(No Model.)

J. YENNE.

BOB SLED.

No. 435,341. Patented Aug. 26, 1890.

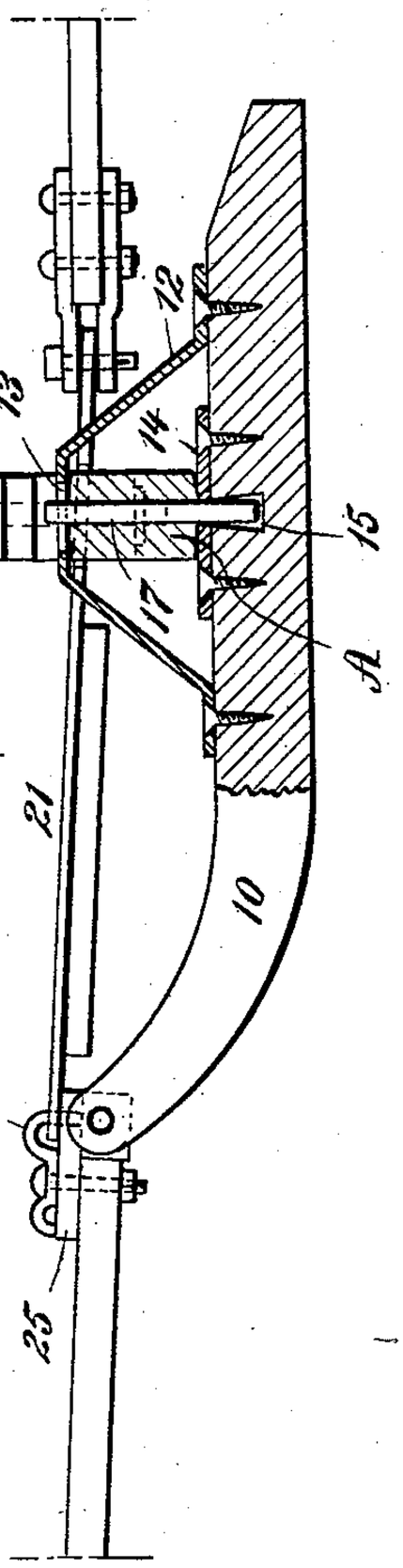

Fig. 2.

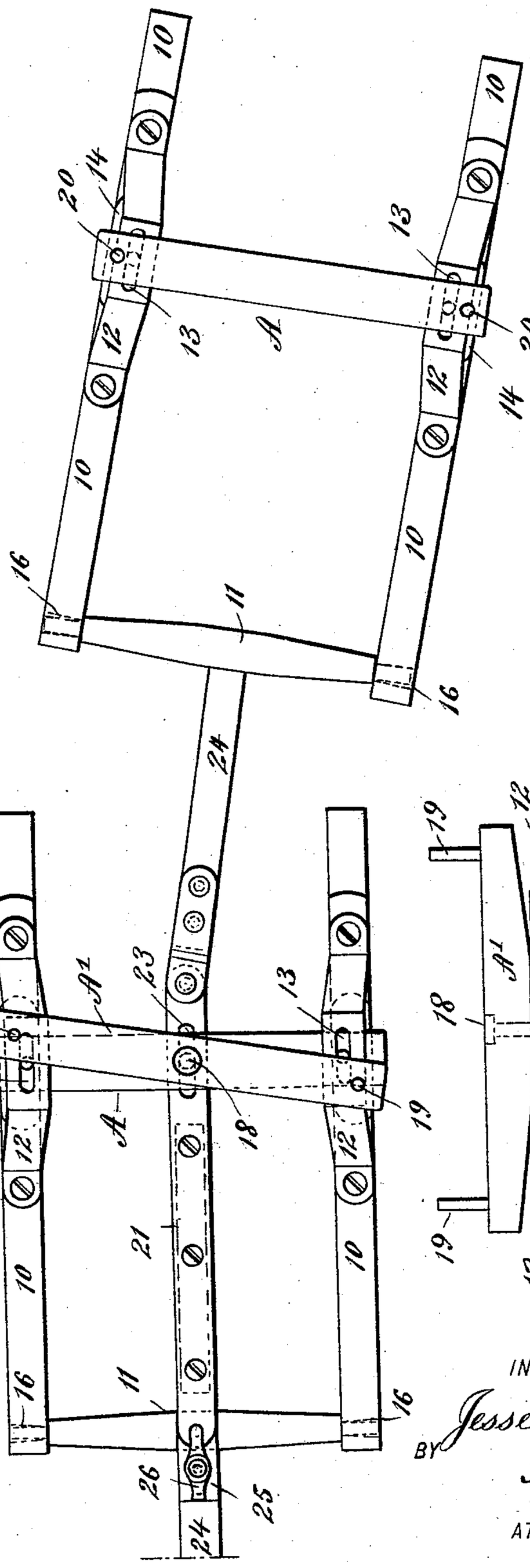

Fig. 1.

