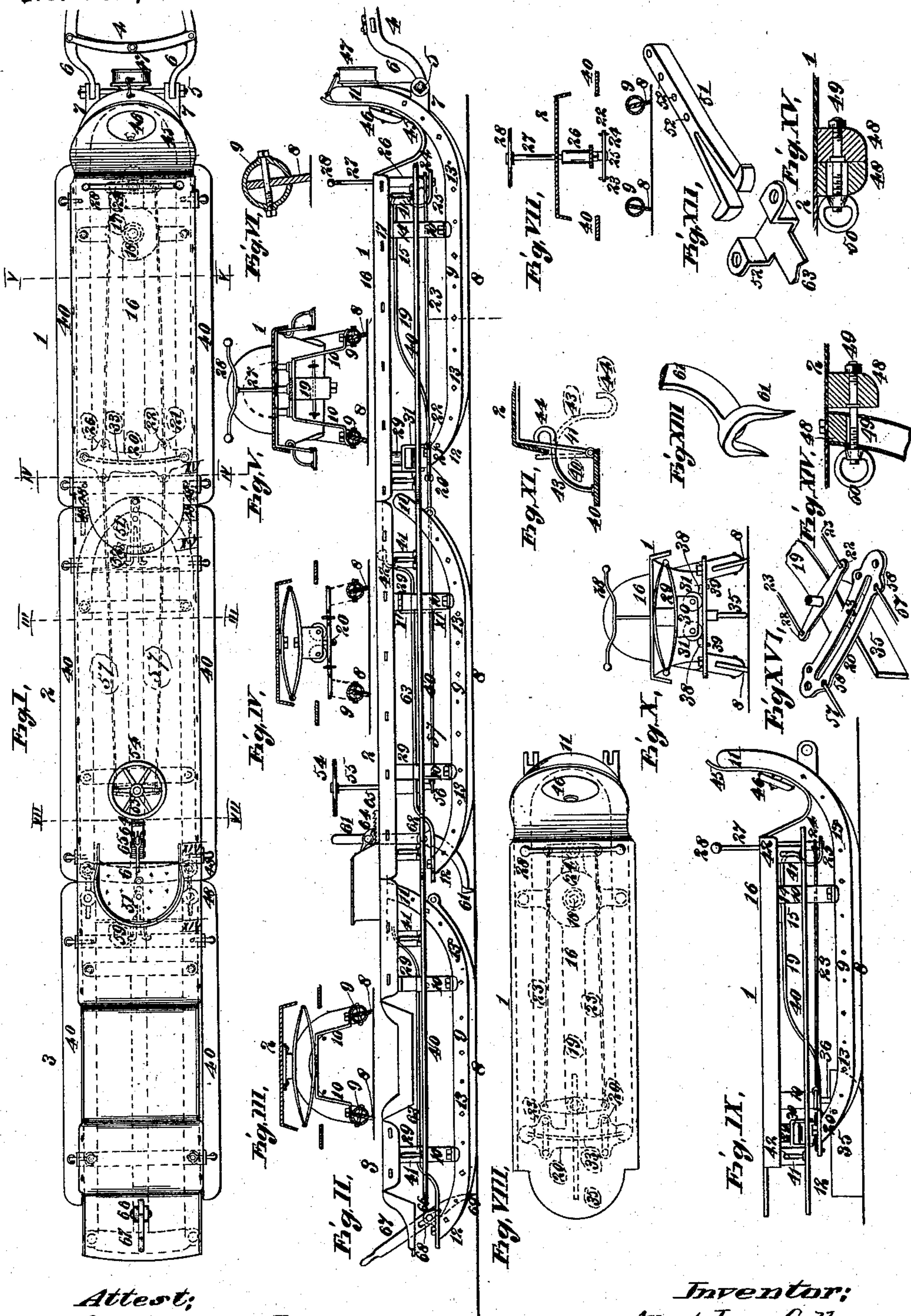


(No Model.)

A. I. GALLAWAY.
COASTING SLED.

No. 406,723.

Patented July 9, 1889.



Attest;
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Atty's

UNITED STATES PATENT OFFICE.

ALBERT I. GALLAWAY, OF ST. LOUIS, MISSOURI.

COASTING-SLED.

SPECIFICATION forming part of Letters Patent No. 406,723, dated July 9, 1889.

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To all whom it may concern:

Be it known that I, ALBERT I. GALLAWAY, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Coasting-Sleds, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

10 This is a sled made in a number of sections, which are adapted to be coupled together, as will be hereinafter described, the leading sled being adapted for use by itself or in connection with one or more of the others.

