(No Model.) 2 Sheets—Sheet 1.

S. L. ALLEN.

SLED.

No. 368,802. Patented Aug. 23, 1887.

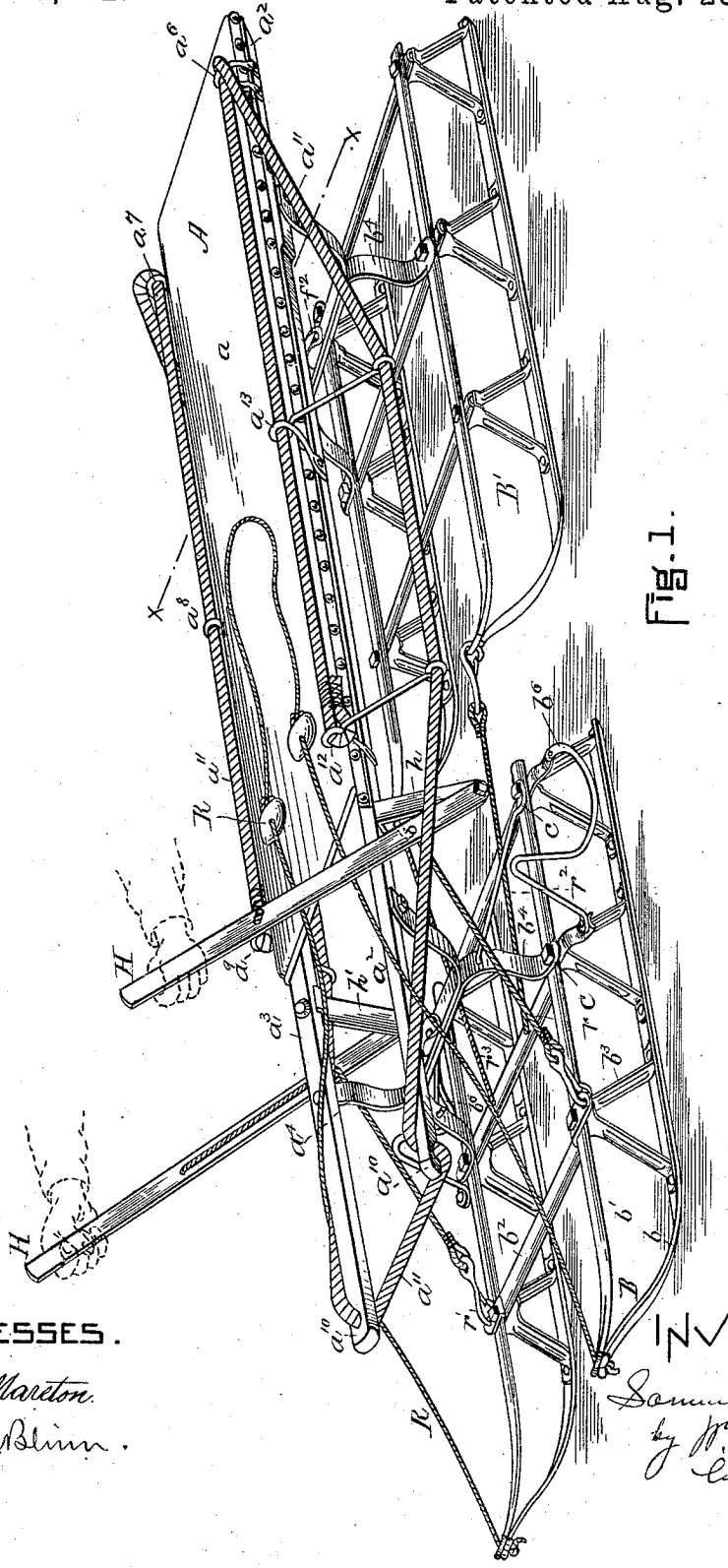

Fig. 1.

WITNESSES.

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Geo. R. Blinn.

INVENTOR.

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by Jno. P. B. Dowell

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(No Model.)

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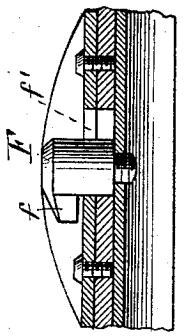

Fig. 4.

