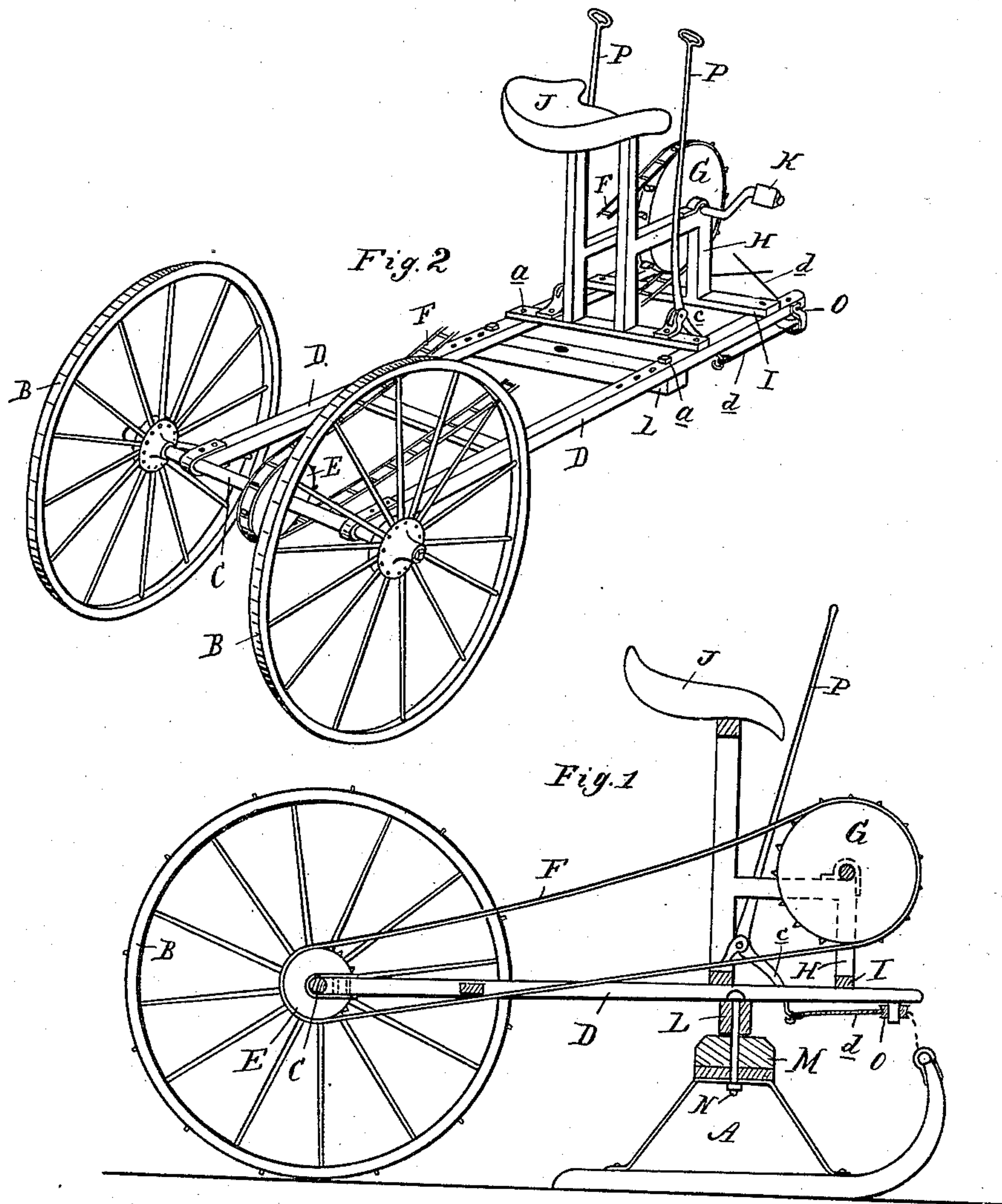


(No Model.)

F. F. FOSTER.  
VELOCIPED SLEIGH.

No. 343,898.

Patented June 15, 1886.



Attest:  
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E. J. Seully

Inventor:  
Frank F. Foster.  
by his Atty  
Thos. D. Sprague



# UNITED STATES PATENT OFFICE.

FRANK F. FOSTER, OF MOUNT PLEASANT, MICHIGAN.

## VELOCIPED-SLEIGH.

SPECIFICATION forming part of Letters Patent No. 343,898, dated June 15, 1886.

Application filed January 29, 1886. Serial No. 190,187. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK F. FOSTER, of Mount Pleasant, in the county of Isabella and State of Michigan, have invented new and  
5 useful Improvements in Velocipede Sleighs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

10 This invention relates to certain new and useful improvements in the construction and operation of what may be properly termed "sleigh-velocipedes."

The invention is designed to furnish the  
15 rider upon the sleigh with means of propulsion, to be operated by himself as he is seated upon the sleigh, so constructed as to be adjustable, when necessary, to throw more or less weight upon the driving-wheels, which are de-  
20 signed to push the sleigh ahead of it.

