

No. 633,085.

Patented Sept. 12, 1899.

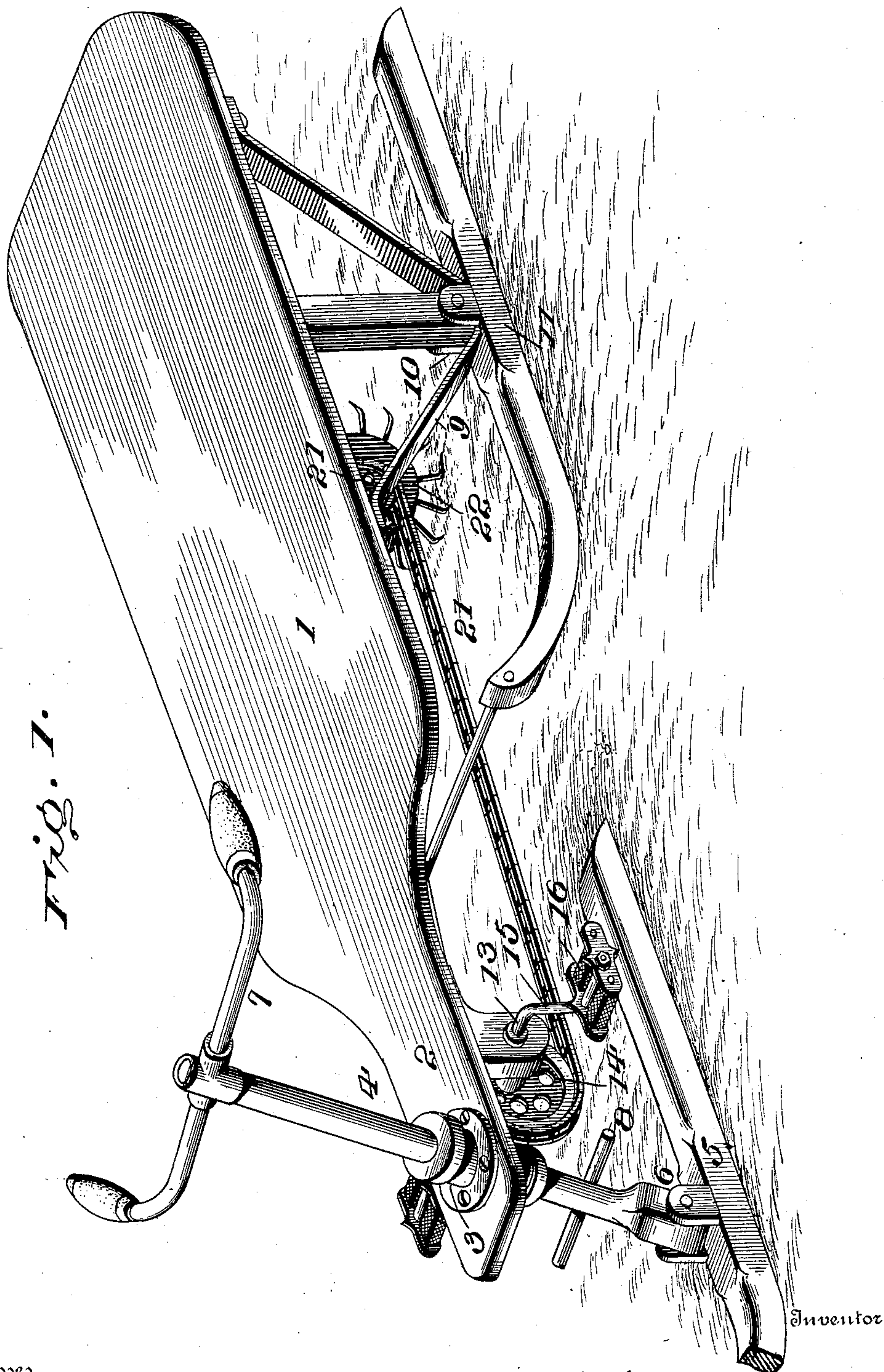
W. A. HARTMAN.

SLED.

(Application filed Jan. 9, 1899.)

2 Sheets—Sheet 1.

(No Model.)