15 Figure I is a plan showing three of the sleds coupled together. Fig. II is an elevation of the same. Fig. III is a transverse section at III III, Fig. I. Fig. IV is a transverse section at IV IV, Fig. I. Fig. V is a sectional view at V V, Fig. I. Fig. VI is an enlarged detail transverse section at VI VI, Fig. II. Fig. VII is a transverse section at VII VII, Fig. I. Fig. VIII is a plan of one sled. Fig. IX is a side elevation of one sled. Fig. X is a rear elevation of the leading sled disconnected from the other sled. Fig. XI is an enlarged detail transverse section at XI XI, Fig. II. Fig. XII is a perspective view of a coupling. Fig. XIII is a perspective view of the lower part brake-dog. Fig. XIV is an enlarged detail longitudinal section at XIV XIV, Fig. I. Fig. XV is an enlarged detail longitudinal section at XV XV, Fig. I. Fig. XVI is a detail perspective view.

35 1, 2, and 3 are sleds, of which the sled 1 is always in the lead when coupled with one or more of the others. This sled 1 may be used singly, if desired. The three sleds have many details in common, and for these the same reference-numbers will be used.

40 At 4 are shown shafts or thills, which may be used for a horse to draw the sleds from place to place; but in the proper use of the sleds for coasting the thills 4 would be removed. The thills are shown to be coupled to the runners 5 by means of a rod 6, passing through attachments 6 and 7 of the thills and runners, respectively; but any suitable coupling may be used. (See Figs. I, II, VIII, and IX.)

The runners are represented as formed of flat bars 8, set in a slot made longitudinally in the bottom of the tube 9, which is bolted to the bench or bracket arms 10. The runners (composed of the bars 8 and tubes 9) are curved upward at the ends 11 12. (See Figs. II, III, IV, V, VI, and IX.) The members 8 9 of the runners are secured together by bolts 13. To the front bench 14 of the sled 1 is attached the lower member or disk 15 of the fifth-wheel, by which the runners are connected to the floor 16 of the sled, the upper member 17 of the fifth-wheel being firmly attached to the floor and connected to the lower member by a king-bolt 18, as usual in fifth-wheels.

19 is an arm extending rearwardly from the lower member 15 of the fifth-wheel and carrying at its rear end a cross bar or plate 20, to whose ends the rear ends 12 of the runners are secured. 21 are lugs near the ends of the bar or plate 20, in which engage the hooks 22 at the rear ends of the longitudinal rods 23. The fore ends of the rods 23 engage in the ends of a cross-bar 24, which is pivoted centrally on a bracket 25, extending forwardly and downwardly from the upper member 17 of the fifth-wheel.

26 is the upwardly-extending stem of the cross-bar, which has a square or other non-circular socket, receiving the lower end of the tiller-shaft 27, which is shaped to fit the socket, so that they turn together. The tiller-shaft is turned by a hand-bar 28 at top, to turn the runners to the right or left in order to guide the sled. (See Figs. I, II, and VII.)

29 is a spring, which is attached to the floor of the sled near its rear end. To the lower member of the spring is attached a block 30, which carries wheels 31, that run upon the plate 20, so as to sustain the rear end of the floor and allow the runners to be turned on the fifth-wheel without the use of much power. (See Figs. II, IX, and X.) The block has a depending lug 32, which works in a slot 33 in the plate 20. The slot is in an arc of a circle of which the king-bolt 18 is the center, so that the lug will not bind in the slot as the runners are turned upon the king-bolt.

34 is a pin passing through the lug 32 be-

neath the plate 20, and serving to hold the block 30 to the plate. (See Fig. IV.)

It is obvious that when the sled 1 is run by itself other means must be provided for guiding it than the turning of the runners on the fifth-wheel, (or rather that the attempt to turn the runners would only result in turning the upper part of the sled.) For the purpose of turning the sled 1 when used singly, a steering-runner 35 is provided, such runner having a spindle 36, turning in bearings in the bar 19. In this case the rods 23 are disconnected from the plate 20 and their hooks 22 engaged in holes in the ends of a cross-bar 37 upon the spindle 36, so that the cross-bar 28 may be used to turn the guide-runner. (See Figs. IX, X, and XVI.) To prevent the independent movement of the top of the sled upon the runners, cleats 38 are secured upon the top of the plate 20 outside the rollers. These clamps have shanks which pass through the slot 33, and are screw-threaded to take nuts 39, by which they are held in place.

