

No. 694,359.

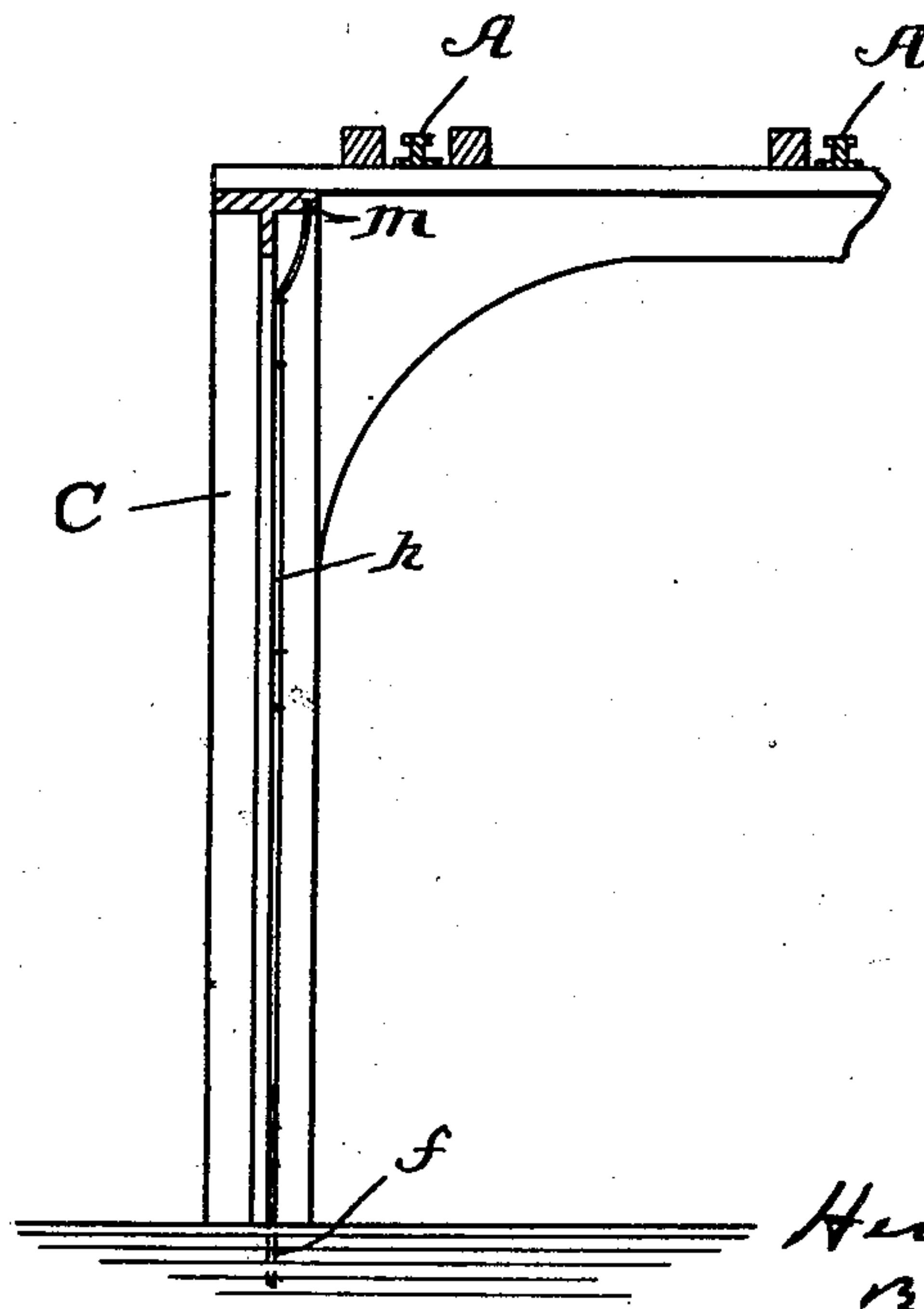
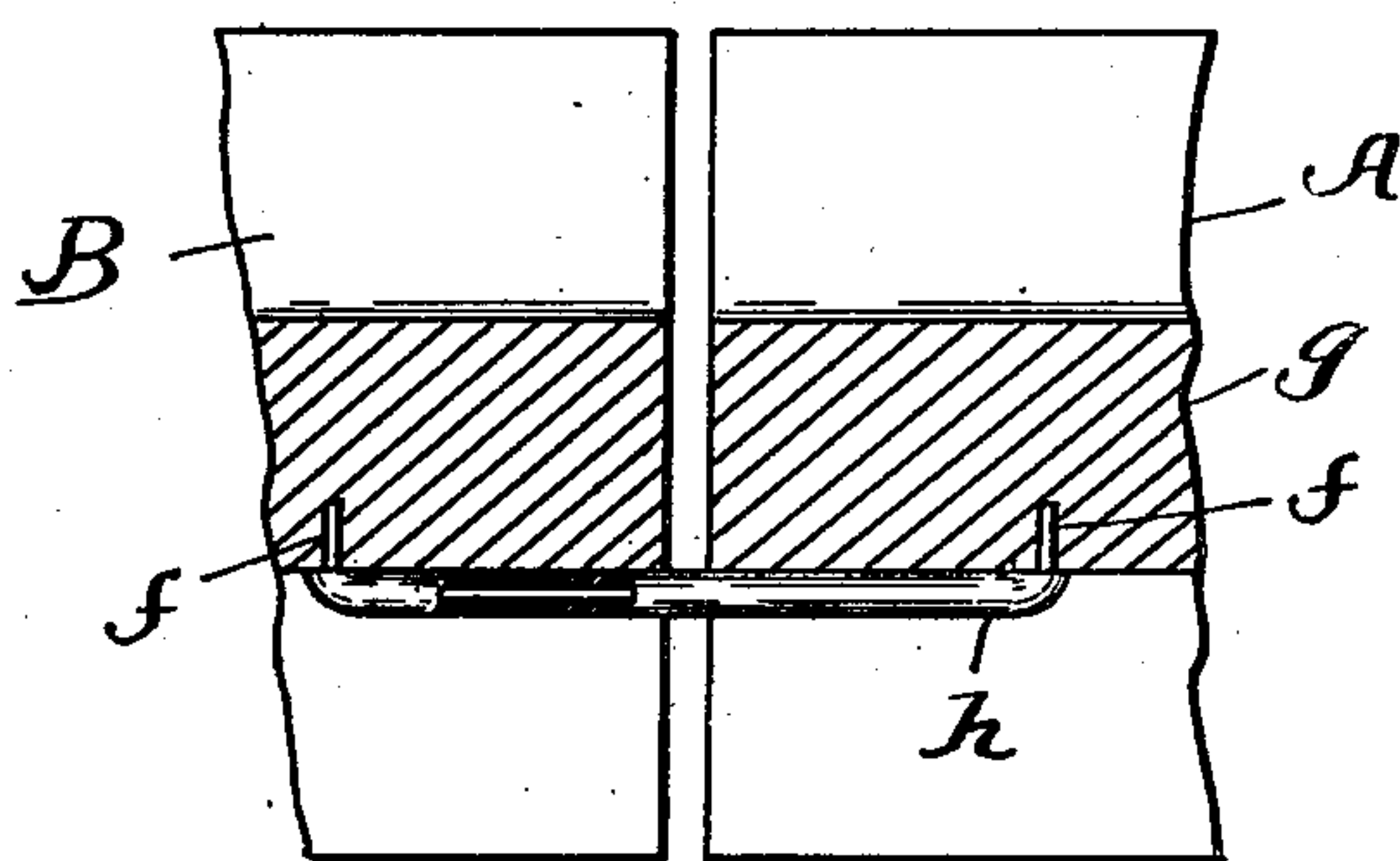
