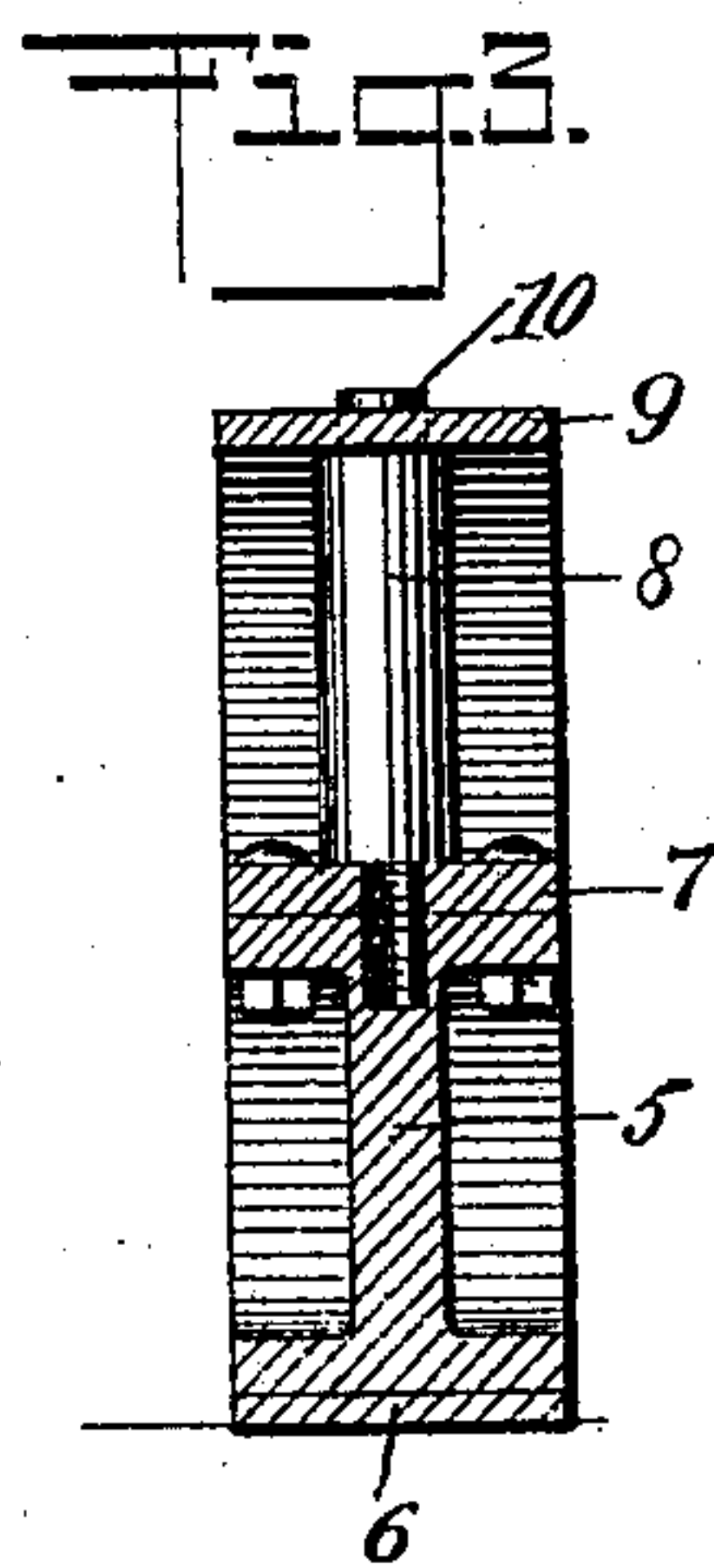
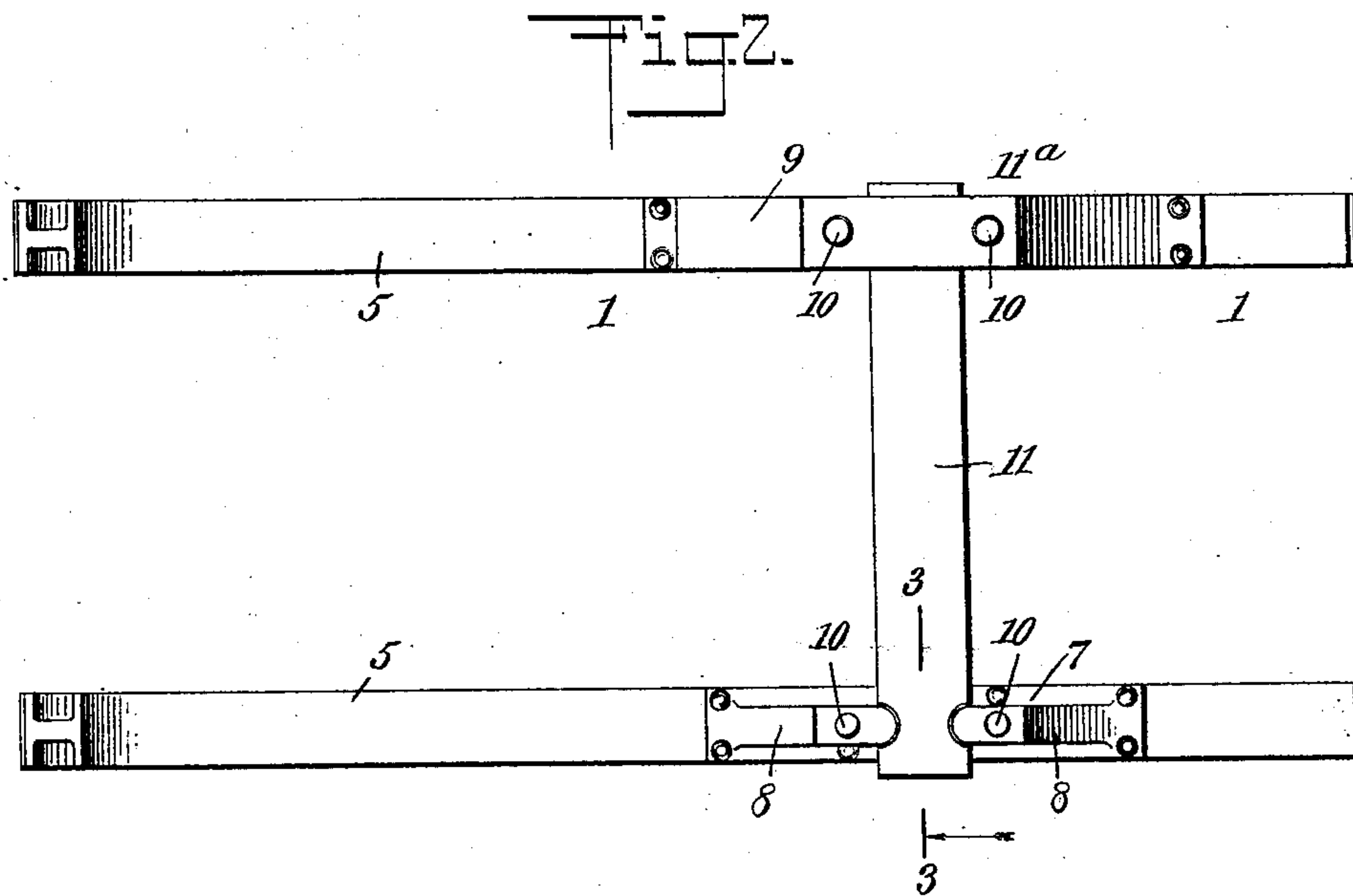