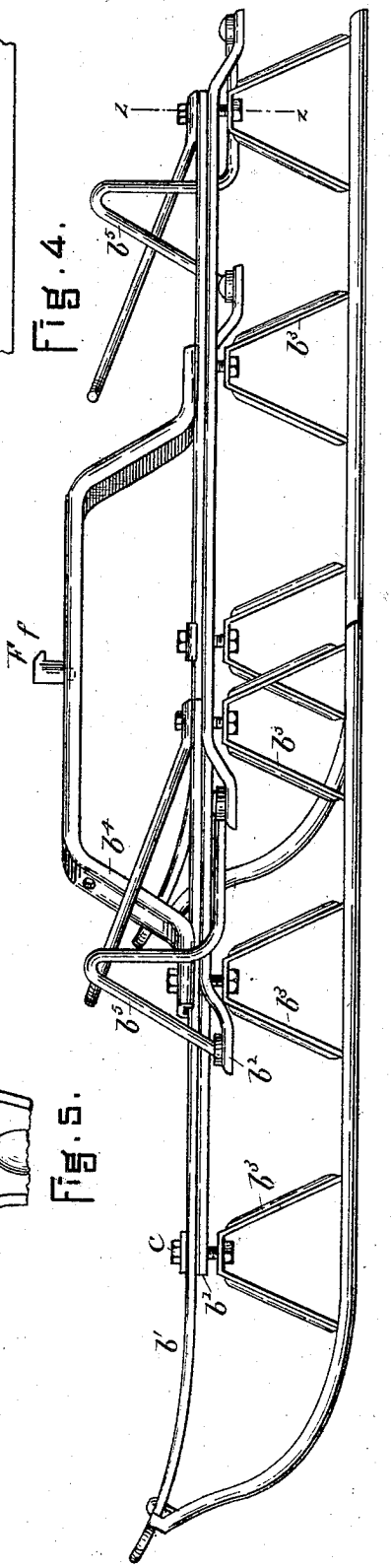

Fig. 2.

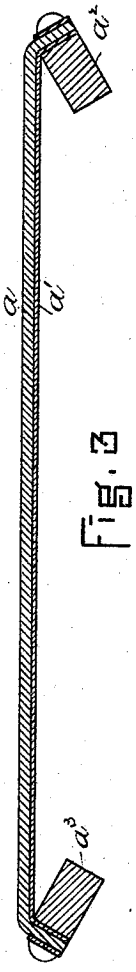

Fig. 3.

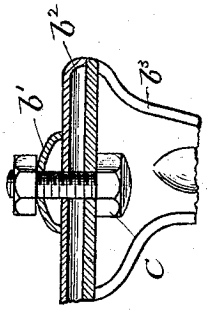

Fig. 5.

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UNITED STATES PATENT OFFICE.

SAMUEL L. ALLEN, OF CINNAMINSON, NEW JERSEY.

SLED.

SPECIFICATION forming part of Letters Patent No. 368,802, dated August 23, 1887.

Application filed February 9, 1887. Serial No. 227,010. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL L. ALLEN, a citizen of the United States, residing at Cinnaminson, in the county of Burlington and State of New Jersey, have invented a certain new and useful Sled, of which the following is a true and complete specification.

My invention relates to all classes of coasting-sleds, but especially to those which consist of a platform of variable length supported at either end upon short sleds or bobs, either or both of which may be revolved, as desired, upon a vertical axis to steer the sled; and it consists of the devices and combinations hereinafter described and shown, reference being had to the annexed drawings, and to the figures and letters marked thereon, forming a part of this specification.

Referring to the drawings, Figure 1 is a perspective view of my improved sled. Fig. 2 is a side elevation of one of the portable short sleds or bobs as folded together for transportation. Fig. 3 is a sectional view of the folding seat and the inclined spring-bars supporting it on the line *x x*, Fig. 1. Fig. 4 is a section on the line *y y*, Fig. 2, showing the king-bolts and locking device, whereby the bobs are adjustably attached to the seat. Fig. 5 is a section on the line *z z*, Fig. 2, showing the method of securing frame of bobs, &c.

My improved sled consists of a folding seat, A, of any desired length, which is supported upon the adjustable folding bobs B and B′. The seat A is preferably composed of heavy cloth or plush backed by one or more thicknesses of canvas to give it strength.

In Fig. 3, which is a section of the seat A, *a* is the cloth or plush seat, and *a′* is the canvas backing. These are fastened at either side to the spring-bars a^2 and a^3, which are preferably placed in an inclined position, as shown in Fig. 3. To the spring-bars a^2 and a^3 are secured the cross-benches a^4 and a^5, each bench being secured to both spring-bars near their ends, thereby securely holding the spring-bars in proper position relative to each other and stretching the cloth seat *a* between them.

I preferably so attach the spring-bars to the cross-benches that they may be conveniently detached, and so allow the cloth seat and spring-bars to be folded together.