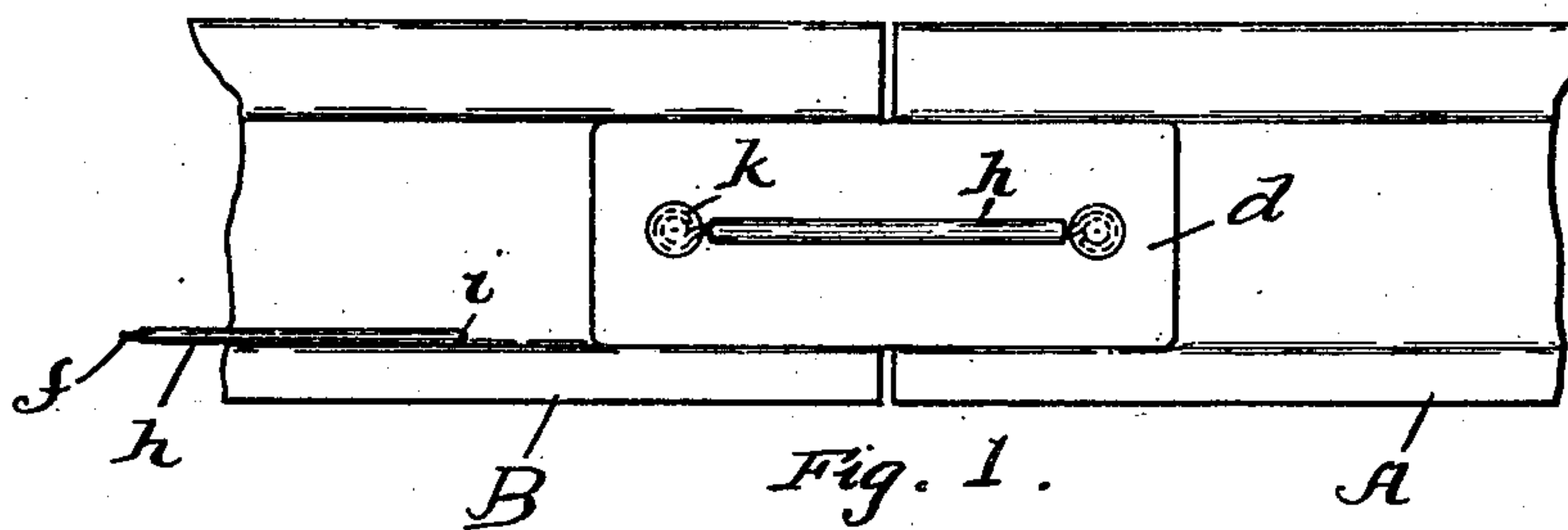
Patented Mar. 4. 1902.

