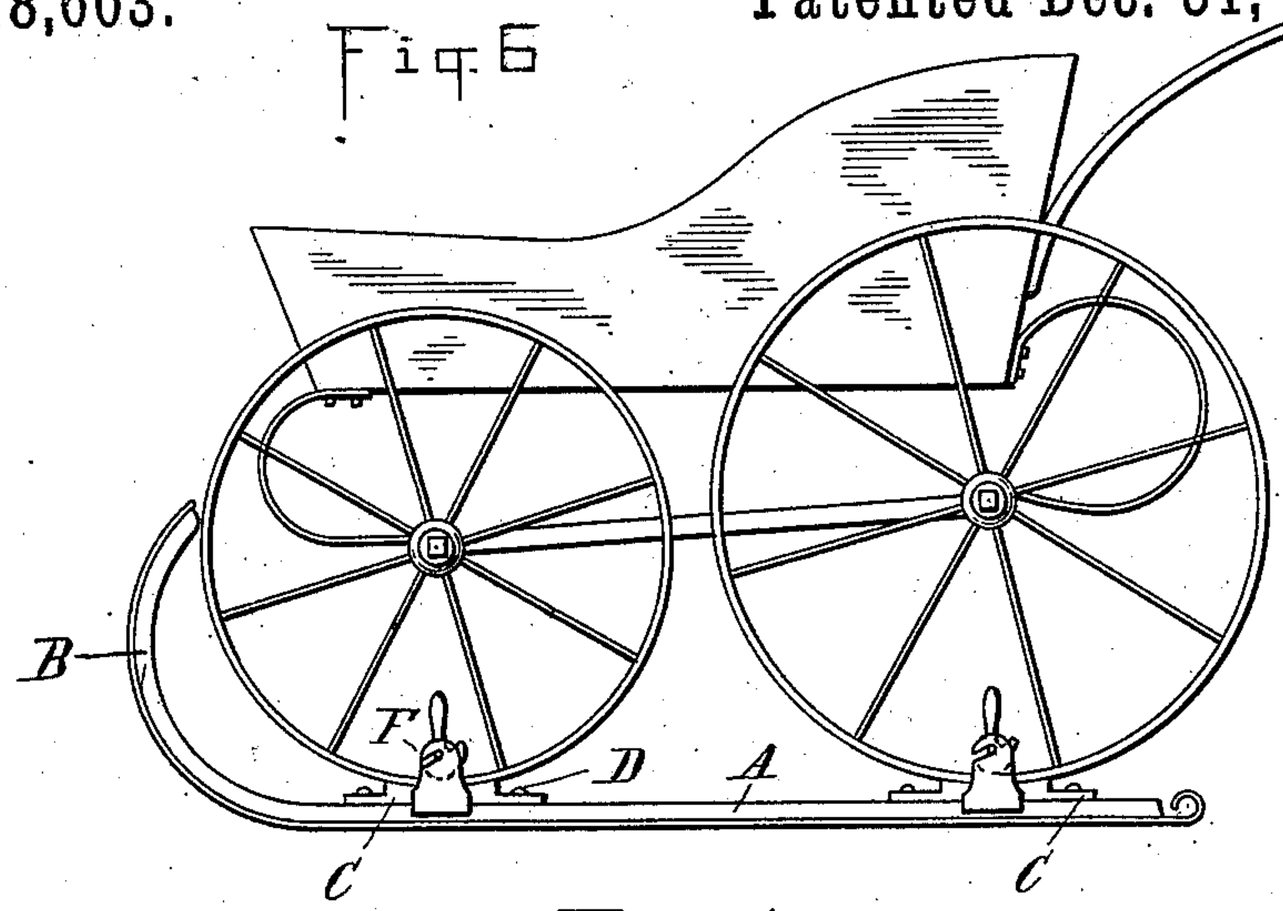


Fig 4

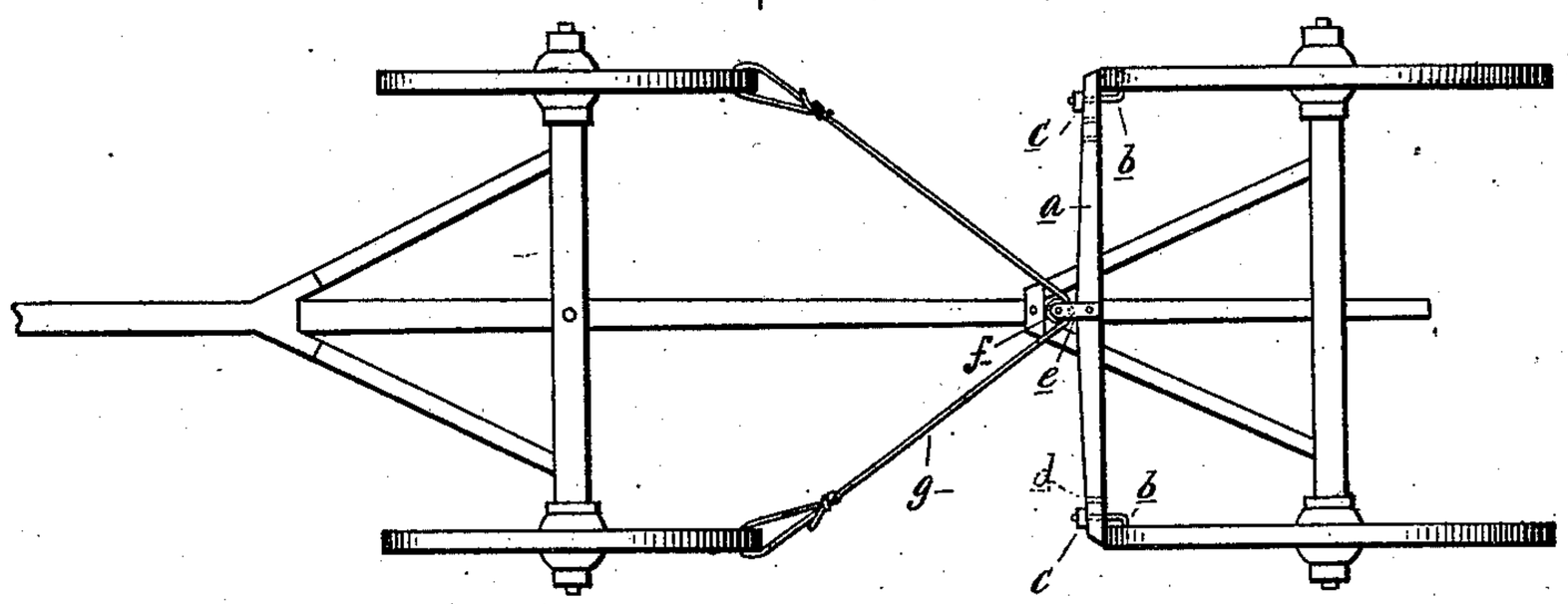