The spring-bars a^2 and a^3 are provided with stanchions a^6, a^7, a^8, a^9, a^{12}, and a^{13}, and with a hole, a^{10}, at their anterior ends, which serves to support a continuous piece of rope, a^{11}, which forms the side rails and foot-rests, as shown in Fig. 1.

The bobs B and B′ are preferably of steel; but any suitable material may be used. The strips forming the runners *b*, top pieces, *b′*, cross-bars b^2, and the legs or braces b^3 are preferably hollowed and struck up to give them strength with lightness. The cross-benches b^4 are secured to the bobs with bolts, as shown in Fig. 1, and have a raking position inclined to the rear. As the sled when in use is moving downward on an inclined plane, this raking position rearward gives a firm brace to the seat, and at the same time a very elastic one, as the braces are in the proper position to exert their full elasticity, the weight acting vertically on top of the brace.

To the ends of the two rear cross-bars of the forward bob are secured the foot-rests b^5, which can be used for steering, and, being sunk, as shown, do not interfere with folding. The swinging braces b^6 b^6 are attached to a bolt, *c*, at the rear of the forward bob and hook into holes provided for them in the cross-bench b^4; or these braces may be attached to the cross-bench b^4 and hook into the bob; or both ends of the braces may be securely attached. The legs or braces b^5 are preferably riveted to the runners *b*, and preferably bolted to the top pieces and cross-bars. The mode of attachment is shown in Fig. 5, in which *c* is the bolt, *b′* the top piece, and b^2 the cross-bar. The bolts *c c c* being slightly loosened and the swinging braces b^6 detached, the bob may be folded together, as shown in Fig. 2.

The cross-benches b^4 are each provided with a king-bolt, F, which fits into a corresponding hole in the cross-bench, a^4 or a^5, opposing it.

The king-bolt F has preferably a lug, *f*, on one side of it, which will just pass through a slot, *f′*, in the bench a^4 or a^5. The slot *f′* and the lug *f* are so placed that in order to make them correspond, and so remove the king-bolt F from its hole, it is necessary to turn the bob half-way round, or so that it shall point exactly to the rear; or the attachment can be as well and quickly made by posts with a tongue

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and other means, the object being a quick and positive adjustment. The caps f^2 are screwed to the cross-bench, as shown in Fig. 4.

The extension-arms h h' are bolted to the spring-bars a^2 and a^3, and to their ends are pivoted the steering handles or levers H and H′, which are connected to the forward cross-bar, b, by the ropes r and r'.

To the front bob are attached the guide-ropes r^2 and r^3, connecting with the rear bob, substantially as shown in Fig. 1.

I preferably arrange the bobs as shown, that both sleds may steer the same way at the same time, both to the right or both to the left, and be controlled by one steersman.

To the front ends of the runners of the forward bob are attached the ends of the steering or drawing rope R. The sled may be steered by the steering-rope R, or by the handles H and H′, or by the foot-rests b^5 b^5, as desired.

As one object of my invention is to produce a light portable sled, I have so constructed it that it can be easily folded into a compact form. To do this, first unhook the wire steering-ropes attached to the levers H H′ and the guide-ropes of the rear bob; then turn both bobs round with their front ends pointing backward, so as to allow the head of the king-bolt of each bob to leave its appropriate opening in the bench of the seat, which, with the benches attached, can then be removed from the bobs. One end of each bench being loosened from the spring-bars, the seat is in readiness to be folded. The braces being unhooked, the bobs are folded together, as shown in Fig. 2, the whole being inclosed within the folding seat.

What I claim is—

1. A seat consisting of bars and any flexible material, said bars having their tops beveled or being at an inclined position to the flexible material when stretched, whereby the flexible material, when in use, does not come in contact with the said bars except at its extreme outer edge, substantially as described.

2. The seat of a sled provided with single-loop stanchions a^6 a^7, double-loop stanchions a^8 a^9 a^{12} a^{13}, and holes a^{10}, which are connected with suitable material, whereby there is formed a set of double side rails, substantially as described.

3. In a sled, a seat and a bob provided with a king-bolt, F, having a lug, f, and a slot, f', whereby the bob is firmly held to the seat and quickly detached therefrom, substantially as described.

4. In a sled, the combination, with the sled and seat, of backward-raking benches, substantially as described.

5. In a sled, a seat provided with extension-arms h h', having pivoted thereto steering-handles H H′, the ropes r r', and a bob, substantially as described.

6. A sled consisting of a folding flexible seat connected to spring-bars which are provided with pivoted cross-benches, in combination with folding bobs, substantially as described.

In witness whereof I have hereunto set my hand.

SAMUEL L. ALLEN.

Witnesses:
WM. B. H. DOWSE,
M. W. MARSTON.

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