(No Model.)

C. A. JOHNSTON.

SLEIGH.

No. 304,105. Patented Aug. 26, 1884.

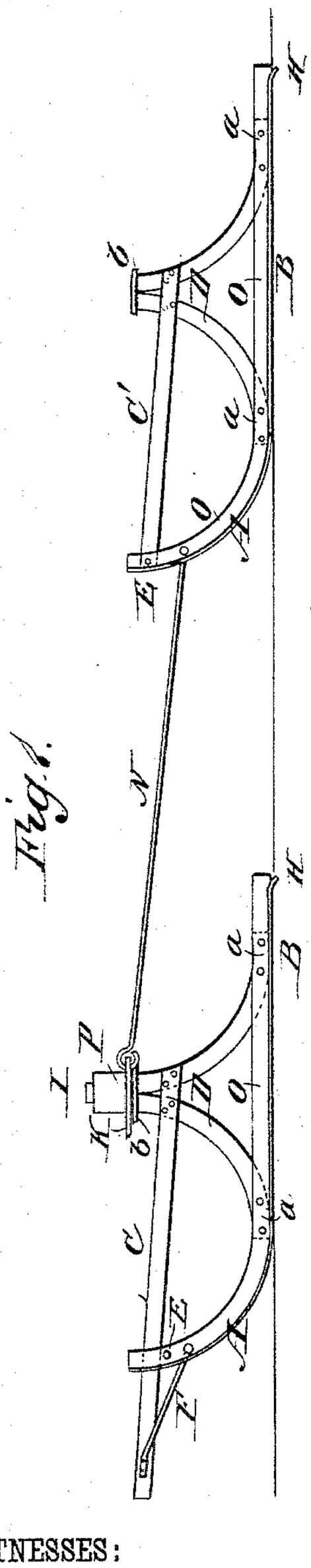

Fig. 1.

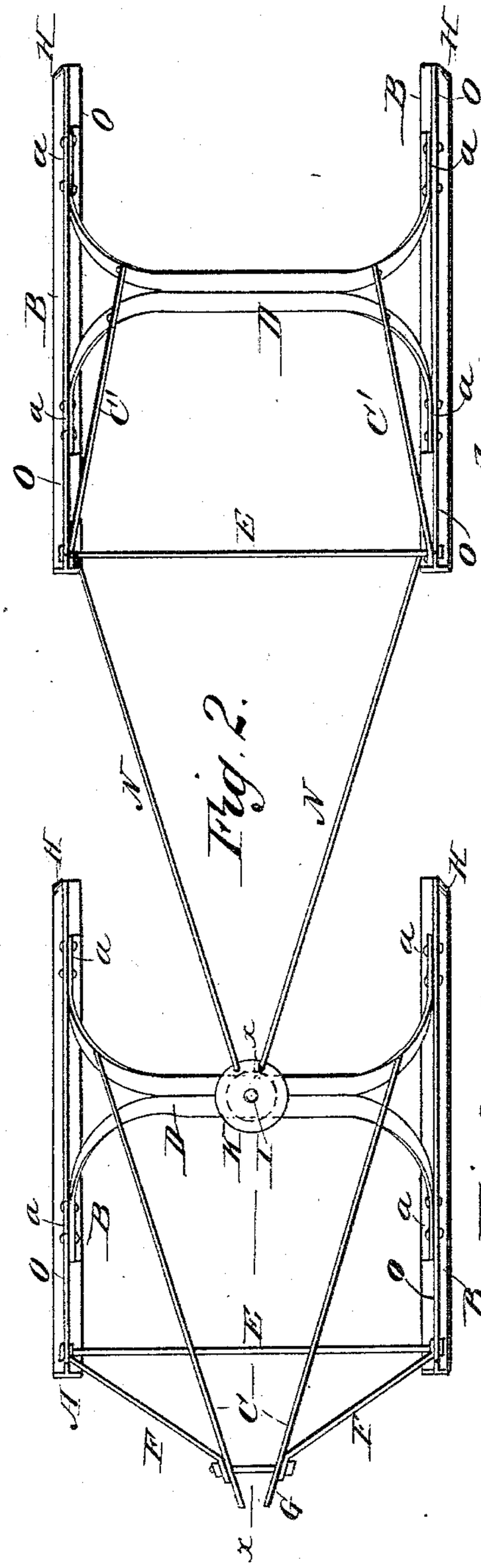

Fig. 2.

