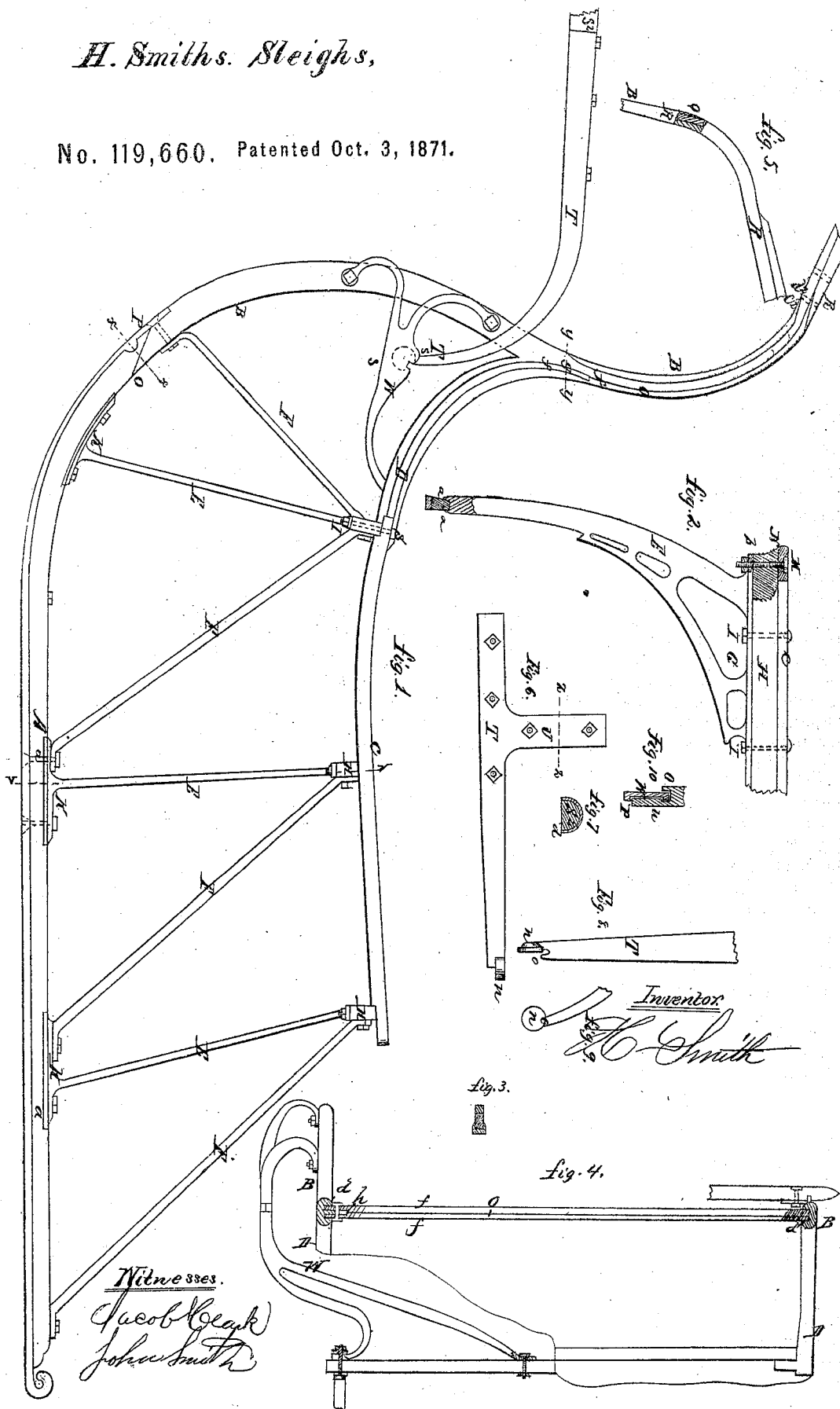


H. Smith's Sleighs,

No. 119,660. Patented Oct. 3, 1871.



UNITED STATES PATENT OFFICE.

HUGH SMITH, OF WEST GRAY, MAINE.

IMPROVEMENT IN SLEIGHS.

Specification forming part of Letters Patent No. 119,660, dated October 3, 1871.

To all whom it may concern:

Be it known that I, HUGH SMITH, of West Gray, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Sleighs; and that the following is a full and exact description of the same, reference being had to the accompanying drawing.

This present invention relates to constructing the runner fronts of sleighs of metal and in a peculiar manner, to receive and secure the dasher-board, and for the attachment to the runners proper and to the body of the sleigh; also the novel construction and method of attaching the shaft extensions to the runner fronts; and furthermore, in a certain arrangement of parts, all of which will hereinafter more fully be described.

My improvements in sleighs are illustrated in the accompanying drawing.

Figure 1 being a side elevation of a sleigh constructed according thereto; Fig. 2, a transverse vertical section in plane of line *v v*, Fig. 1; Fig. 3, a transverse section in plane of line *x x*, Fig. 1; Fig. 4, a transverse horizontal section in plane of line *y y*, Fig. 1; Fig. 5, a view of a portion of the dasher-board; Figs. 6, 7, 8, and 9, views in detail of the metallic extensions to thills. Fig. 10 is a cross-section in plane of line *s s*, Fig. 1.

