To all whom it may concern:

Be it known that I, ALBERT H. WATERS, a citizen of the United States, residing at Thompsonville, in the county of Benzie and State of Michigan, have invented new and useful Improvements in Tramways for Log-Sleds, of which the following is a specification.

This invention relates to improvements in tramways for log-sleds and the like, and particularly to an improved construction of track-rail for such tramways.

The object of the invention is to provide a rail which will permit free and easy movement of the sled-runners, which will guide the runners and prevent the same from running off the trackway, and which embodies a tread or traction surface which reduces traction resistance to the minimum and may be removed when worn out or injured and a new surface substituted therefor without the necessity of discarding the entire rail.

With the above and other objects in view the invention consists of the features of construction, combination, and arrangement of parts hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan view of a section of a log-tramway embodying my invention. Fig. 2 is a longitudinal section thereof, taken centrally through one of the rails. Fig. 3 is a cross-section through the track or tramway, and Fig. 4 is a fragmentary plan view of the tread member of one of the rails.

Referring more particularly to the drawings, the numeral 1 designates ordinary ties or sleepers of wood or other suitable material which are designed to rest upon or be sunk in the surface of the ground. Upon these sleepers rest the track-rails 2 of the improved tramway, which may be secured in any approved manner to said ties or sleepers, but are preferably spiked in the manner hereinafter described.

In accordance with my invention each track-rail 2 comprises a base-plate 3 of desired length and width and having an upper surface of proper form and dimensions to support a tread-surface 4, consisting of longitudinal side pieces 5, connected by transverse bars or blocks 6. These bars or blocks 6 are preferably removable connected to the side pieces 5 by forming the latter in their longitudinal side edges at suitable intervals with notches or recesses 7, forming seats to receive the ends of the tread blocks or bars 6, which are held by the walls of the notches from lateral and longitudinal movement. The bars or blocks 6 as thus arranged rest upon and are supported by the base-plate 3 and form a spaced tread or traction surface for the runners of the sleds. By this construction it will be seen that the use of a continuous rail-surface is obviated and resistance to the movement of the runners therefore reduced to the minimum. In practice the bars or blocks 6 are coated with grease or other lubricant to further reduce friction and allow the runners of the sleds to slide easily thereon.

Arranged upon the side bars 5 are guard-rails 8, which preferably extend inwardly beyond the side edges of the said guard-rails and are spaced apart to form a guideway for the said runners and hold the same from displacement, thus obviating all liability of the sled running off or jumping the track-rails. The guard-rails 8 also extend a sufficient distance inward to overlap the ends of the traction blocks or bars 6, and thus securely hold them seated in their receiving-recesses in the bars 5 against upward movement. The base-plate 3, bars 5, and guard-rails 8 are secured in position by spikes 9 passing downward therethrough and entering the ties or sleepers 1. If desired, however, the base-plate 3 and rails 5 of the tread-surface 4 may be secured together and to the ties 1 by suitable fastening means and the guard-rails 8 independently secured by other fastening means, so as to enable the guard-rails to be readily removed without disturbing the fastenings of the other parts. In some cases also the rails 5 instead of being formed independently of the base-plate 3 may be integral therewith.
and form part thereof to reduce the number of separate parts of the trackway.

It will be readily observed from the foregoing description that the bars or blocks 6 as
constructed and arranged not only reduce the tread-surface of the rail, thus diminishing
the resistance to the movement of the runners thereon and allowing draft-animals
to draw heavy loads with comparative ease,
but that when injured or worn to an appreciable degree may be, upon the removal of
the guard-rails 8, readily removed and new
blocks or bars substituted therefor without
the necessity of detaching or discarding the
entire rail.

The logging-sleds designed to be used in
connection with my improved trackway
may be of any preferred type and construction; but in the present instance I have
shown a logging-sled composed of two separate sled members 10 and 11, connected by
an intermediate draft-chain 12, each of said sleds comprising a transverse frame-bar 13,
carrying runners 14 of suitable form and con-
struction to run upon the bars or blocks 6 and
also carrying the superposed bar or bolster 15,
adapted to serve as a support for the logs.
The forward ends of the runners of the front
sled member 10 are connected by a trans-
verse rod or bar 16, to which is attached a
tongue or draft device 17, to which in prac-
tice the draft-animals are hitched up.

When portions of the tramway are in-
clined and form heavy grades, the blocks 6
of such portions may be removed and a board
or other solid surface substituted. This will
permit the inclined portions of the track to
be sanded to check the speed of a sled de-
scending the grade.

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

1. A tram-rail having a grooved guideway
provided with receiving seats or recesses, sta-
tionary transverse tread-bars disposed in
spaced relation in said guideway and ar-
ranged in said seats or recesses, and means
for removably confining the tread-bars in
said seats or recesses.

2. A tram-rail, having a grooved guide-
way formed with seats in its side walls, sta-
tionary transverse tread-bars disposed in
said guideway with their ends engaging said
seats, and strips above said side walls con-
fining the ends of the bars in the seats, sub-
stantially as described.

3. A tram-rail having a grooved guide-
way formed with seats in its side walls, sta-
tionary transverse tread-bars disposed in
said guideway with their ends engaging said
seats, and spaced longitudinal strips above the
side walls confining the ends of the tread-
bars in the seats and having converging op-
posing faces.

4. A tram-rail comprising a base, parallel
longitudinal supporting-strips mounted upon
said base and provided with recesses in their
opposing edges, spaced transverse tread-
blocks seated in said recesses, upper parallel
longitudinal strips confining the tread-blocks
in place, and means for detachably connect-
ing the parts, substantially as described.

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

ALBERT H. WATERS.

Witnesses:

M. G. PAUL,
J. E. PAUL.