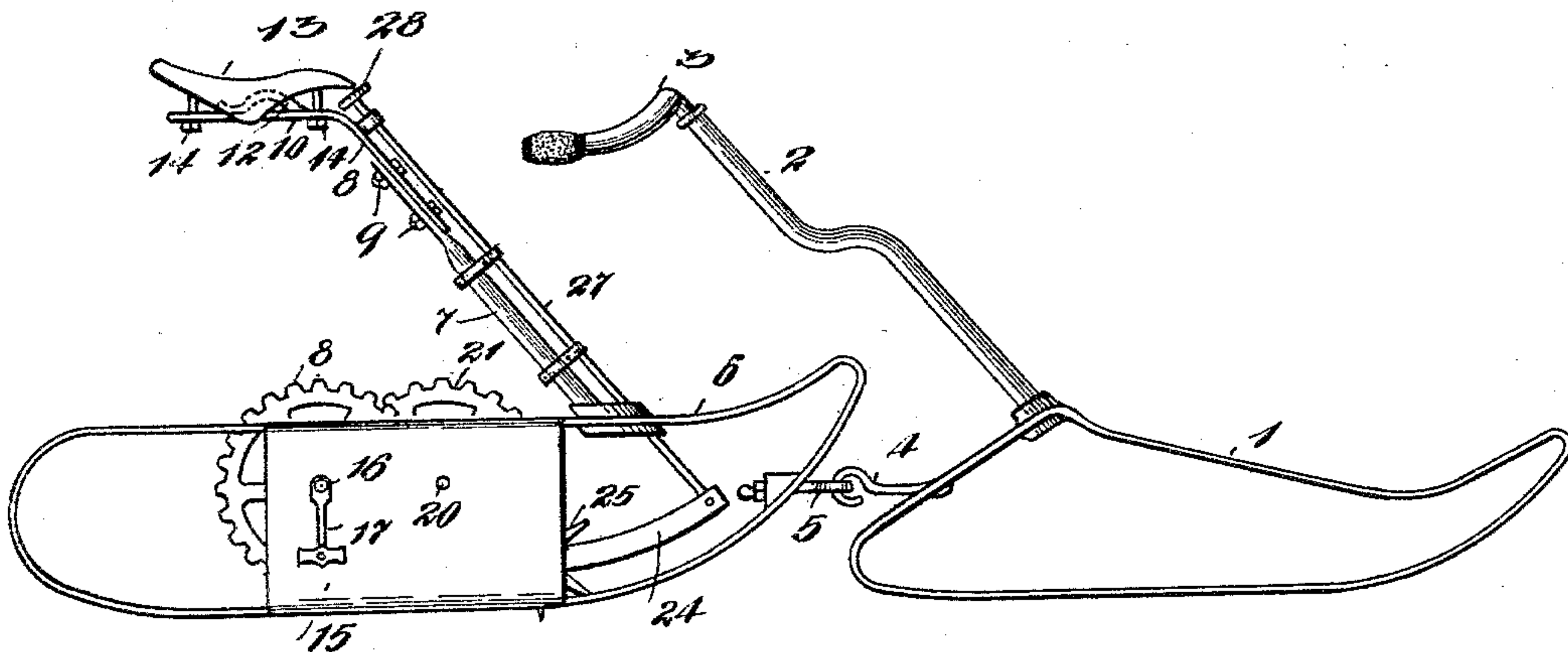


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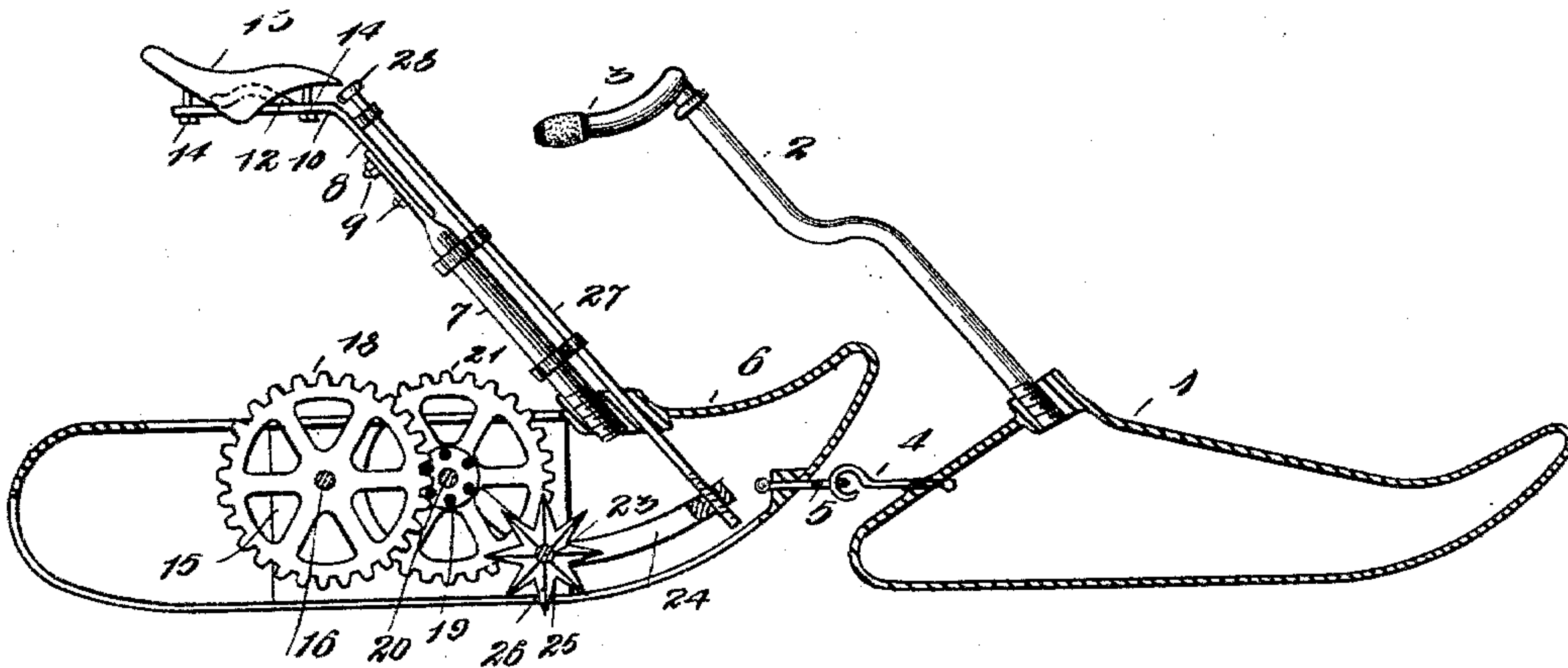
No. 597.468.

Patented Jan. 18, 1898.

*Fig. 1*



*Fig. 2*



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(No Model.)