Witnesses

*per Imrie*  
*Gladys L. Thompson*

*William A. Hartman*  
*by R. H. B. Lacey* *Attorney*

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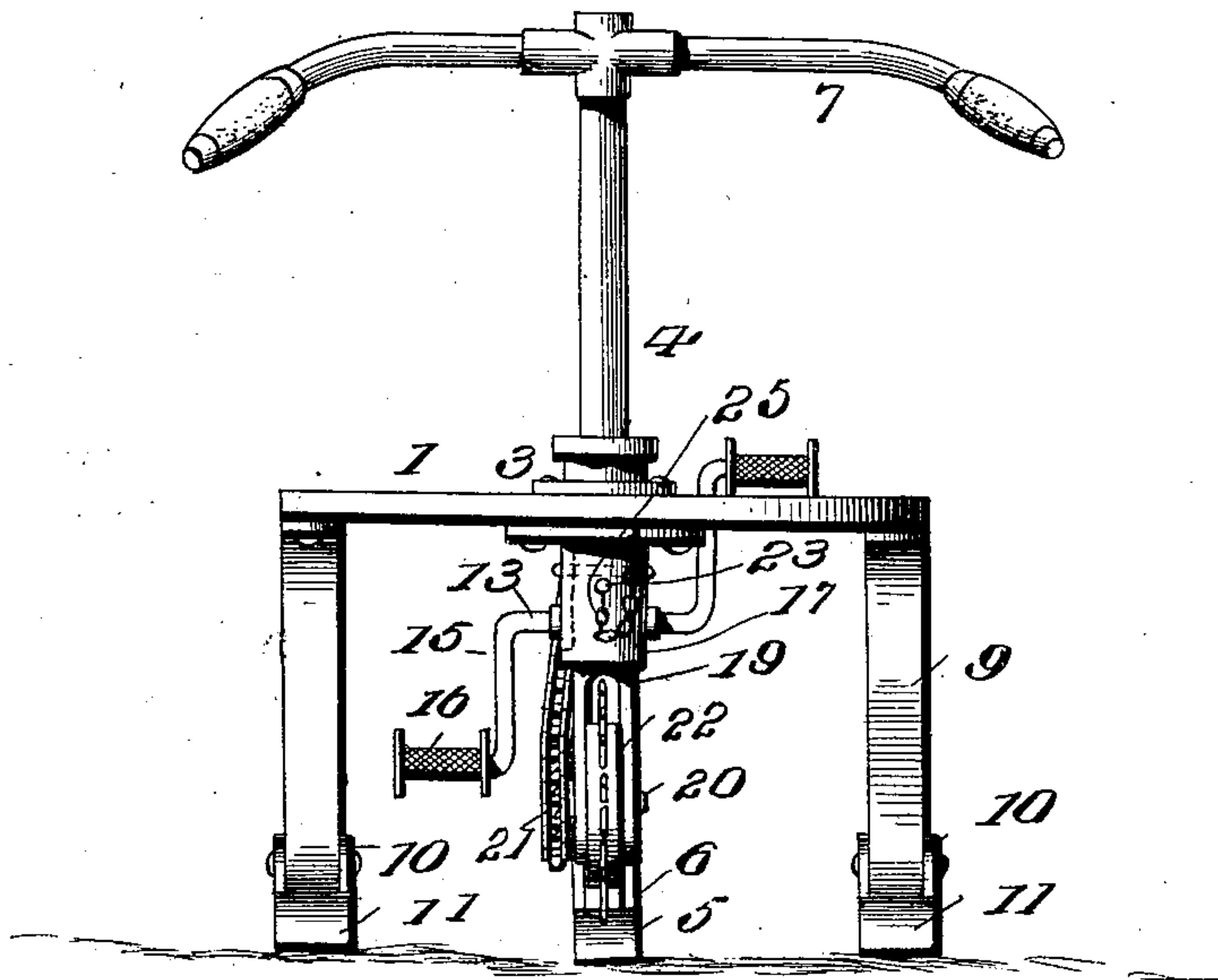
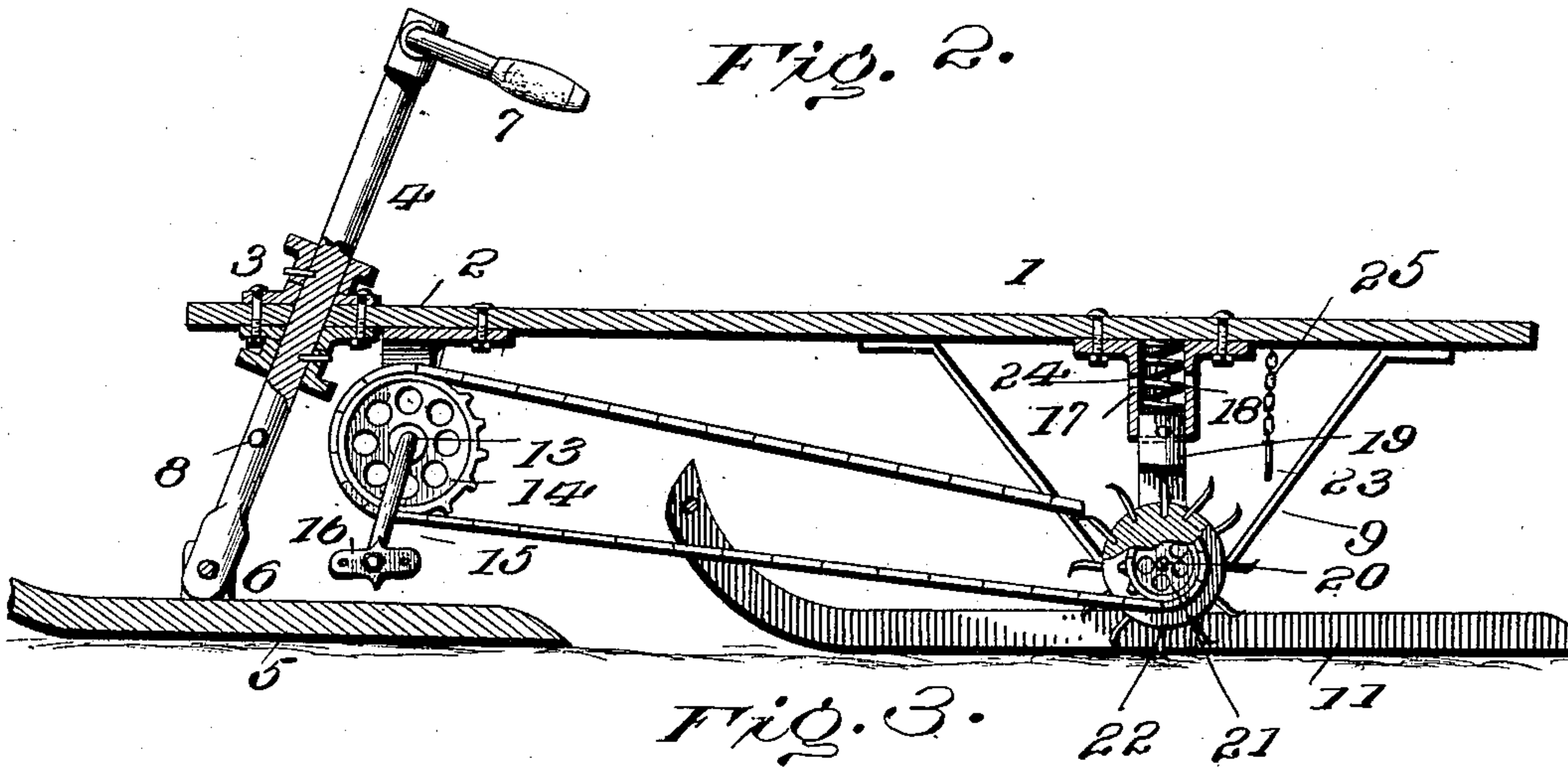
W. A. HARTMAN.