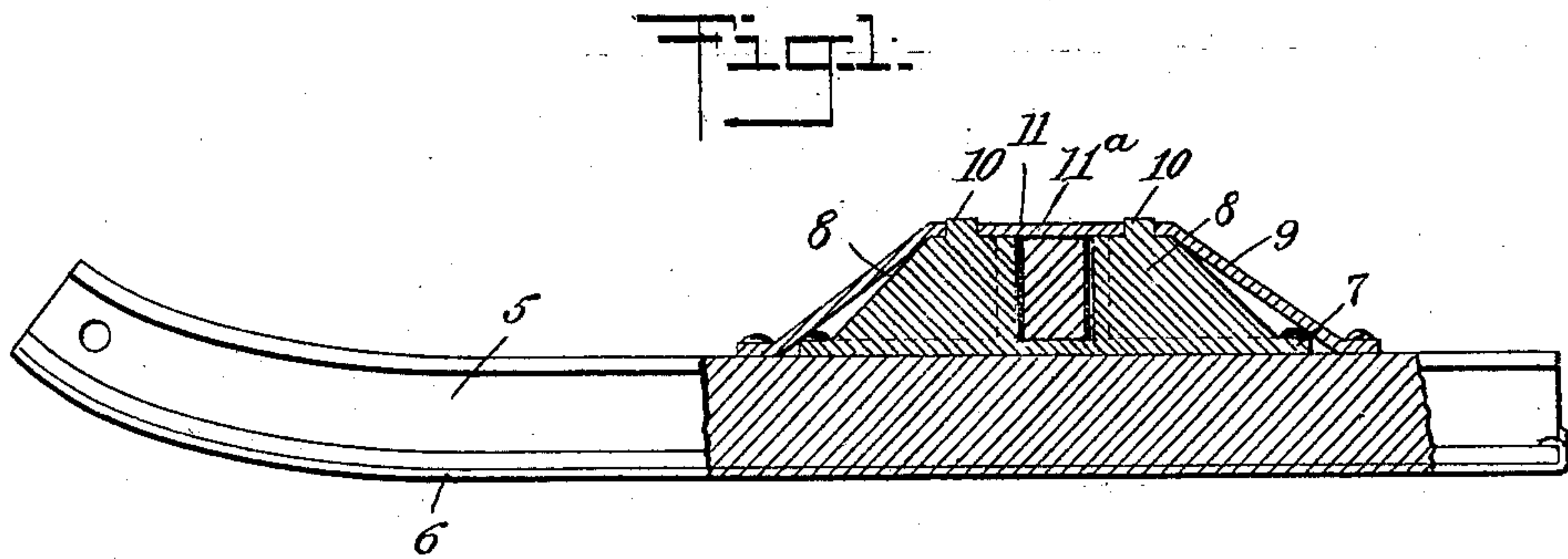