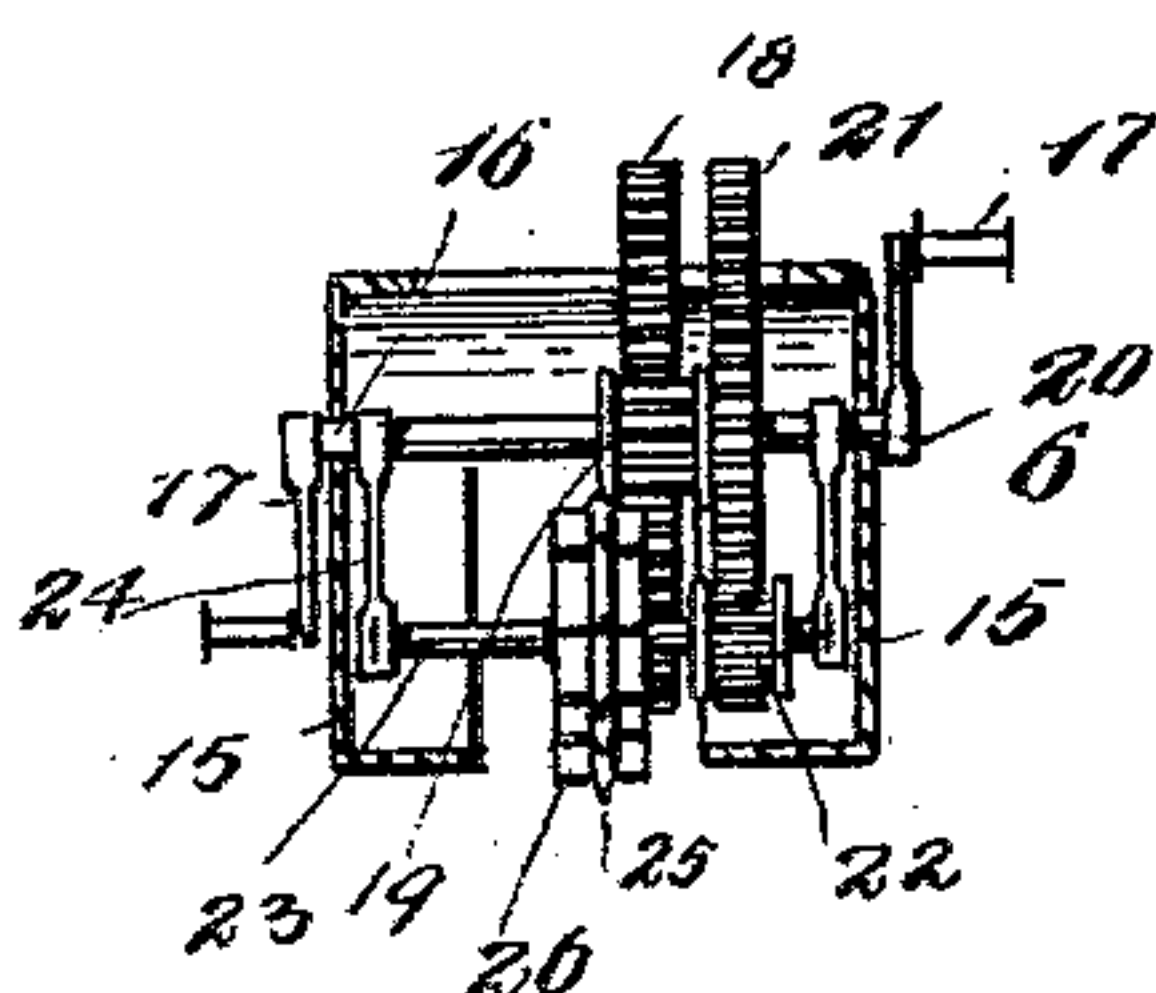
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C. LOCKWOOD.  
ICE VELOCIPEDE.

