

E. J. Calhoun,

Railroad Frog.

No. 97,163

Patented Nov. 23, 1869

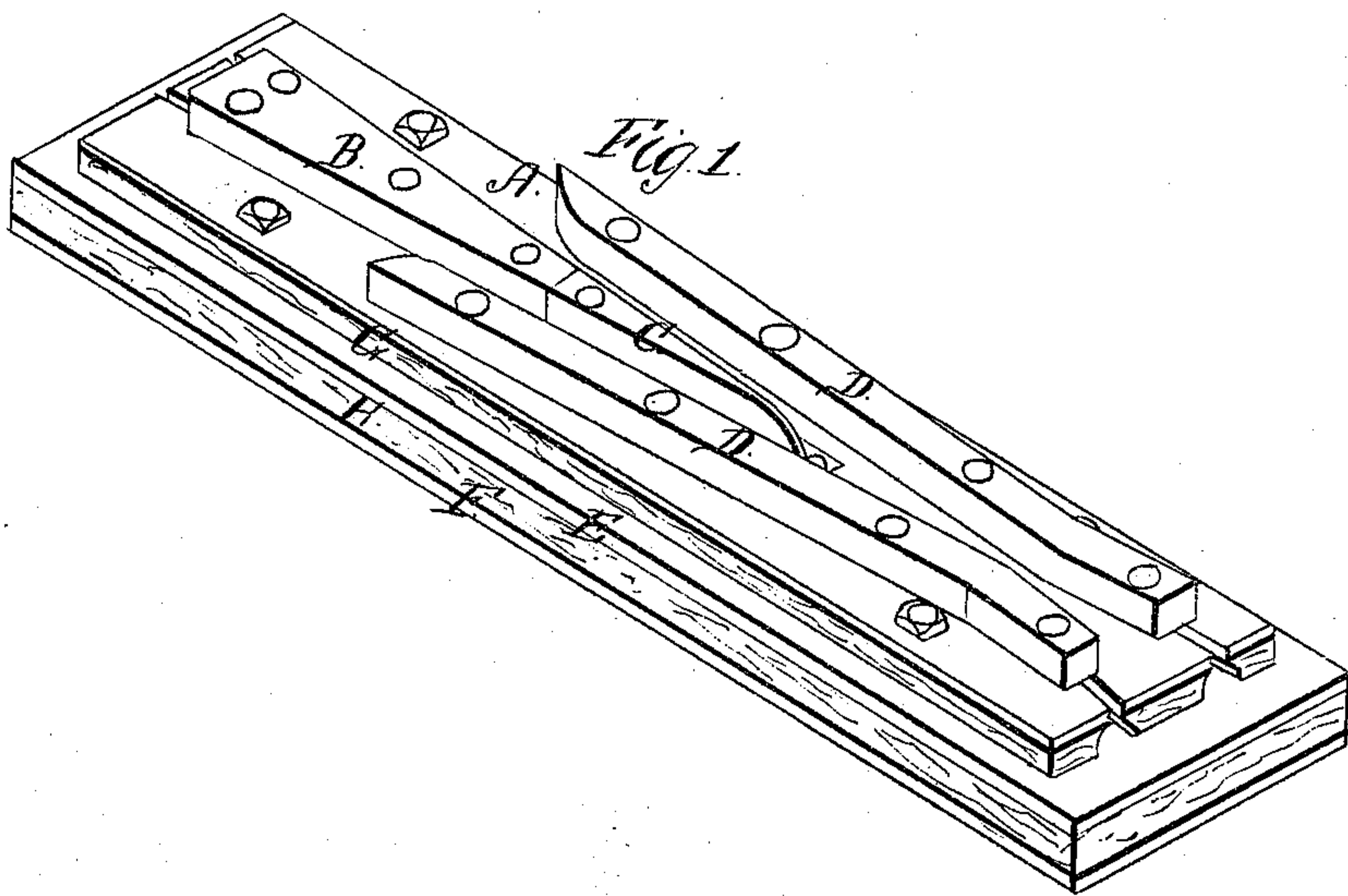
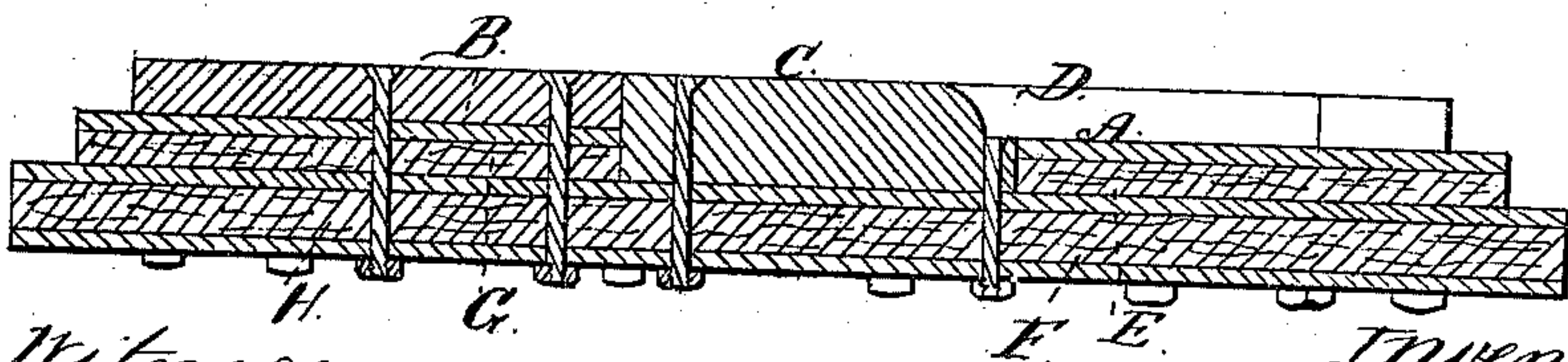