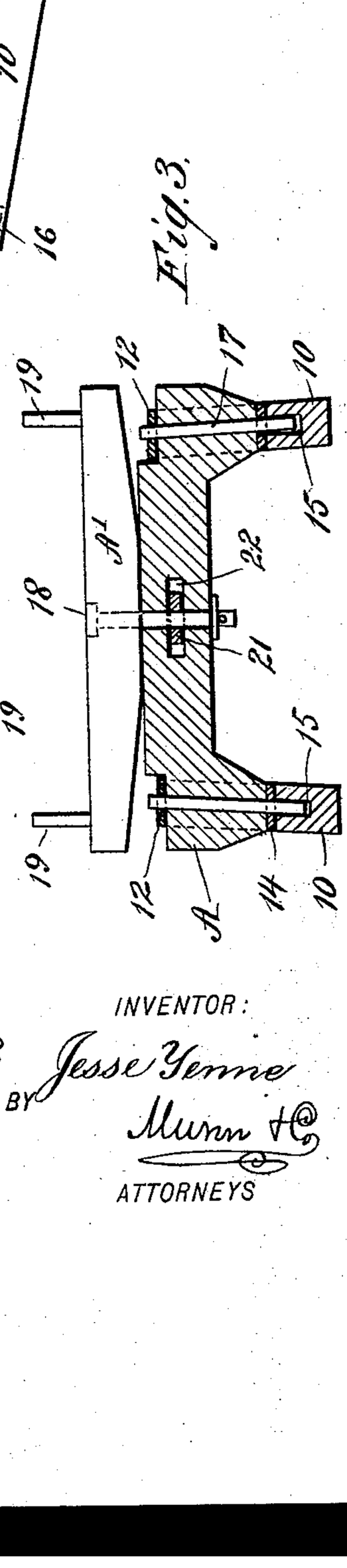

Fig. 3.

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JESSE YENNE, OF EGAN, ASSIGNOR OF ONE-HALF TO JOHN E. CLIFFORD AND GEORGE F. STANNARD, BOTH OF DEMERSVILLE, MONTANA.

BOB-SLED.

SPECIFICATION forming part of Letters Patent No. 435,341, dated August 26, 1890.

Application filed January 9, 1890. Serial No. 336,461. (No model.)

To all whom it may concern:

Be it known that I, JESSE YENNE, of Egan, in the county of Missoula and State of Montana, have invented a new and useful Improvement in Bob-Sleds, of which the following is a full, clear, and exact description.

My invention relates to an improvement in bob-sleds, and has for its object to so construct the same that the runners and several parts will be essentially connected, thus providing for a uniform movement of both the forward and rear sleds in turning corners, and also wherein a minimum of strain will be exerted upon the several parts of the sleds.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a plan view of the improved bob-sled. Fig. 2 is a side elevation of the forward sled of a pair, one runner being partially in section; and Fig. 3 is a transverse section through the bolster and runners of the forward sled.

In carrying out the invention each sled is constructed with two runners 10, having forward upturned ends, the forward ends of the runners of each sled being pivotally connected by a cross-bar 11. Upon the upper face of each runner, at a convenient point in the length of the same, a rave 12 is rigidly secured, each rave being somewhat triangular in shape, the upper end or apex being flattened, as best shown in Fig. 2, and provided with an elongated slot or opening 13. Between the members of each rave a plate 14 is securely bolted to the upper surface of each runner, and each plate 14 is provided with a hole at or near its center and in central alignment with the center of the rave-opening 13, and in each runner immediately beneath the opening or aperture in the plate 14 an essentially dovetail recess 15 is produced, the wider portion of the recess being at the bottom, as best shown in Fig. 2. Each of the cross-bars 11 is connected at its extremities with the runners 10 by reducing the ends of the cross-bars and introducing the said reduced ends into essentially dovetail recesses 16, produced in the forward ends of the runners, as illustrated in dotted lines in Fig. 1, whereby the runners are capable of a limited independent longitudinal movement.