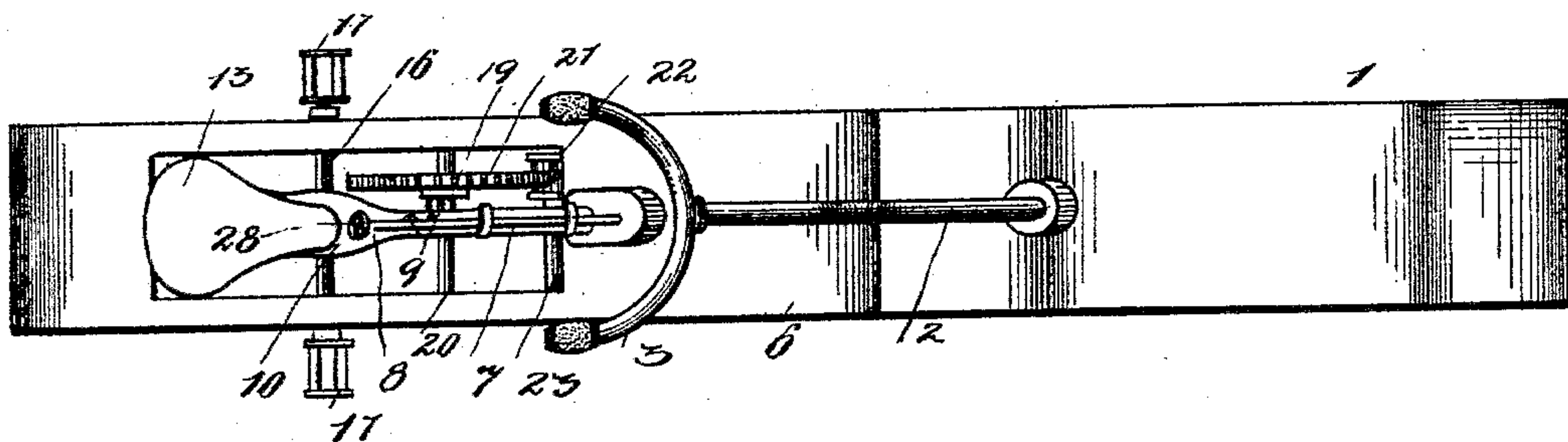
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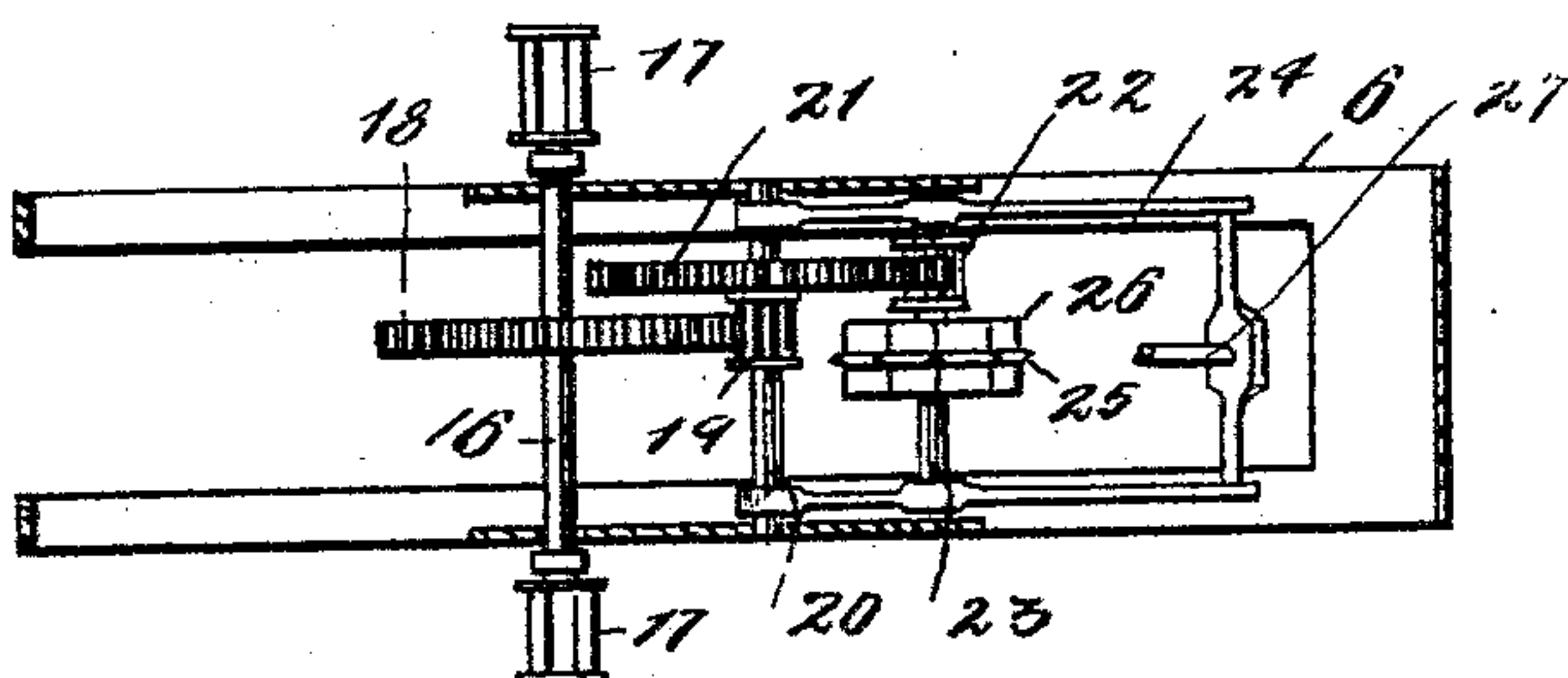
*Fig. 3*



*Fig. 4*



*Fig. 5*



Witnesses

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# UNITED STATES PATENT OFFICE.

