

(No Model.)

R. E. LEE.

SLEIGH.

No. 393,988.

Patented Dec. 4, 1888.

FIG. 2

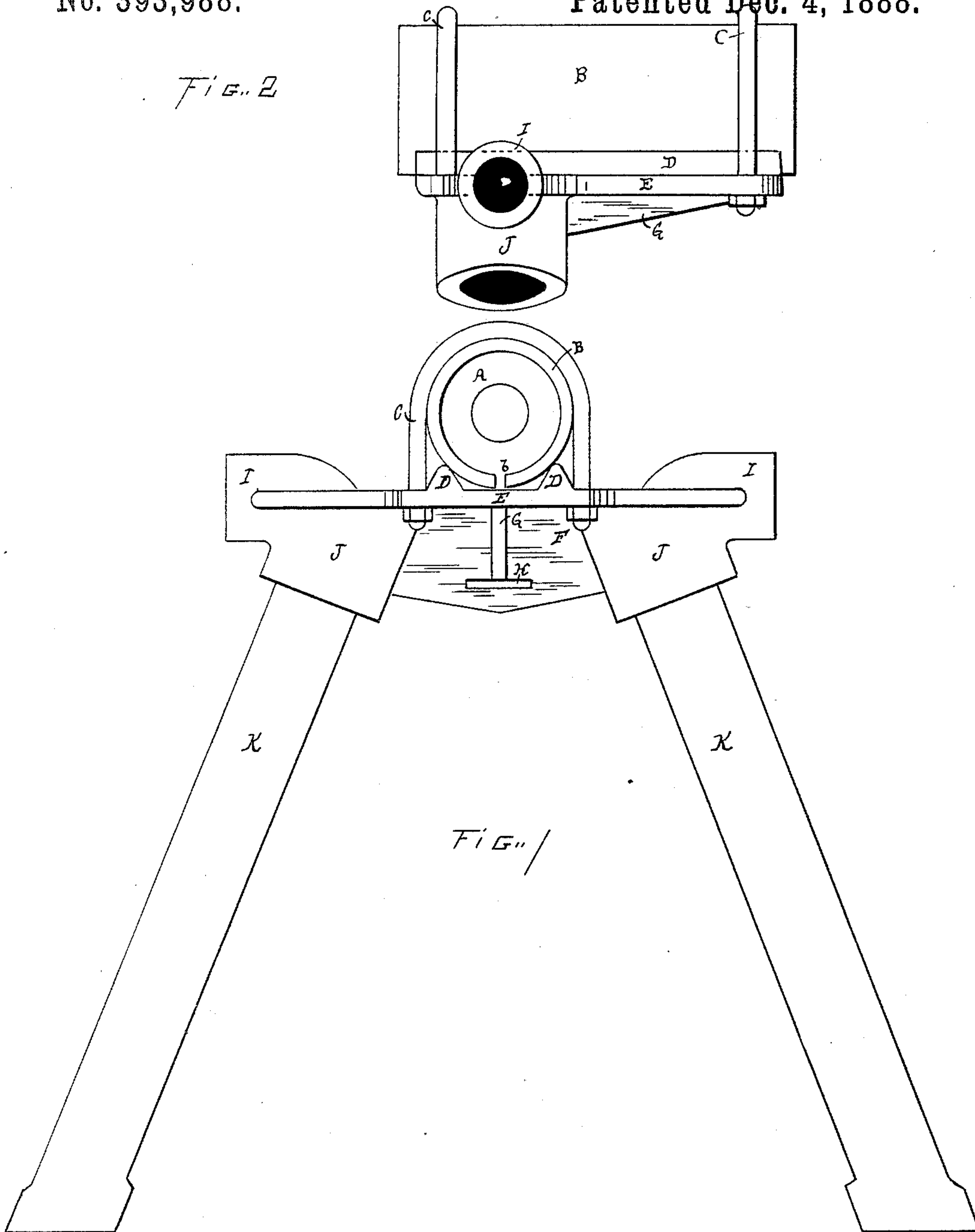


FIG. 1

Witnesses.
Adelaide A. Anderson.
Cyrus L. Lothrop.

Inventor.
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by Geo. H. Lothrop.
att'y.

UNITED STATES PATENT OFFICE.

ROBERT E. LEE, OF ALMONT, MICHIGAN, ASSIGNOR OF TWO-THIRDS TO
JAMES S. JOHNSON, OF SAME PLACE.

SLEIGH.

SPECIFICATION forming part of Letters Patent No. 393,988, dated December 4, 1888.

Application filed September 28, 1888. Serial No. 286,689. (No model.)

To all whom it may concern:

Be it known that I, ROBERT E. LEE, of Almont, in the county of Lapeer and State of Michigan, have invented a new and useful
5 Improvement in Couplings for Sleigh-Runners, of which the following is a specification.

My invention consists in an improvement in couplings for sleigh-runners, hereinafter fully described and claimed.

10 Figure 1 is a side elevation of my improved coupling and the two knees, and Fig. 2 is a rear elevation of the coupling.

My invention is designed to be used in a sleigh-runner made of pipe; and it consists
15 of the flat plate E, stayed by the longitudinal and transverse webs F and G, provided on its under side with the two inclined threaded female couplings J to receive the upper ends of the knees K at its ends, with the female
20 couplings I to receive the rave, and on its upper side with the two projections D, between which lies the hub B and which serves to stay the hub and prevent it from lateral motion.

25 The hub is the same as that shown in my pending application for a patent, in which B

represents a metal thimble slotted at *b*, inclosing a wooden hub, A, and fastened to the plate E by the two clips C. This construction furnishes a stronger support for the hub, permits both clips which support the hub to be
30 secured directly to the plate, and obviates the necessity of running braces from the knees or runner to the outer end of the hub.

What I claim as my invention, and desire
35 to secure by Letters Patent, is—

1. In a sleigh-runner, a webbed plate having female couplings for the knees and rave, and having on its upper surface projecting ribs to steady the hub, substantially as shown
40 and described.

2. In a sleigh-runner, the plate E, strengthened by the webs F and G, having the female couplings J and I and the upward projections D, in combination with the hub B, lying
45 between the projections D and secured to the plate E by clip-bolts C, substantially as shown and described.

ROBERT E. LEE.

Witnesses:

F. P. ANDRUS,
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