W. E. TURNER.
SLEIGH RUNNER.
APPLICATION FILED AUG. 22, 1908.

914,901.

Patented Mar. 9, 1909.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM EDWARD TURNER, OF ESCANABA, MICHIGAN.

SLEIGH-RUNNER.

No. 914,901.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed August 22, 1908. Serial No. 449,855.

To all whom it may concern:

Be it known that I, WILLIAM E. TURNER, a citizen of the United States, and a resident of Escanaba, in the county of Delta and State of Michigan, have invented a new and Improved Sleigh-Runner, of which the following is a full, clear, and exact description.

This invention is an improvement in sleigh runners, having in view a construction in which the runners are in the nature of I-beams, each having a knee applied thereto provided with opposed jaws, with the bench or beam of the sleigh provided with approximately semi-circular grooves near each end and at both sides, receiving the jaws of the respective knees, which admit of a slight relative endwise movement of the runners and thus relieve the connections of the bench of undue shock.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side view of a runner embodying my invention, partly in central vertical section; Fig. 2 is a plan of the runners and the connecting bench or cross-beam; and Fig. 3 is a cross-section through one of the runners substantially on the line 3—3 of Fig. 2.

The runners proper as preferably constructed are in the form of I-beams 5, each comprising a bottom flange, a top flange, and an intermediate web connecting the flanges together, this form of runner enabling their construction of standard rolled metal without additional shaping other than curving the forward ends. Intermediate the length of each runner is secured by rivets, bolts or such other devices, a knee 7 which is provided with jaws 8 having opposed curved edges, as clearly illustrated in Fig. 2. Over the knee of each runner is placed a strap 9 which is riveted or otherwise attached at its opposite ends to the runner, and is further secured directly to the jaws 8, for which pur-

pose the latter are provided with studs or projections 10 on their top faces entering and snugly fitting corresponding openings in the strap.

The runners are connected together by the conventional cross-beam or bench 11, which, in the present instance is provided with metal-lined grooves near each end and at opposite sides, which receive the rounded ends of the jaws and conform thereto. This particular construction admits of relative endwise movement between the runners and relieves the connecting ends of the cross-beam 11 of undue strain or shock when the runners strike an obstruction.

The making of the runners of standard rolled metal permits of their manufacture at a relatively low cost, and of light and strong construction, and the particular cross-sectional form of metal adopted is especially applicable to the attachment of the knees 7 not only from the fact that the top flange of each runner affords a substantial seating surface for the knee but also for the reason that the bolts or rivets may be passed through this flange, as shown, in securing the knee in place.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

The combination of sleigh runners, a knee carried by each runner having a pair of opposed jaws, each jaw having a lug on its upper face, a bench having its opposite end portions engaged between the pairs of jaws, and a strap having openings snugly fitting the lugs of the jaws and having its ends attached to the runner.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM EDWARD TURNER.

Witnesses:

EARL A. HUBBARD,
F. B. BEMENT.