CHARLES LOCKWOOD, OF FOREST HOUSE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO HENRY C. CRAWFORD AND GEORGE H. CRAWFORD, OF SAME PLACE.

## ICE-VELOCIPED.

SPECIFICATION forming part of Letters Patent No. 597,468, dated January 18, 1898.

Application filed December 10, 1896. Serial No. 615,205. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES LOCKWOOD, a citizen of the United States, residing at Forest House, in the county of Potter and State of Pennsylvania, have invented certain new and useful Improvements in Ice-Velocipedes; and I do 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 has relation to improvements in the construction of sleighs or ice-velocipedes, and more particularly to that class of sleighs for ice and snow wherein the rider propels himself after the general manner of a bicycle.

The object of the invention is to provide a simple and effective device for this purpose; and to this end the novelty consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings the same reference-numerals indicate the same parts of the invention.

Figure 1 is a side elevation of my improved propeller-sleigh. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section through the body of the sleigh. Fig. 4 is a top plan view, and Fig. 5 is a horizontal section of the same.

1 represents the guiding shoe or runner, provided with a rearwardly-extending bar 2, surmounted by the usual steering-handle 3. The rear end of said shoe is provided with a swivel-hook 4, which engages a swivel-eye 5 in the forward end of the sleigh-frame, and said rear sleigh-frame being a one-runner frame. This frame 6 is provided with a seat-standard 7, to which is secured the vertically-adjustable seat-bracket 8 by means of the bolts 9 9. The bracket is formed with a horizontal flat spring-steel arm 10, in the center of which is a longitudinal integral tongue 12, which forms a spring for the saddle 13 to rest

upon, the saddle itself being vertically adjustable on said arm by means of the bolts 14 14.

15 15 are the sides of the frame 6, and in these sides is journaled the driving-shaft 16, provided on its outer ends with the usual cranks and pedals 17 17. The crank-shaft is likewise provided with a gear-wheel 18, which meshes with a pinion 19 on a shaft 20, which is also provided with a gear-wheel 21. This latter meshes with a pinion 22 on the shaft 23, the ends of which are journaled in the parallel sides of a rectangular frame 24, one end of which has a bearing on the shaft 20, while the free end of said frame may be raised or lowered vertically, still keeping the pinion 22 in proper mesh with its driving-gear 21. The shaft 23 is likewise provided with a spur-wheel 25, the teeth of which are adapted to take hold upon the surface of the ice and impel the machine forward. Each of the teeth on the spur-wheel 25, a short distance back from the point thereof, is provided with a transverse radial paddle 26, which forms a bearing in the snow to drive the machine.

The forward or free end of the frame 24 receives the threaded end of a regulating-shaft 27, journaled in the frame, its handle 28 extending upward to within convenient reach of the rider. It will thus be seen that by turning the shaft 27 to the right or left the forward end of the frame 24 can be raised or lowered without dismounting, and consequently the rider can regulate the depth of the spur-wheel to correspond to the density or consistency of the ice or snow over which he is traveling.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

Having thus fully described my invention, what I claim as new and useful, and desire

to secure by Letters Patent of the United States, is—

5 An ice-velocipede comprising the frame 6, the crank-shaft and driving gear-wheels journaled therein, in combination with the frame 24, the shaft 23 journaled therein and provided with the pinion 23 and spur-wheel 25, and the shaft 27 mounted in said frame and having its threaded end in engagement with

the free end of the frame 24, substantially as is shown and described.

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

CHARLES LOCKWOOD.

Witnesses:

C. M. THOMAS,

G. H. CRAWFORD.