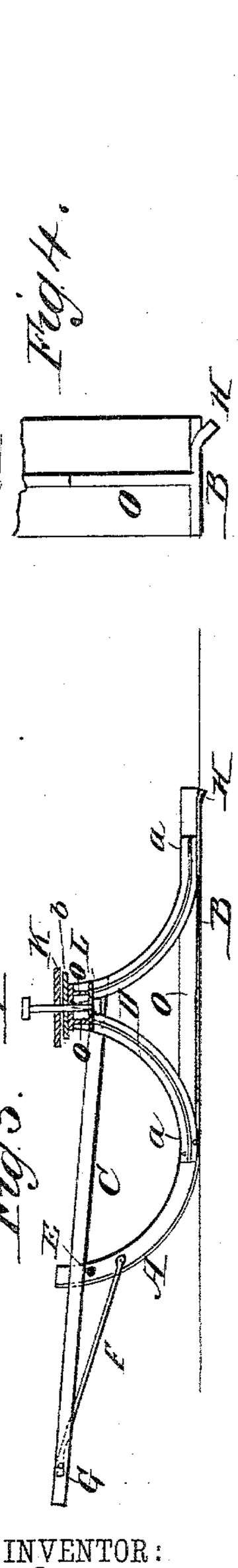

Fig. 4.

Fig. 3.

WITNESSES:

Francis McArdle.

C. Bedgwick

INVENTOR:

C. A. Johnston

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES AUGUST JOHNSTON, OF WALL LAKE, IOWA.

SLEIGH.

SPECIFICATION forming part of Letters Patent No. 304,105, dated August 26, 1884.

Application filed December 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES AUGUST JOHNSTON, of Wall Lake, in the county of Sac and State of Iowa, have invented certain new and useful Improvements in Sleighs, of which the following is a full, clear, and exact description.

My invention consists in the construction and arrangement of parts, as will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a pair of bob-sleds constructed according to my invention. Fig. 2 is a plan view of a pair of bob-sleds, as in Fig. 1. Fig. 3 is a section through the front sled of Fig. 2, on the line *x x*; and Fig. 4 is a detail of the runner contrivance, to prevent the lateral play of the same.

I use T-bar for the runners A B, bending the same so that the head of the T forms the bottom of the shoe of the runner for bearing-surface, and the middle flange forms the upper part, O, for the stiffener, and for the part to which the front cross-rod, E, braces, and the benches D may be connected.

For the benches or beams D, I use two T-bars, which I arrange side by side along the middle and top portion of the benches, with the heads of the T-bars upward, as seen best in Fig. 2, and I bend and twist the end portions, so as to turn downward and branch outward each way along the runners, to connect with the flanges O, as at *a*, so as to form benches with substantial knees, which are braced forward and backward, and also laterally, and are made by simply bending the bars of which they are formed.

The two bars forming the benches D may be connected together along the middle in any approved way—for instance, by a plate, *b*, riveted on—and on the forward bench a bolster-plate, K, may be fitted on with a king-bolt, I, for suitably mounting a wooden or other bolster, P.

To secure the king-bolt and stay it laterally, a plate, L, may be fitted under and attached to the edges of the middle flanges, O, of the T-bars, forming the benches.

For the hounds of the front sled to connect the tongue, I connect two flat bars, C, to the bench D, and arrange them in suitable converging form and forward extension beyond the cross-rod E, for connecting the tongue in the proper location by the bolt G, with lateral braces F, connected to the hounds by said bolt G, and also connected to the runners and to the rod E. I connect these bars C to the benches, so as to connect the two parts of the benches together by them.

For the hind bob-sled, I use similar bars, C′, to connect the bench D to the front end of the runners and to the rod E, and to connect the two parts of the bench together; and I connect the two sleds together by the diagonal rods N, hooked into eyes of the bolster-plate K, and pivoted in the front ends of the runners of the hind sled.

To prevent the hind ends of the sled from sliding or swinging sidewise too freely, I propose to turn down one or both of the hind corners of the runners, as at H, to make comparatively sharp-edged points that will not offer much resistance to the forward motion, but will present wider surfaces laterally and afford greater resistance that way.

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

1. The benches or beams and knees of sleds, made of two T-bars placed side by side along the middle of the bench, with the heads of the bars upward and bent downward, and twisted in the knee portions, and thereby branched along the runners each way, and connected by the ends to said runners at *a*, substantially as described.

2. The hounds C, attached to bench D, extended forward therefrom beyond the cross-rod E convergently, and connected with the tongue-bolt G, in combination with braces F, also connected to said tongue-bolt, and connected to the runners, substantially as described.

3. The king-bolt I, fitted to a sled-bench, consisting of two T-bars arranged side by side, along the middle portion, with the heads upward, by extending through said heads, and a plate, L, fitted to the lower edges of said flanges O of said T-bars, substantially as described.

CHARLES AUGUST JOHNSTON.

Witnesses:

HORMES MOHR,

L. L. COOK.