

(No Model.)

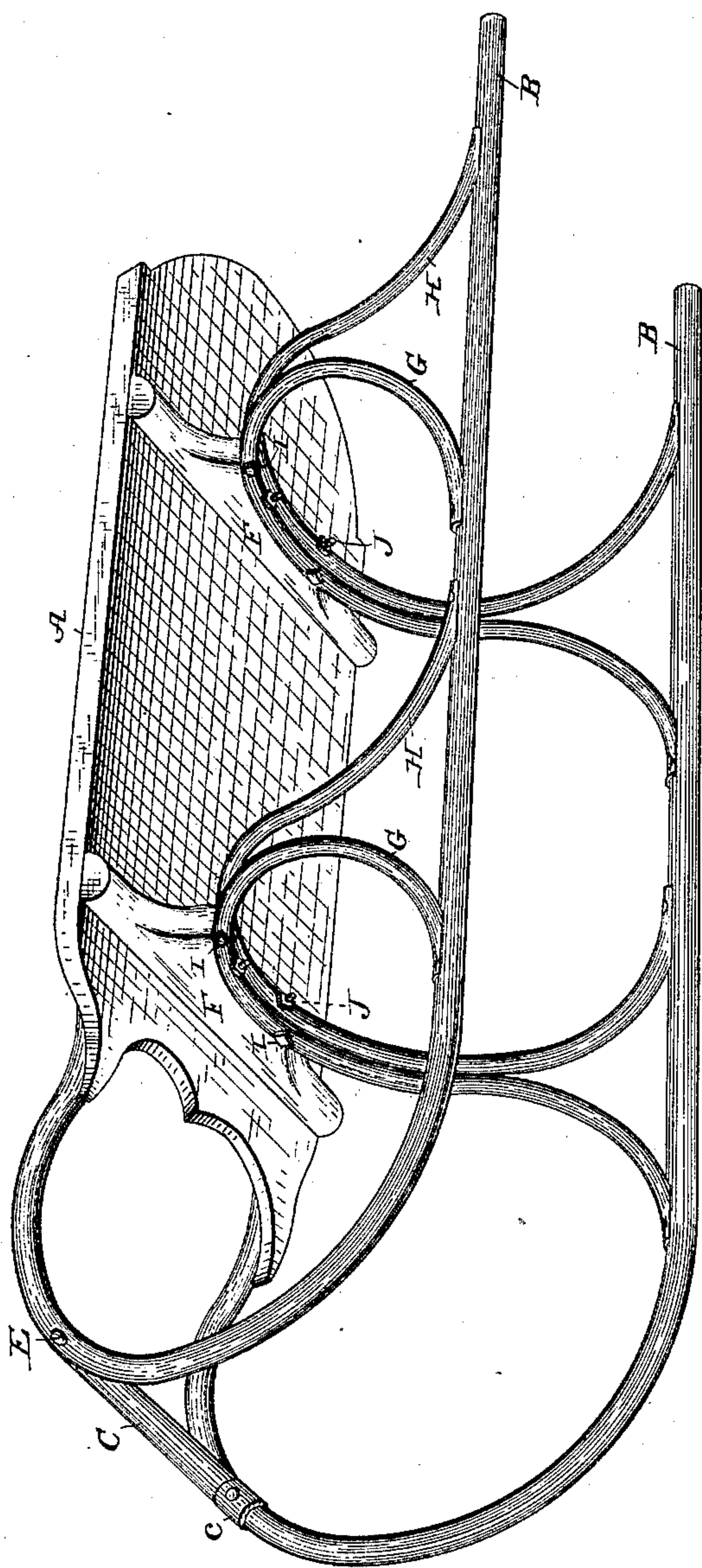
J. I. HANCOCK.

SLED.

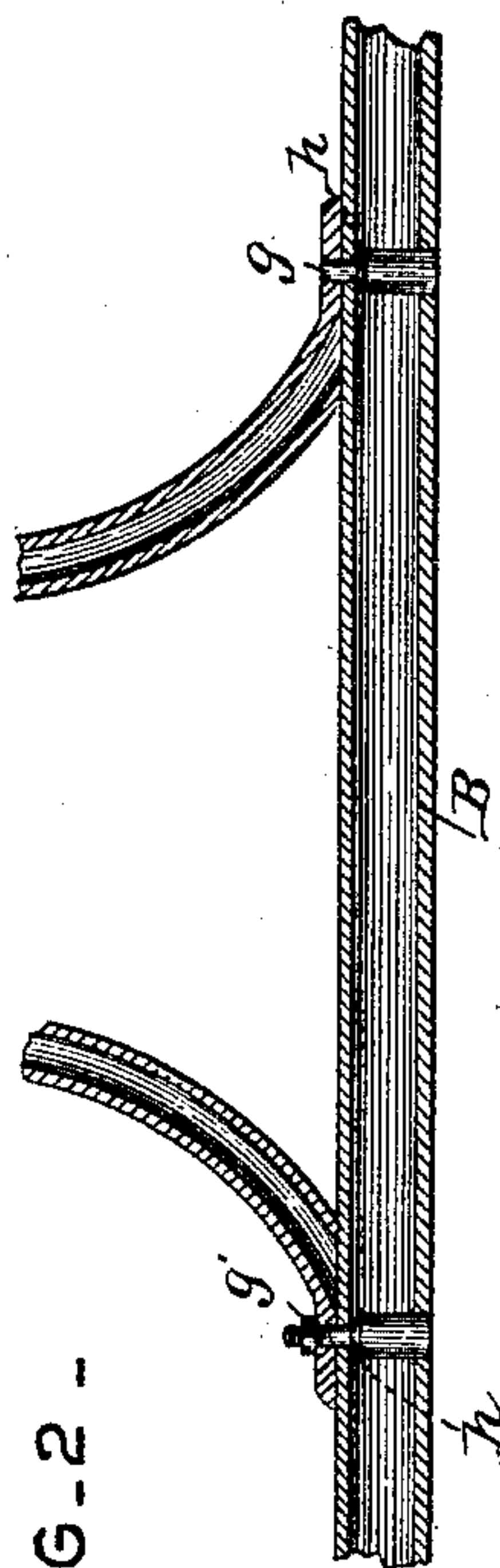
No. 413,054.