40 are the steps at each side of the sled. These steps are made to fold, hinged at the inner edge to brackets 41, depending from the top and having apertures 42, through which pass brace-rods 43, which are fixed to the step and have a curved part or head 44 bearing against the inner side of the bracket when the step is in its lower position. (See Figs. V and XI.)

In Fig. XI the step is shown in its folded position by broken lines. 45 is the dash-board, 46 a gong, and 47 a lantern.

There are two devices for coupling together the sleds, one when it is desired to make a stiff connection and the other where some side flexion is desired. In the rigid connection there are projections 48 at the corners of the sleds, through which pass coupling-bolts 49 with thumb-nuts 50. In the flexible connection there is a double spring-hook 51 attached to one sled by a bolt passing through one of a series of holes 52, giving means for coupling the sleds more or less closely together. The hooks engage in a bracket 53, which is attached to the other sled of the pair. (See Figs. I and XII.)

When the sleds are in a gang, as seen in Figs. I and II, the guiding is done by swinging the runners around on the fifth-wheel 17 18. This may be done by the cross-lever 28, as before described, or by means of a similar cross-lever or hand-wheel 54 upon sled 2. The lever 54 is upon a shaft 55, having at the lower end a cross-bar 56, whose ends are connected by rods 57 to lugs 58 upon the plate 20. Thus it will be seen that the runners of the sled 1 may be turned on the fifth-wheel by either of the cross-levers 28 or 54; or both may be used at once.

59 is a seat for a person operating the cross-lever or wheel 54.

60 is a brake-lever having at the lower end a claw 61, adapted to dig into the track and

arrest the forward movement of the sleds. This lever is fulcrumed at 62 to a bar 63, extending rearwardly from the bracket 52.

64 is a dog on the lever, which is adapted to engage a rack 65 to hold the claw 61 in contact with the track. (See Figs. I, II, and XIII.)

From the bracket 52 of the sled 2 extends a bar 63, in which is fulcrumed at 66 the starting-lever 67. The fulcrum-pin 66 passes through a slot 68 made lengthwise in the lever, so that the lever may be lifted from the track and the lower sharpened end 69 moved forward into the position shown in Figs. I and II, when it is in position to force the sleds forward by first forcing the point into the track and then pulling the upper end forward.

I claim as my invention—

1. The combination of two coasting-sleds adapted for connection together and one of them having the runners connected to its body by a fifth-wheel connection, substantially as and for the purpose set forth.

2. A sled-body connected to the runners by a pivot-connection, supporting-wheels tracking on the body, and a plate or bar on the runners, substantially as set forth.

3. A sled-body pivoted to the runners and having bearing thereupon by a block 30, connected to the body by a spring 29 and carrying wheels 31, tracking on a plate 20, secured to the runners, all substantially as set forth.

4. The combination, in a sled, of runners connected to the body by a pivot-joint, and a hand or tiller shaft 27, with hand-bar 28, connected to the runners, substantially as and for the purpose set forth.

5. The combination of a sled supported on runners fixed upon the body, a sled 1, connected to the sled 2 and in line therewith, and having its runners connected to the body by a pivot, rods 57, connected with the pivoted runners, and a hand wheel or bar 54, shaft 55, and cross-bar 56, to which the rods 57 are connected, substantially as and for the purpose set forth.

6. The sled-coupling composed of the bar 54, having a spring-hook 51 upon one sled and bracket 53 upon the other engaging together, substantially as set forth.

7. The combination of wheels 31 upon the sled-body, plate 20 upon the runners, pivotal connection between the body and the runners, a lug 32 upon the wheel-bearing 30, passing through a slot 33 in the plate, and pin 34, passing through the lug beneath the plate, substantially as set forth.

8. The combination, in a sled having the body and runners connected by a pivot, of wheels 31 upon the body, tracking on a plate 20 upon the runners, provided with a curved slot 33, a lug 32, working in the slot, with pin 34, and the cleats 38, substantially as and for the purpose set forth.

9. The starting-lever 67, connected to the sled by a fulcrum-pin 66, extending through a longitudinal slot 68 in the lever, allowing the vertical and oscillatory movements of the lever, for the purpose set forth.

5 10. The sled-runner formed of a longitudinally-slotted pipe, with a flat steel blade inserted in the slot, substantially as shown and described.

11. The steps 40, hinged to the sides of the sled with the brace-rods, constructed and operating substantially as set forth.

ALBERT I. GALLAWAY.

Witnesses:

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EDW. S. KNIGHT.