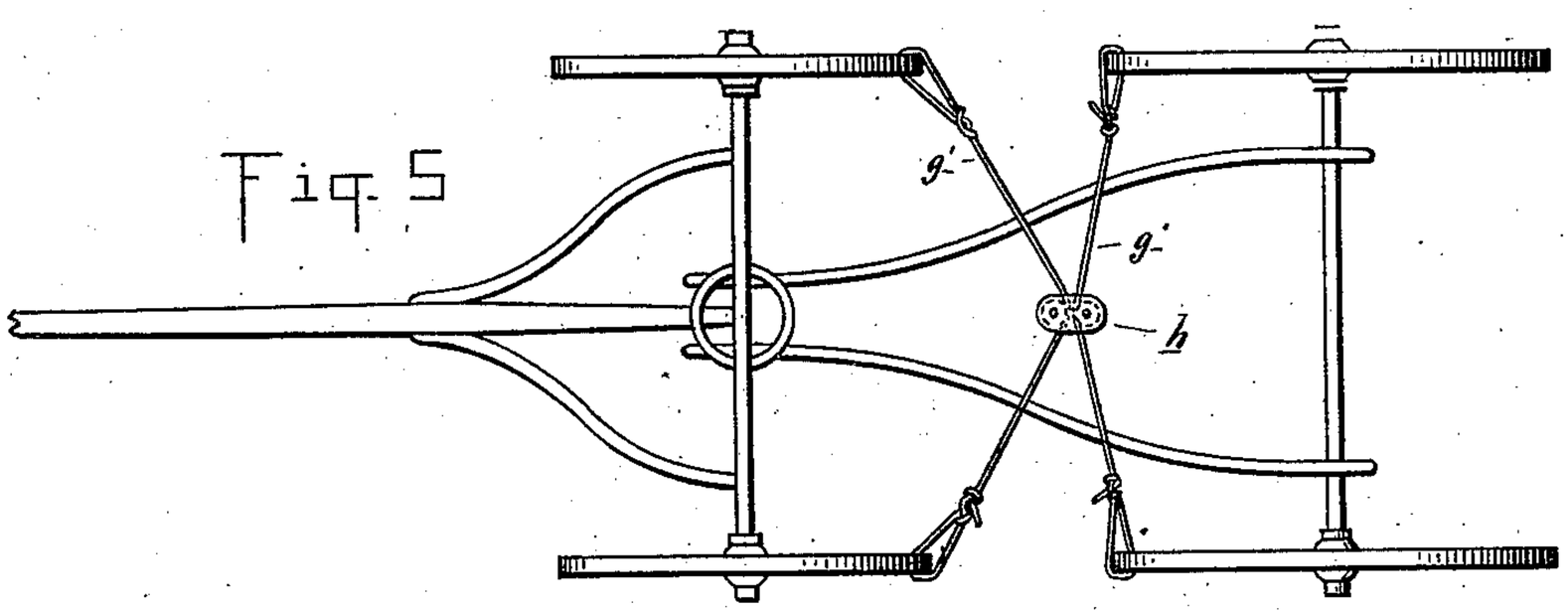


Fig 5



Witnesses:
P. M. Hulbert
Geo. A. Gregg.