Patented Oct. 15, 1889.

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Attest:

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UNITED STATES PATENT OFFICE.

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SLED.

SPECIFICATION forming part of Letters Patent No. 413,054, dated October 15, 1889.

Application filed August 19, 1889. Serial No. 321,295. (No model.)

To all whom it may concern:

Be it known that I, JOHN I. HANCOCK, a citizen of the United States, residing at Montrose, in the county of Susquehanna and State of Pennsylvania, have invented certain new and useful Improvements in Sleds or Sleighs, of which the following is a specification.

My invention relates to a sled or sleigh in which the frame is constructed of gas-pipe; and it consists in features of novelty to be hereinafter fully described, and then particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view looking underneath the sled. Fig. 2 is a detail view.

A represents the top, and B B the pair of runners of gas-pipe, (one on each side,) which extend forwardly and are curved up in front of and below the top and rearwardly, being secured to the top in a suitable manner, as by bolts or rivets. The curves of the runners are connected by a cross-piece C of gas-pipe, a portion of each end of which is cut out, so that turned-down ends or lips *c* may be formed that are convex on the outside and concave on the inside and are secured to the runners by rivets, bolts, or screws E. Extending across the underside of the top A are cleats F.

The novelty of my invention resides in the braces for connecting the runners to the sled-top and the means of attaching them to the runners, and they consist of U-shaped pieces G and H of gas-pipe, of which there are four shown in the drawings; but any number may be used, according to the length of the sled or sleigh. These braces are arranged in pairs, the lower ends or legs of each pair being curved in a direction opposite to each other, so that the opposite sides of each pair constitute spreading arms extending outwardly and laterally from the under side of the sled-top. The ends of the braces are pressed together, so that their upper sides are convex and their under sides are concave to fit the convex runners, to which they are fastened by means of suitable fastenings or rivets *g*.

Referring to Fig. 2, it will be observed that the lower ends of the rivets are enlarged, forming shoulders *h*. The small end of each rivet is passed up first through the hole in

the bottom of the runner and then through the hole in the top thereof, the shoulders *h* thereof bearing on the inner side of the top of the runner. The small end of each rivet is then clinched down upon the end of its respective brace; or the end may be screw-threaded for the reception of a nut *g'*. The advantage of the means of attachment over a simple rivet is that the head of the latter at the under side of the runner will wear away and the parts become loose; but with the use of a rivet having an enlarged lower end, as shown, the runner and rivet will have to wear away close up to the shoulder *h* before this will occur, and before it could occur the sled would probably be useless from other causes. At top the braces of each pair are connected by bolts, rivets, or screws I, and are connected to the cleats F by bolts, rivets, or screws J, and afford broad seats for the cleats.

It will be observed that braces constructed in this manner of gas-pipe distribute the strain more evenly throughout the sled and thoroughly brace the parts.

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

1. In combination with the framing and top of a sled or sleigh, paired braces having spreading ends, substantially as and for the purpose set forth.

2. In combination with the gas-pipe framing and the top of a sled or sleigh, U-shaped braces of gas-pipe having downwardly and laterally curved ends, arranged in pairs, with the ends extending oppositely, substantially as and for the purpose set forth.

3. In a sled or sleigh, the combination of the top, cleats on the under side thereof, the gas-pipe framing, and paired U-shaped braces curving downwardly and laterally, the arms of each pair extending oppositely and having compressed ends concave on their under sides to fit the gas-pipe runners, means for connecting the ends to the runners, and means for connecting the braces to said cleats, said braces affording a broad bearing for the cleats, substantially as and for the purpose set forth.

4. A sled in which the runners are constructed of pipe, having the herein-described

means for attaching the braces thereto, consisting of shouldered fastenings, the shoulders of which are adapted to engage the inner sides of the runners.

- 5 5. A sled in which the runners are constructed of pipe, having the herein-described means for attaching the braces thereto, consisting of rivets having enlarged lower ends

passing through the runners and engaging the inner sides of the top thereof, and means for securing the braces to the rivets on the upper sides of the runners.

JOHN I. HANCOCK.

Witnesses:

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