Fig. 2.



Witnesses:
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By his Attorney,
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United States Patent Office.

FREDERICK J. CALHOUN, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 97,163, dated November 23, 1869.

IMPROVED RAILWAY-FROG.

The Schedule referred to in these Letters Patent and making part of the same

To all to whom these presents shall come:

Be it known that I, FREDERICK J. CALHOUN, of Boston, in the county of Suffolk, and Commonwealth of Massachusetts, have made an invention of a new and useful Improvement in Railway-Frogs; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, making part of this specification, and in which—

Figure 1 is a perspective representation, and

Figure 2, a vertical and transverse section of a frog containing my improvement.

This invention consists in the interposition, between the metallic plates composing the body of a railway-frog, of hardened pulp from paper-stock or other fibrous substances or tissues.

I am aware that previous to the origin of the improvements herein described, one or more strata of wood have been employed between the metallic plates of railway-frogs.

I have found, by careful experiments, that a hardened or dried pulp, composed after the manner, or of the materials used in paper-manufacture, or of various other fibrous substances or preparations, is much better calculated, than wood, to resist the impact, concussion, or thrusts, to which a railway-frog is constantly subjected, and that it possesses, in addition to its capability of retaining for a great length of time its primitive shape, an immunity from decay not found in wood.

It also embodies a certain degree of elasticity in excess of that possessed by wood, and I am confident that this elasticity is of sufficient extent to render the employment of an additional elastic material, such as India rubber or gutta-percha, unnecessary, although this material may, of course, be combined with it, if desirable.

In the drawings attached to this specification, and in which my improvement is exhibited—

A denotes an oblong and flat metallic plate, to the upper face of which are secured the "heel-plate" B, and side rails or guides D D, a second metallic plate E being disposed below the first-mentioned or rail-plate A, while an additional and third plate F is in turn disposed below the second plate E, a strip or layer of wood, G or H, being interposed between the plates A, E, and F, and the whole bolted securely together, the point *c* passing through and sustained by the upper plate A, and resting upon the second plate.

This construction of the frog without the wood, possesses no patentable novelty, and is in extensive use.

In carrying out my improvement, comprising the subject-matter of this patent, I dispense with the wooden filling hereinbefore described, and substitute in lieu thereof, sheets or plates of hardened pulp, composed of a fibrous material, and produced by any of the well-known processes adopted in paper-manufacture, or otherwise obtained, to effect the desired result.

This pulp is to be rendered impervious to moisture by incorporation or impregnation with shellac or other analogous substance, properly prepared to effect an intimate union.

I am aware that felt has been used for a like purpose in railway-frogs, and this I do not claim; but

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

The employment, in a railway-frog, of one or more hardened and water-proof sheets of pulp, made from paper or other fibrous material, substantially as and for the purposes herein set forth.

Witnesses: FREDERICK J. CALHOUN.

FRED. CURTIS,

EDWARD GRIFFITH.