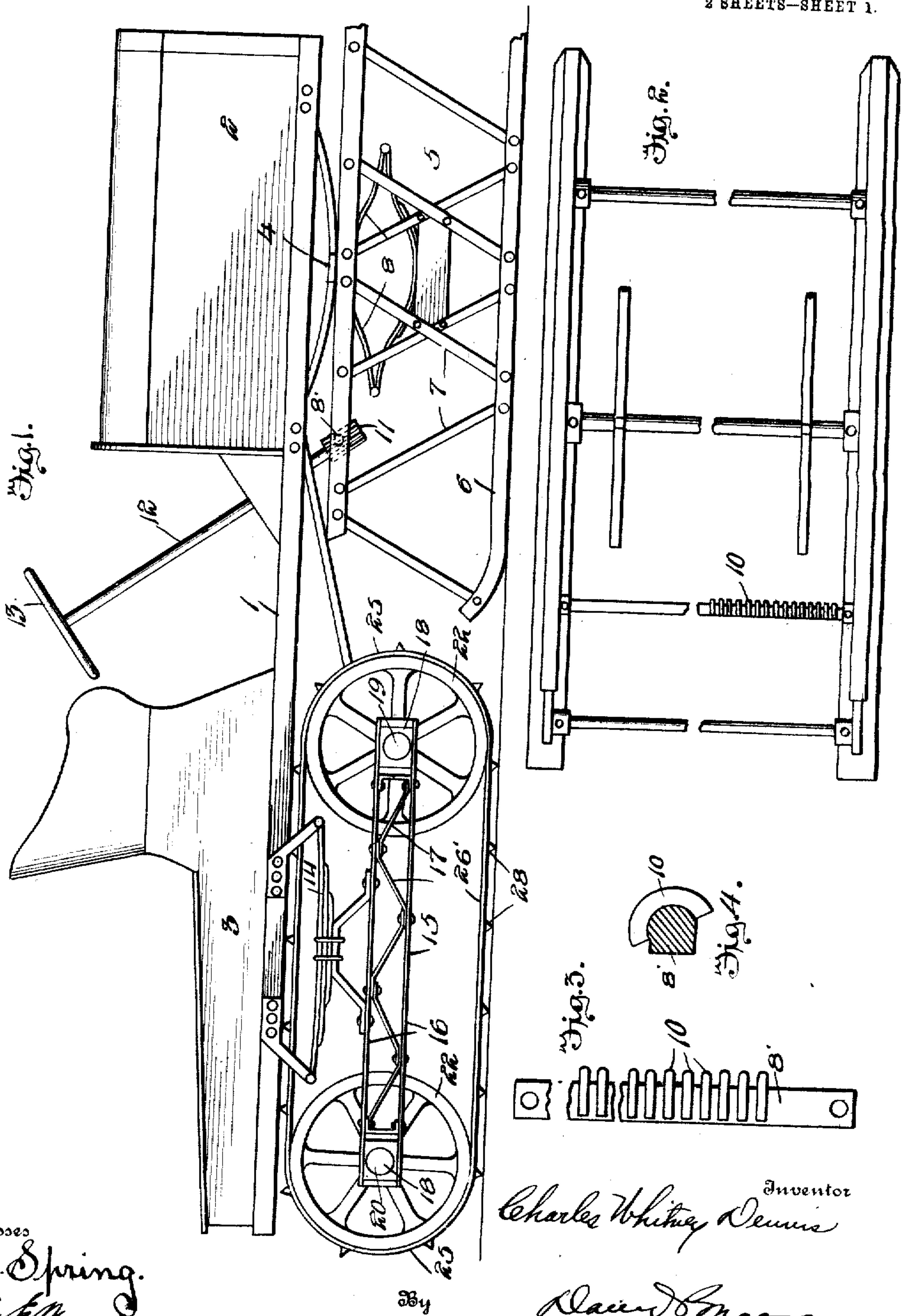


905,058.

C. W. DENNIS.  
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APPLICATION FILED APR. 27, 1908.

Patented Nov. 24, 1908.

2 SHEETS—SHEET 1.



Witnesses  
G. M. Spring.  
May E. Moore.

