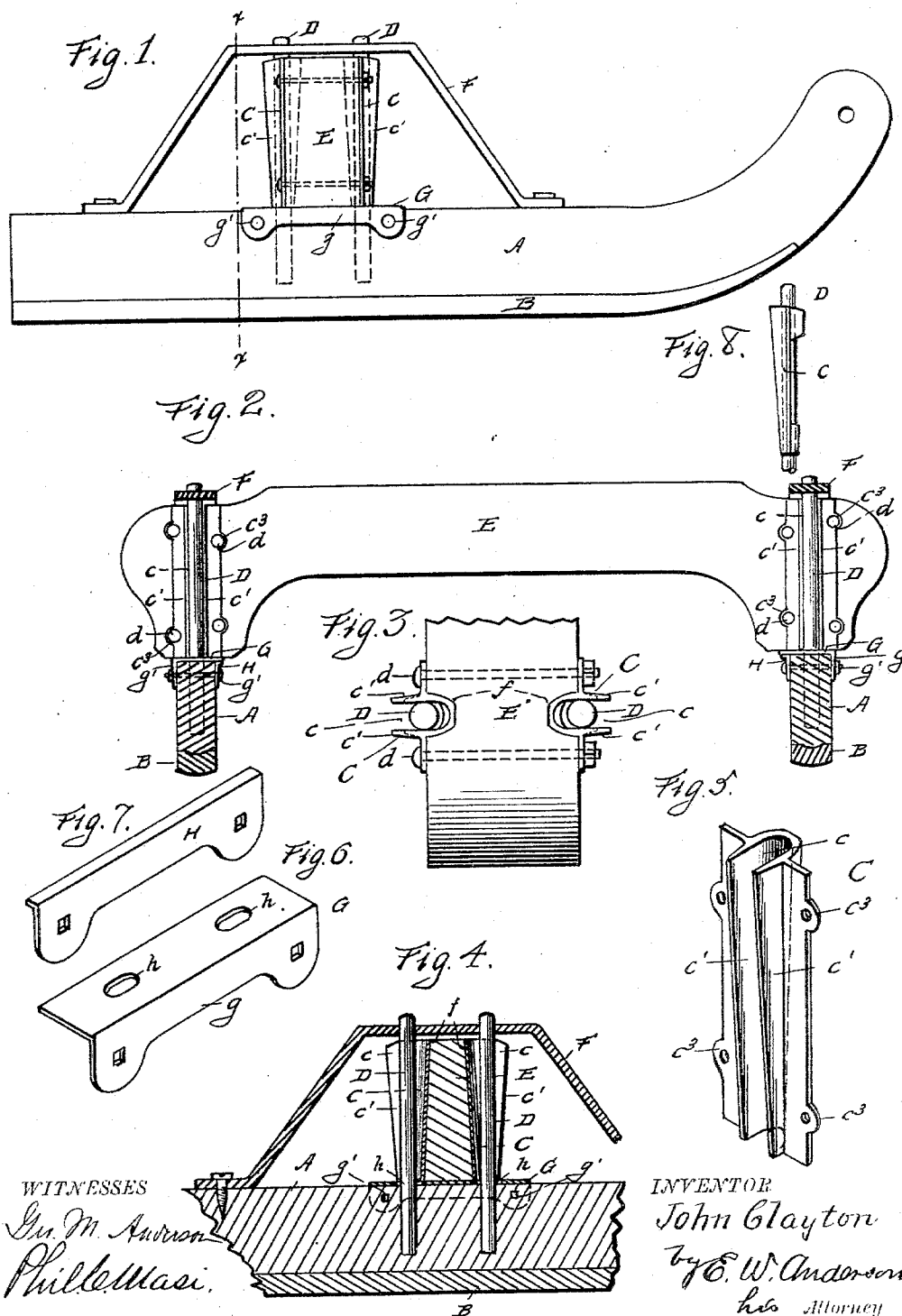


(No Model.)

J. CLAYTON.
BOB SLEIGH.

No. 571,647

Patented Nov. 17, 1896.



UNITED STATES PATENT OFFICE.

JOHN CLAYTON, OF MINNEAPOLIS, MINNESOTA.

BOB-SLEIGH.

SPECIFICATION forming part of Letters Patent No. 571,647, dated November 17, 1896.

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To all whom it may concern:

Be it known that I, JOHN CLAYTON, a citizen of the United States, and a resident of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Bob-Sleighs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a side view of bob-sleigh having the invention applied thereto. Fig. 2 is a section on line *x x*, Fig. 1. Fig. 3 is a partial plan view of bench with bar F removed. Fig. 4 is a vertical section through center of bar F, parts broken. Fig. 5 is a perspective view of one of start-plates. Figs. 6 and 7 are perspective views of plates G and H. Fig. 8 is a side view of modification of start-plate.