A bolster A, of a simple and ordinary construction, is illustrated in connection with the rear sled in Fig. 1, or the bolster may be provided with an auxiliary pivoted sand-bolster A′, as illustrated in connection with the forward sled in Fig. 2. In the ordinary construction of a bob-sled the forward sled is provided with the main and sand bolsters, and the rear sled with the main bolster only. The main bolsters A are provided at each end with a pin 17, which pin is securely fixed in the bolster and extends above the upper and below the lower surfaces of the same. The upper extremities of the pins 17 are adapted to pass through the slots 13 of the raves, and the said pins are of a sufficient diameter to readily slide in said slots. The lower extremities of the pins 17 are made to enter the dovetail recesses 15 in the runners, as is best illustrated in Figs. 2 and 3. The sand-bolster A′ is pivoted upon the main bolster in any suitable or approved manner, usually and preferably through the medium of a central bolt 18. When the main bolster A only is employed, the said bolster is constructed in two sections, and the upper surfaces of the raves are made to pass through recesses formed in the opposed faces of the bolster-sections. The sand-bolsters are provided at their extremities with the usual pins 19, and similar pins 20 are inserted in the upper section of the main bolster when it alone is used.

A reach-bar 21 is employed to connect the front and rear sleds, the forward end of which reach-bar is connected to the front cross-bar of the forward sled, and the rear end of said reach is made to pass through an opening produced horizontally in the main bolster A of the forward sled. At the point where the reach passes through the main bolster A it is provided with an elongated slot 23, through which slot the pivotal pin 18 of the sand-bolster passes.

Each cross-bar of each sled is provided with

a rigidly-attached tongue 24, and the tongue of the rear sled is rigidly attached to the rear end of the reach-bar 21. The forward end of the reach-bar is connected to the cross-bar of the forward sled in a very peculiar manner. Upon the said cross-bar, and also upon the tongue 24 of the same, a block 25 is rigidly fastened, upon which a staple or staples 26 is or are placed, one of the staples 26 being made to pass through the reach, as best illustrated in Fig. 2. The object of this attachment of the reach is to loosen the rear sled should its runners become frozen to the ground. This is readily effected by throwing upward the forward tongue 24, which turns the forward cross-bar 11, and the said cross-bar in its movement forces the reach rearward, and the said reach-bar acts as a lever upon the tongue 24 of the rear sled, effectually detaching its runners from the frozen ground.

It will be observed that the bolsters have movement upon the raves and in the runners, and that the reach is capable of lateral movement; also, that by reason of the peculiar connection heretofore described between the cross-bars and runners the runners of the sleds are permitted to run in parallel lines, one in advance of the other. This movement of the runners is particularly desirable in rounding corners or in turning the sled, as the runners, though straight, may to some degree adapt themselves to the curve, and thereby cause a minimum amount of strain to be exerted upon the several parts of the sled, as the bolsters accommodate themselves automatically to the movement of the runners by reason of their pin-connection 17 with said runners and raves. It is also evident that by constructing the sled in the manner above described the draft is materially lightened.

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

1. The combination, with a bob-sled having a rocking cross-bar at the forward ends of its runners, provided with a tongue, of a reach pivotally connected at its front end to said rocking bar and adapted at its inner end for connection with a rear sled, whereby by rocking the said bar longitudinal movement will be given the reach, for the purpose described.

2. The combination, with a bob-sled having a slotted bolster and a rocking bar at the forward ends of its runners, provided with a tongue, of a reach pivotally connected at its front end to said bar, extending rearwardly therefrom through the slot in the bolster, and having a slot and a pin extending through said slot in the bolster, substantially as set forth.

3. The combination, of the runner having a recess 15 in its upper face, an apertured flat plate 14 on the said upper face over said recess, and the rave 12, having a slot 13, and the bolster-pin extending into said slot and into the runner-recess 15 to rock therein, the lower flat face of the bolster having a bearing on the flat plate 14, substantially as set forth.

4. In a bob-sleigh, the combination, with the runners provided with downwardly-widening recesses 15 in their upper faces and outwardly widening or flaring apertures 16 in their front ends, a rocking cross-bar, the ends of which rock vertically and laterally in said apertures 16, a tongue attached to said cross-bar, and a rave secured to the upper face of each runner over the recess therein, each rave being provided with an elongated slot in its upper portion, of a bolster spanning the runners beneath the raves, a pin secured to each end of said bolster, the upper end of which pins extends through the slots in the raves and the other end into the recesses 15 of the runners, and a reach-bar attached to the runner cross-bar at its forward end, the rear end of which reach passes through the bolster and is capable of longitudinal movement therein, substantially as and for the purpose set forth.

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