Inventor  
Charles Whitney Dennis  
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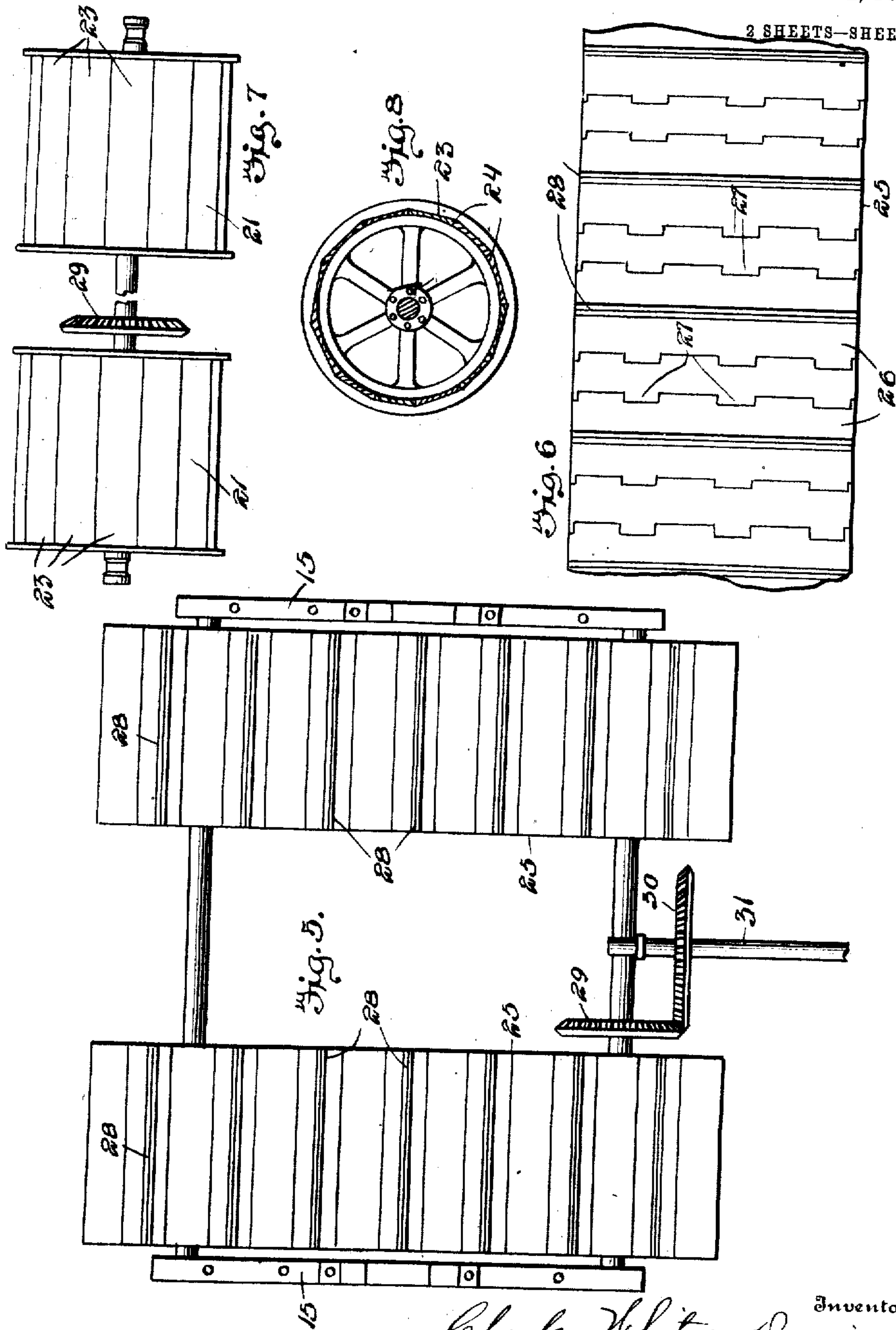
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Attorney



# UNITED STATES PATENT OFFICE.

CHARLES WHITNEY DENNIS, OF AUGUSTA, MAINE.

## AUTOSLEIGH.

No. 905,058.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed April 27, 1908. Serial No. 429,558.

*To all whom it may concern:*

Be it known that I, CHARLES WHITNEY DENNIS, a citizen of the United States, residing at Augusta, in the county of Kennebec and State of Maine, have invented certain new and useful Improvements in Autosleights, of which the following is a specification, reference being had therein to the accompanying drawings.

My present invention relates to an improved autosleigh, and has special reference to a sleigh adapted to be propelled by any form of power, such as explosive engines, steam or electricity, the main feature residing in the fact of a peculiarly constructed propelling machine which will not allow the machine to sink deeply into the snow, all of which will presently appear.

To clearly illustrate my invention, attention is invited to the accompanying drawings, in which:—

Figure 1 is a side elevation of the complete autosleigh. Fig. 2 is a top plan view of the steering or forward runners. Fig. 3 is an enlarged detail view of one portion of the steering mechanism. Fig. 4 is a cross section thereof. Fig. 5 is a top plan view of the propelling truck and runners, the body being removed. Fig. 6 is an enlarged detail plan view of the steel propelling runner. Fig. 7 is an elevation of one of the propelling axles and drums, and Fig. 8 is a cross section on line  $x-x$  of Fig. 7.