H. G. FARR.

DEVICE FOR REDUCING THE NOISE IN ELEVATED RAILROAD STRUCTURES.

(Application filed Dec. 12, 1901.)

(No Model.)



Witnesses:

H. B. Davis

H. G. Wright

Inventor:

Hiram G. Farr

By *own* *claw*
in atty

Fig. 3.

UNITED STATES PATENT OFFICE.

HIRAM G. FARR, OF WINCHESTER, MASSACHUSETTS.

DEVICE FOR REDUCING THE NOISE IN ELEVATED-RAILROAD STRUCTURES.

SPECIFICATION forming part of Letters Patent No. 694,359, dated March 4, 1902.

Application filed December 12, 1901. Serial No. 85,634. (No model.)

To all whom it may concern:

Be it known that I, HIRAM G. FARR, of Winchester, in the county of Middlesex and Commonwealth of Massachusetts, have made certain new and useful Improvements in Devices for Reducing the Noise in Elevated-Railroad Structures, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation showing the joint between two railway-rails and my improved device in position thereon; Fig. 2, a horizontal section, enlarged, through the web of the rail; and Fig. 3, an elevation illustrating the device attached to an upright or post of an elevated structure.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawing.

My invention relates to a device or means for counteracting or neutralizing the noise caused by the vibration of a metallic elevated-railway structure or of the rails from the contact with the moving wheels of the cars or the motors used for propelling or drawing said cars; and it consists in certain novel features hereinafter fully set forth and claimed, the object being especially to produce a simple, cheap, and effective device of this character.

The nature and operation of the improvement will be readily understood by those conversant with such matters from the following explanation.

In the drawings, A B represent two rails of ordinary construction, the ends of which are connected by fish-plates *d* in the usual manner. I find by experiment that by connecting the ends of these rails by a metallic wire, the body of which is covered with a substantially non-vibratory material, the vibration set up in said rails by the wheels of the cars or motors is checked or so broken as to not produce sound, or at least so little sound as not to be objectionable. Any suitable way of connecting the rails by the wire or of disposing the wire thus covered and connected with said rails may be employed. As shown

in Fig. 1, I use a short copper wire, the bare ends *f* of which are forced into suitably-drilled holes in the web *g* of the rails, so as to fit tightly. The body portion of this wire is entirely inclosed in a rubber covering *h*. When vibration is set up, as in the rail A, it is imparted to the wire; but the non-vibratory covering *h* counteracts or prevents in a large degree this vibration. I find by experiment, furthermore, that substantially the same result is attained when the wire has its bare ends *f* in contact, respectively, with each end of the same rail, the covering *h* for convenience being laid in contact with the lower flange or base of said rail, as at the left in Fig. 1, or it may be otherwise suitably disposed. Instead of drilling holes in the web and inserting the ends of the wire therein these ends can be clamped under the nuts *k*, which hold the bolts through the fish-plates *d*, if desired, as shown in Fig. 1, this being a simple and cheap method of attaching the end of the covered wire. In Fig. 3 the rubber-covered wire is shown attached to a post or upright C of an elevated-railway structure, upon which the rails A are disposed in a manner well known to those skilled in the art. The upper end of said wire at *m* is in rigid contact with the metal structure, and the lower end at *p* penetrates the ground, or instead of penetrating the ground said lower end may be carried to any other structure, as a wood post or building, or may be permitted to simply contact with the ground. If fast, I find that the wire covered with non-vibratory material may be rigidly secured by only one end to the metal structure and its body be permitted to hang pendent and the vibration in the structure be materially reduced.

It will be understood that I do not confine myself to any special means of attaching the wire to the structure; neither do I confine myself to the use of copper wire.

The salient feature of my invention consists in the employment of a metallic wire, one or both of the uncovered ends of which is in contact with the rail or with such portion of the metal structure as shall be convenient, the body portion of said wire being covered with rubber or other non-vibrative material, whereby the noise caused by vibra-

tion may be counteracted or greatly diminished.

Having thus explained my invention, what I claim is--

5 1. The herein-described means for decreasing the noise caused by the vibration of elevated-railway structures which comprises the employment of a metallic wire with its bared ends in rigid contact with portions of said
10 structure, the body portion of said wire being covered with a non-vibratory material.

2. Means for decreasing the noise caused by vibration in elevated-railway structures which comprises the employment of a metallic
15 wire having a bared end in rigid contact with some portion of said structure, the body por-

tion of said wire being covered with a non-vibratory material.

3. Means for decreasing the noise caused by vibration in elevated-railway structures 20 which comprises the employment of a metallic wire having a bared end in rigid contact with some portion of said structure, the body portion of said wire being covered with a non-vibratory material, and its opposite bared 25 end in contact with the ground or some structure other than that of the railroad.

HIRAM G. FARR.

Witnesses:

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