A in the drawing represents a runner of a sleigh; B, the front to runner A; C, the body-bottom, connected to arm D of runner-front and to the runner proper by and through stanchions or posts E and brace-rods F. The stanchions or posts E are made of metal and of a skeleton bracket form, see Fig. 2, more particularly, making a long bearing, G, for being attached to the cross-bars H on the under side of body-bottom C by means of screw-bolts and nuts I. The posts, E, each have a foot piece, K, extending from each side. The foot pieces K to the posts are provided along their length and upon both edges with a flange, *a*, that, when the posts are secured to the runner by bolting them through the thickness of the runner, (see Fig. 1.) clasp the runner on its sides, (see Fig. 2 more particularly,) and thus secure the bolts from side strains or wrenchings. The posts E at their upper ends or bearings G are provided with an outer projecting ear-piece, *b*, see Fig. 2, to receive a screw-bolt, M, that is employed for securing the side-rail N of the body-bottom, and the boards constituting said bottom, firmly to and upon the cross-bars H,

to which the bracket-bearing G of the posts is bolted, as before described. By the ear-pieces *b* of the stanchions a firm fastening together of the parts stated is secured, and by the use of metallic stanchions of substantially the construction described great strength, firmness, and stiffness are imparted to the sleigh. The runner-front B is made of metal, and at its ends O is jointed or spliced to the runner, with the runner-shoe P passing beyond the line of joint, and the whole secured together by bolting. (See Fig. 1.) From the point O of the splice, between the runner and runner-front, the runner-front is extended upward, with a graceful curvature, a suitable distance to receive a dasher-board, Q, of the proper height, and is constructed with the arm D, heretofore referred to, by which it is joined to the front line of body C, forming, in fact, a continuation thereof. The upper portion of runner-front, and also its arm D, upon their inner faces are provided with a continuous groove, *d*, of a curved form for receiving the end of the dasher-board Q. The dasher-board Q, in the present instance, is in two parts or sections, *f*, overlapping, as shown at *g*, where, by means of a bolt, the board is fastened to a start, *h*, formed in the runner-front, (see Fig. 4, more particularly.) The runner-front B proper terminates a short distance below the extreme end of the dasher-board, which, at the termination of the runner-front, is widened to be flush with its outer face or side, and is fastened by a splice-joint to the said runner-front, together with an iron rail or bar, R, extending along the upper edge of dasher from one runner-front to the other by and through the means of bolts, screws, or other suitable devices, (bolts being preferred,) the said bar R between the runner-front being suitably secured to the dasher-board.

By a metallic and a groove-construction of the runner-fronts to sleighs, together with a tying of the same to the dasher-board, substantially as described, a neat, strong, and durable dasher-board and runner-front is obtained, and many advantages otherwise secured in the process of manufacturing sleighs, as is obvious.

By the arm D of runner-front the runner-front is secured to the front of body-bottom, and is thereto jointed and bolted, as shown at S, Fig. 1. S² represent the shafts or thills. These are each provided with a metallic extension, T, in and

along the concave m , of which the inner end of the shaft is placed and then fastened by bolting with the extension T , covering the upper side of shaft. These extensions are each constructed with a side concave arm, U , for receiving and securing by bolting the ends of the cross-bar to which the whiffletree is hung. By the metallic extensions of the thills the thills are hung to the brackets W of runner-front, and under the present invention they are hinged by a relative construction, as follows: The end of extensions T is formed with a circular disk, n , of a less thickness than the width of the extension proper, and with a projection or lug, o , (see Fig. 8, more particularly.) The brackets W on their inner face are each constructed with a circular-shaped recess or depression, p , to receive the disks n of shaft extensions T , and with a notch, r , at the upper edge of bracket W to allow the lug o of extension to pass and come to a position outside of the bracket with the disks inside and within the recesses described. With a hinging of the shafts described free movement and swing of the shaft are obtained, with perfect security against detachment, provided the brackets are located at such a distance apart that, for hanging the thill extensions T in the brackets of runner-front, it is necessary to slightly spring in their ends. a^2 is a rail fastened to start b^2 over lug c^2 , interlocking therewith by notch d^2 of the runner-front B , and from which it is to extend entirely across

the sleigh in front of the dasher-board, and to be similarly attached to the other runner-front, tying and securing the two together and thus fastening the dasher-board.

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

1. The runner-fronts B , made of metal, with arm D , both grooved to receive dasher-board, and constructed at O and S for attachment, respectively, to the runner and sleigh body, substantially as described.

2. The brackets W of the runner-fronts, each constructed with the recess p and notch r , in combination with the shaft extension T , formed with the disks n and lug o , the whole arranged to operate in the manner substantially as herein shown and described, for the purpose set forth.

3. The rail a^2 , start b^2 , and lug c^2 , substantially as and for the purpose specified.

4. The brace-rods $F F$, arranged between the body C and the runners A of the sleigh, in combination with the stanchions E , when the stanchions are formed substantially as described.

The above specification of my improvements in sleighs signed by me this 29th day of August, A. D. 1870.

HUGH SMITH.

Witnesses:

JOHN SMITH,
JACOB CLARK.

(22)