Referring to the drawings:—The numeral 1 designates the platform or support, for the forward power carrying casing 2, and the rear body 3. The forward part of the platform is pivotally connected at 4, to the steering runner frame 5, which carries the two runners 6, which are secured together by means of the braces 7. In order to cushionly support the power casing, I employ the two elliptical springs 8. In order to steer or turn the runners 6, I employ the rod 8', which is provided with the angularly set semi-circular worms or segments 10, which are always in engagement with the long pinion or cog 11, carried upon the lower end of the steering post 12, whose wheel 13, gives full control to the steering of the autosleigh.

The rear body 3, is supported by means of the springs 14, upon the truck-frame 15, which consists of the upper and lower metal plates 16, supported and braced apart by means of the angle-irons 17, to form the re-

ceptacles at the ends for the journal boxes 18, in which are mounted the front and rear axles 19 and 20, respectively. Carried upon each axle is a pair of pulleys or drums 21, each of which consists of the rims 22, and the series of flat portions 23, which provide the angles 24. Mounted upon these drums, that is pairing the right forward drum with the right rear drum, and the left forward drum and left rear drum, is what I term the movable runners or tires 25, one to each pair. These runners or tires are made in sections 26, the inner surface 26', of which is of the same width as each flat portion or surface 23 of the drums, and as each section 26, is hingedly connected to the adjoining one by means of the hinge 27, the runners will closely adhere to the contour of the drums and be moved in the proper direction by the movement of the drums. Upon the outer surface of the movable runners and to the sections thereof, I secure the ribs or gripping rods 28, which extend preferably the full width of the runner, and are tri-angular in cross-section. By this means it will be seen that the width of the two movable runners, prevent the rear portion of the autosleigh from sinking into the snow, acting as a snow shoe, and as the front axle is revolved, the movable runners are operated so that their gripping rods will grip the snow and thus propel the autosleigh, and movable runners imparting a rotary motion to the rear axle, acting as a belting.

Upon the forward axle, I mount a gear 29, which is operably geared to the gear 30, carried upon the shaft 31, which extends forwardly and is connected to the motive power in any suitable clutch (not shown).

From the foregoing description taken in connection with the drawings, it is evident that I provide a practical autosleigh, as I provide a platform carrying the motive power and operator's seat and rear body, a steering truck mounted upon stationary runners, and a propelling truck having its movable propelling runners operably connected with the motive power, and being so constructed as at the same time they propel the autosleigh, they also prevent the same from sinking into the snow to such a depth as to impair the practicability of the sleigh.

What I claim, as new, is:—

1. In an autosleigh, the combination of a platform, a steering runner pivotally mounted below the front of said platform, motive



power mounted upon the platform above the steering runner, co-acting steering mechanism carried by the runners and accessible in the rear of the motive power, truck frames supporting the rear portion of the platform, journal boxes mounted in said truck frames, a front axle journaled in the forward boxes of the truck frames, a rear axle journaled in the remaining boxes, means for operably connecting the front axle with the motive power, two drums each having a central portion composed of a series of different angled planes and corners and with projecting rims keyed to each axle, said drums being separated by a central space upon each axle, two endless propelling belts paralleling each other and mounted upon their respective drums of the front and rear axles, the front axle conveying motion to the rear axle through the medium of the belts, and each belt being made of a series of sections flexibly connected together to conform to the contour of the central portion of the drums and with exterior gripping ribs.

2. In an autosleigh, the combination of a platform, a steering runner pivotally mounted below the front of said platform, motive power mounted upon the platform above the steering runner, a rack bar extending transversely of the runner, a steering mechanism operably connected therewith and accessible

in the rear of the motive power, springs carried below the rear portion of the platform, one upon each side, truck frames, one to each spring, connected with the spring to support the platform, journal boxes mounted in said truck frames, one in each end, a front axle journaled in the forward ones of each frame, a rear axle journaled in the rear ones of each frame, means for operably connecting the front axle with the motive power, two drums each having a central portion composed of a series of different angled planes and corners and with projecting rims keyed to each axle, said drums being separated by a central space upon each axle, two endless propelling belts paralleling each other and mounted upon their respective drums of the front and rear axles, the front axle conveying motion to the rear axle through the medium of the belts, and each belt being made of a series of sections flexibly connected together to conform to the contour of the central portion of the drums and with exterior gripping ribs.

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

CHARLES WHITNEY DENNIS.

Witnesses:

JOS. WILLIAMSON,  
ERNEST L. MCLEAN,  
JULIA BERRY.