This invention has relation to certain new and useful improvements in bob-sleighs, the object being, mainly, to provide means whereby the sleigh-runner is permitted a free and independent movement longitudinally, at the same time retaining it firmly in its lateral position, so that the runner can oscillate, or either end can rise and fall in passing over irregularities or inequalities of the ground without causing any twist or strain on the runners, the bench, or the starts.

Other minor objects will hereinafter appear.

Referring to the accompanying drawings, the letter A designates the runners of a bob-sleigh; B, the shoes; C, the start or strut plates; D, the starts or struts, and E the bench. The start-plates C are bolted, one to the front and one to the rear face of the vertical or knee portions of the bench E, and each is provided with a deep vertical chamber or slot *c*, the walls of which are formed by two wings or flanges *c'*, which extend outward from the front face of the plate and inward from the rear face of the same, the inwardly-extending walls having a connecting back wall which forms the seat for the start when the oscillation of the runner carries said start against such wall. Said chambers

or slots are of tapering form, their depth at the lower ends being about equal to or a little greater than the diameter or thickness of the start, while their upper portions are of sufficient depth to admit of the starts moving inward and outward, when the runner oscillates, without their extending beyond the outer edges of the outward flanges or wings *c'*. The taper is gradual from the bottom to the top and corresponds approximately to the decrease in the extent of movement of the starts from the top to the bottom. Said start-plates are provided with perforated lugs *c''*, through which pass the through-bolts *d*. The perforations for these bolts are placed out of line in order to add to the strength of the bench by causing the bolts to cross the grain of the wood. The lateral width of the chambers or slots *c* is substantially equal to the diameter of the start if the latter is round, or its lateral thickness if square, thus preventing any lateral play of the runner and rendering it perfectly rigid in so far as movement in this direction is concerned. The bench is grooved, as indicated at *f*, to receive the inward wings or flanges of the start-plates. The starts D are secured in the runners at their lower end portions and extend up through the slots or chambers of the start-plates, one at each side of the bench upon each side of the sled. The upper ends of the starts are secured in flat iron bars or reefs F, one at each side of the sleigh, which are not secured to the bench, but whose end portions are bent obliquely downward and are secured to the runners upon each side of the bench in the usual manner, being free to move with the runners. These bars or reefs prevent the starts from spreading and also suspend and support the runners.

The upper edge of each runner is provided with a plate G, having a vertical flange *g*, which extends down upon the outside of the runner, and is provided with seats to receive the bolts *g'*, which secure the plate to the runner. This plate G forms a bed or seat for the bench to rest upon. The upper or horizontal portion of the plate is formed with two oblong slots *h*, through which the starts pass. Said slots are of about the same width as the diameter or thickness of the starts, and the object in making them oblong longitudinally

is to provide means whereby the starts may be placed nearer together or farther apart according to the thickness of the bench. The inner face of the runner is provided with a plate H opposite the flange *g* of the plate G to receive the bolts *g'*. The upper edge of this plate H lies underneath the inner edge portion of the plate G, as best seen in Fig. 2, in order that any variation in the thickness of the runner may be overcome by drawing the plate firmly against the inner face of the runner by means of the bolts *g'*.

The operation will be obvious from the foregoing and from the drawings without detailed description. Whenever either of the runners oscillates from any cause, one of its starts is carried inward and the other outward in the slots or chambers of the start-plates. If desired, the central portion of the wings or flanges of the said plates may be cut away, as shown in Fig. 8, in order to lighten the casting.

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

1. In a bob-sleigh, the combination with the runners, of plates G secured thereto, and having each a horizontal flange which seats on the upper edge of said runner and is formed with oblong slots *h*, a plate H secured to each runner opposite its plates G and having a horizontal flange upon which the horizontal flange of the plate G rests, and bolts connecting the two plates of each runner, together

with a bench whose knee portions rest upon the horizontal flanges of the plates G, the reef-plates, and the starts whose lower ends enter the runner through the said slots *h* and whose upper ends are secured in said reef-plates, said starts having a loose engagement with the bench, substantially as specified.

2. In a bob-sleigh, the combination with a runner, a bench whose knee portion is seated on said runner, and a reef-plate whose end portions are secured to the runner upon opposite sides of the bench and whose intermediate portion extends over the bench but is disconnected therefrom, of the start-plates C secured to opposite faces of the said knee portion, each of said plates having the outwardly-projecting tapered flanges *c'* and the corresponding opposite flanges *c* united at their inner edges by a connecting-wall, said flanges and wall forming in said plate a vertical chamber of gradually-decreasing depth from its upper to its lower end, and starts, one of which extends loosely up through each of said chambers, said starts having their lower ends secured in the runner and their upper ends in the reef-plates, substantially as specified.

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

JOHN CLAYTON.

Witnesses:

EDWARD SISKRON,
G. L. FORT.