The invention consists in the peculiar construction of the various parts, their arrangement with relation to each other, and their combinations, as more fully hereinafter de-  
25 scribed.

Figure 1 is a longitudinal section of my improved velocipede-sleigh. Fig. 2 is a perspective view of the driving-gear of the same detached from the sleigh.

30 In the accompanying drawings, A represents a sleigh, which may be of any of the well-known constructions.

B are a pair of driving-wheels suitably secured to an axle, C, in any of the known and  
35 preferred ways. A pair of shafts, D, are sleeved or otherwise attached to the axle, upon the center of which is secured the pulley or sprocket wheel E, over which runs a belt or sprocket-chain, F, extending to and around  
40 the crank-wheel G, which is supported by suitable standards, H, rising from the cross-girt I, which secures together the front ends of the shafts.

J is the rider's seat, supported upon the  
45 shafts, as shown, and it is so located with reference to the crank-wheel that the rider may easily operate the cranks K with his feet.

L is a bolster secured to the shafts, and is designed to rest upon the top cross-rail, M, of  
50 the sleigh, or upon the floor, as may be preferred. A bolt, N, passes through the center of the bolster and the sleigh, as shown, which

serves the purpose of a king-bolt, and holds the parts together. The shafts are adjustable fore and aft upon the bolster, to which they  
55 are secured by suitable holes coincident in the two shafts and the bolts a, so that the weight of the rider may be thrown more or less, as occasion requires, upon the driving-wheels—that is to say, the driver, when the device is  
60 as shown in Fig. 1, sits directly over the bolster, and his weight is therefore upon the sleigh. Should the driving-wheels slip from any cause, the shafts are extended to the rear by the means of adjustment described, so that  
65 the weight of the rider is more or less thrown upon the wheels, this depending upon the amount of such extension to the rear.

To prevent the driving-wheels from slipping on smooth ice or roads, their rims should be  
70 provided with spurs b, projecting radially therefrom.

At each front corner made by the shafts and the girt I there are secured the pulleys O.

P are levers, one on each side of the rider's  
75 seat, and within easy reach of the occupant thereof, with their lower ends forming a bell-crank, c, which are pivotally secured to the frame-work. To the lower ends of the bell-cranks there is secured a rope or chain, d, 80  
which, passing over the pulley nearest to the lever, leads to the opposite front corner of the frame, where it is secured. These form the necessary device for steering the sleigh.

By this construction I am enabled to propel  
85 a sleigh carrying the rider at a very rapid rate of speed, such speed depending upon the relative sizes of the drive-wheels and the crank-wheel.

What I claim as my invention is—

90 1. In a velocipede-sleigh, the combination, with the sleigh A and driving-wheels B, of a sprocket-wheel on the shaft of said wheels midway between the same, a sprocket-wheel centrally journaled in advance of said sleigh,  
95 an endless belt passing over said sprocket-wheels, and means for imparting motion thereto, and means, substantially as described, for adjusting said sleigh longitudinally, substantially as and for the purpose specified. 100

2. The combination, with the driving-wheels B, sprocket-wheels E G, and shafts adjustable longitudinally thereon, of the sleigh A, attached to said shafts and adjustable to and



from the driving-wheels, substantially as and for the purpose specified.

3. The combination, with the wheels B, shafts D, and sleigh A, supported by said shafts, of the sprocket-wheel E, secured to the center of the driving-shaft, the sprocket-wheel G, centrally supported by said shafts in advance of the sleigh, belt F, and the cranks K on the shaft of the sprocket-wheel G, one upon each side of said wheel, substantially as described.

4. The combination, with the sleigh, driving-wheels, and propelling mechanism, as described, of the levers P, pulleys O, and crossed ropes or chains d, substantially as and for the purpose specified.

5. The combination, with the sleigh, driving-wheels, shafts, sprocket-wheels E G, and chain F, of the pulleys O, the levers P, pivoted to the frame, one upon each side thereof, and forming at their lower ends bell-cranks c, and the ropes d, connected to said bell-cranks,

passing over said pulleys, and operating substantially as and for the purpose specified.

6. The combination, with the axle C, wheels B, and shafts D, of the sleigh A, king-bolt N, connecting said sleigh to said shafts, the seat J, arranged substantially over said king-bolt, and means for turning said sleigh on the king-bolt, substantially as described.

7. The combination, with the wheels B, axle C, sprocket-wheel E on said axle, shafts D, and bolster L, of the sleigh A, swiveled to said bolster by the king-bolt N, the seat J, supported by said shafts substantially over said king-bolt, the sprocket-wheel G, arranged above said shafts in advance of the king-bolt, and the endless belt F, connecting said sprocket-wheels, substantially as and for the purpose specified.

FRANK F. FOSTER.

Witnesses:

H. S. SPRAGUE,  
E. J. SCULLY.