SLED.

(Application filed Jan. 3, 1899.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM A. HARTMAN, OF MAYBURG, PENNSYLVANIA.

## SLED.

SPECIFICATION forming part of Letters Patent No. 633,085, dated September 12, 1899.

Application filed January 9, 1899. Serial No. 701,651. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. HARTMAN, a citizen of the United States, residing at Mayburg, in the county of Forest and State of Pennsylvania, have invented certain new and useful Improvements in Sleds; 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.

This invention relates to sleds, and the purpose of the improved construction is to facilitate level-surface propulsion and provide increased advantages in coasting; and it consists of the construction and arrangement of parts in general and detail, as more fully hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a sled embodying the invention. Fig. 2 is a longitudinal vertical section of the improved device. Fig. 3 is a rear end elevation showing the manner of adjusting a portion of the device.

Referring to the drawings wherein similar numerals are utilized to indicate corresponding parts in the several views, the numeral 1 designates a bed forming a seat or rest and having a front reduced end 2 for free straddle movement of the limbs of the occupant. At the front termination of said end 2 a socket or head 3 is secured at a proper angle, and a steering-post 4 is rotatably mounted therein and extends above and below the said bed. To the lower end of said post a front steering-runner 5 is movably connected by a knuckle 6 and has a free action to compensate for the inequalities of the traversed surface. The upper end of the post has a handle-bar 7 secured thereto and supplied with suitable grips, the said bar standing over the fore part or front reduced end 2 of the bed a sufficient distance for convenient engagement and operation. A short distance above the runner 5 a transverse foot-bar 8 is secured to the post 4 and serves as a rest for the feet of the occupant while coasting.

The rear part of the bed 1 has braces 9 depending therefrom and converging toward opposite knuckles 10, in part carried by rear runners 11, to movably attach the latter and also allow them to conform to surface inequalities. The front ends of said runners are

tied, and the usual supplemental braces and strengthening devices can be applied whenever desired.

The device as thus far described embodies a construction uniform in all the figures of the drawings, and to the front end of the steering-runner 5 a rope or analogous device 12 is attached to draw the sled over a level or ordinary surface.

In the use of the device as thus far disclosed the occupant sits on the bed 1 and places his feet on the foot-bar 8. The handle-bar 7 may be grasped and used to assist in steering on a level surface, though the rope or analogous device 12 will in this instance be sufficient for this purpose owing to the draft thereon. In coasting, the rope or analogous device 12 is drawn up to the handle-bar, and the latter is operated to guide the runner 5 and safely direct the course of the sled.

In a rear lower part of the post 4 or the brace therefor a crank-shaft 13 is mounted, on which is fixed a sprocket-wheel 14 and opposite cranks 15, which have pedals 16 secured thereto. The crank-arms and pedals are far enough to the rear and laterally confined to such an extent as not to interfere with the use of the foot-bar 8. Depending from the rear under part of the bed 1 between the braces 9 is a containing guide-hanger 17, having a spring 18 therein and freely movable. In the lower part of said guide the bearing member 19 of a shaft 20 is mounted, and the lower end of said spring directly bears thereon. On the said shaft 20 is keyed a sprocket 21, attached to or forming a part of a toothed propelling-wheel 22. A chain belt engages the sprocket-wheels 14 and 21, and by operating the crank-shaft 13 the said propelling-wheel is rotated and the teeth thereof caused to strike and bite into the snow or ice over which the sled is to travel, and an effective means of forwardly moving the said sled by the occupant is thereby provided. During the propulsion of the sled by the mechanism set forth it can be readily guided or steered, and the wheel 22, through the medium of the spring 18, resting on the shaft 20, automatically rises and falls to compensate for unevenness of the traversed surface.

In using the sled supplied with the propelling mechanism for coasting purposes it will



be necessary to elevate the wheel 22 to free the teeth thereof from the surface to avoid a drag or impediment and a possible breakage. To accomplish this, the bearing 19 of the shaft  
5 20 is pressed upwardly against the spring 18 in the guide-hanger 17, and a strong pin 23 is inserted in openings 24 in the hanger for the purpose, and the said bearing 19 rests on said pin, and wheel 22 is thereby maintained in an  
10 elevated position until the pin is withdrawn from the openings 24. The pin is attached to the hanger in convenient position by a chain or analogous device 25 and is easily operated in the manner stated.

15 Changes in the proportions, dimensions, and minor details can be made for various applications and utilizations without departing from the nature or spirit of the invention.

Having thus described the invention, what  
20 is claimed as new is—

In a sled, the combination of a bed, having rear movable runners and a front single steering-runner, a crank-shaft at the front part of

the bed having cranks and pedals and a sprocket-wheel thereon, a containable guide- 25 hanger depending from the rear part of the bed, and having openings therein, a spring freely movable in said hanger, a rear shaft having a bearing mounted in said hanger and bearing against said spring, a sprocket-wheel 30 on said latter rear shaft, a chain belt running from the sprocket-wheel on the said crank-shaft to that on the rear shaft, a toothed propelling-wheel on said rear shaft, and a pin carried by a flexible connection to bed and 35 adapted to be removably inserted in the openings of the hanger to hold the rear shaft and parts carried thereby in elevated position to clear said toothed wheel from operative surface contact. 40

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

WILLIAM A. HARTMAN. [L. S.]

Witnesses:

THOMAS J. BRUCE,

WILLIAM RICHARDS.