Inventor:
John Blankart
By James Whittemore
Atty

UNITED STATES PATENT OFFICE.

JOHN BLANKART, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO SIMON C. KARRER, OF SAME PLACE.

SLEIGH-RUNNER FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 418,603, dated December 31, 1889.

Application filed October 12, 1889. Serial No. 326,886. (No model.)

To all whom it may concern:

Be it known that I, JOHN BLANKART, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Sleigh-Runners for Vehicles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in sleigh-runners for vehicles intended for temporary use; and the invention consists in the peculiar construction of the parts, whereby a simple, strong, and effective device is obtained, applicable either to two or four wheeled vehicles to adapt them for sleighing purposes, all as more fully hereinafter described.

In the drawings which accompany this specification, Figure 1 is an elevation showing my sleigh-runner applied to the wheel of a two-wheeled vehicle. Fig. 2 is a cross-section on line *x x* in Fig. 1. Fig. 3 is a cross-section on line *y y* in Fig. 1. Fig. 4 is a plan showing the manner of applying my device to a four-wheeled vehicle. Fig. 5 shows a plan of a modified arrangement thereof. Fig. 6 is an elevation of a child's carriage having my device attached.

A is a sleigh-runner designed for one wheel only and provided with the upturned forward end B.

C is a curved bearing secured by suitable bolts D to the runner and having the upwardly-projecting clamping-jaws E, each being provided with a horizontal slot F near the top, adapted to receive the bearing-pin G of the clamp-plate H. This clamp-plate is provided at one end with a suitable clamp-screw I. The rim of the wheel of the vehicle to which my device is to be applied is placed upon the curved bearing. The clamp-plate is inserted in its position with the pivots G engaging with the slot F. The clamp-screw I is now turned down, firmly clamping the wheel-rim upon the bearing C.

The upper end of the runner is provided with a clamp-screw J, having a suitable head adapted to bear against the rim of the wheel. The upper end is also provided with a suitable pin K, projecting on both sides.

L is a U-shaped hook having a broad bearing-piece M, adapted to rest against the inner side of the rim of the wheel and projecting with its hooked ends over the pin K. I preferably make a series of hooks or notches O, as shown in Fig. 1, so that my device may be attached to wheels having different thicknesses. The parts being thus applied, the clamp-screw J being turned, the upper end of the runner will be firmly held in position. I preferably connect the end of the clamp-screw J with the loop P, in which I secure a suitable strap Q, which extends upwardly to the shafts, being passed several times around and rearwardly engaging with the wheel, as shown in Fig. 1, thus giving a vertical horizontal brace from the shaft to the wheel and preventing any danger of its turning in backing or in applying the draft to the vehicle.

In order to apply my device, previously described, to a four-wheeled vehicle turning upon a king-bolt, I use in connection therewith the construction shown in Figs. 4 and 5. The device shown in Fig. 4 consists of the cross-bar *a*, having the detachable hooks *b* secured at the ends thereof and adapted to be secured on the rim of the wheel, and held in position by means of suitable nuts *c*. I preferably provide a series of holes *d*, in which the hooks *b* may be inserted, to be used in wagons of different gage. At the middle of this bar is secured between the lugs *e* a roller *f*. To the two front wheels are secured the end of the strap *g*, passing around the roller *e*, all so arranged that when the vehicle is turned the straps *g* will at all times prevent the front wheels and rear wheels from turning and causing damage to the runner.

Instead of using the bar *a*, I may use in connection with a double-running shackle *h* two straps, such as *f*, (shown in Fig. 5,) the operation of these straps being evident from the above description.

It is obvious that for small vehicles having four wheels, but having no king-bolt, the runners A may be made of sufficient length to embrace the two wheels and be secured thereto in the same manner as described and shown in Fig. 1. This modification I show in Fig. 6.

What I claim as my invention is—

1. In a sleigh-runner adapted to be attached to vehicles, the combination, with a runner having an upwardly-projecting forward end, of a clamp-screw therein, a U-shaped hook adapted to bear against the inner rim of the wheel and with its hooked end to engage over a pin K, substantially as described.

2. In a sleigh-runner adapted to be attached to vehicles, the combination, with the runner having an upwardly-projecting part B, of a clamp-screw J, the U-shaped hook L, the bearing M, a series of hooks or notches O, and the pin K, substantially as described.

3. In a sleigh-runner adapted to be attached to vehicles, the combination, with the runner having an upwardly-projecting part B, of a clamp-screw J, the U-shaped hook L, the bearing M, a series of hooks or notches O, the pin K, a loop P in the clamp-screw, and the strap adapted to be connected to the shafts and the wheel, the parts being arranged to operate substantially as described.

4. The combination, with a sleigh-runner adapted to be attached to four-wheeled vehicles, of a running-connection between the two parts thereof, consisting of a flexible strap secured to the front wheels and passing over a roller connected to the rear wheels, substantially as and for the purpose described.

In testimony whereof I affix my signature, in presence of two witnesses, this 16th day of September, 1889.

JOHN BLANKART.

Witnesses:
JAMES WHITTEMORE,
P. M. HULBERT.