

(No Model.)

2 Sheets—Sheet 1.

J. B. BENTON.
CAR FENDER.

No. 540,379.

Patented June 4, 1895.

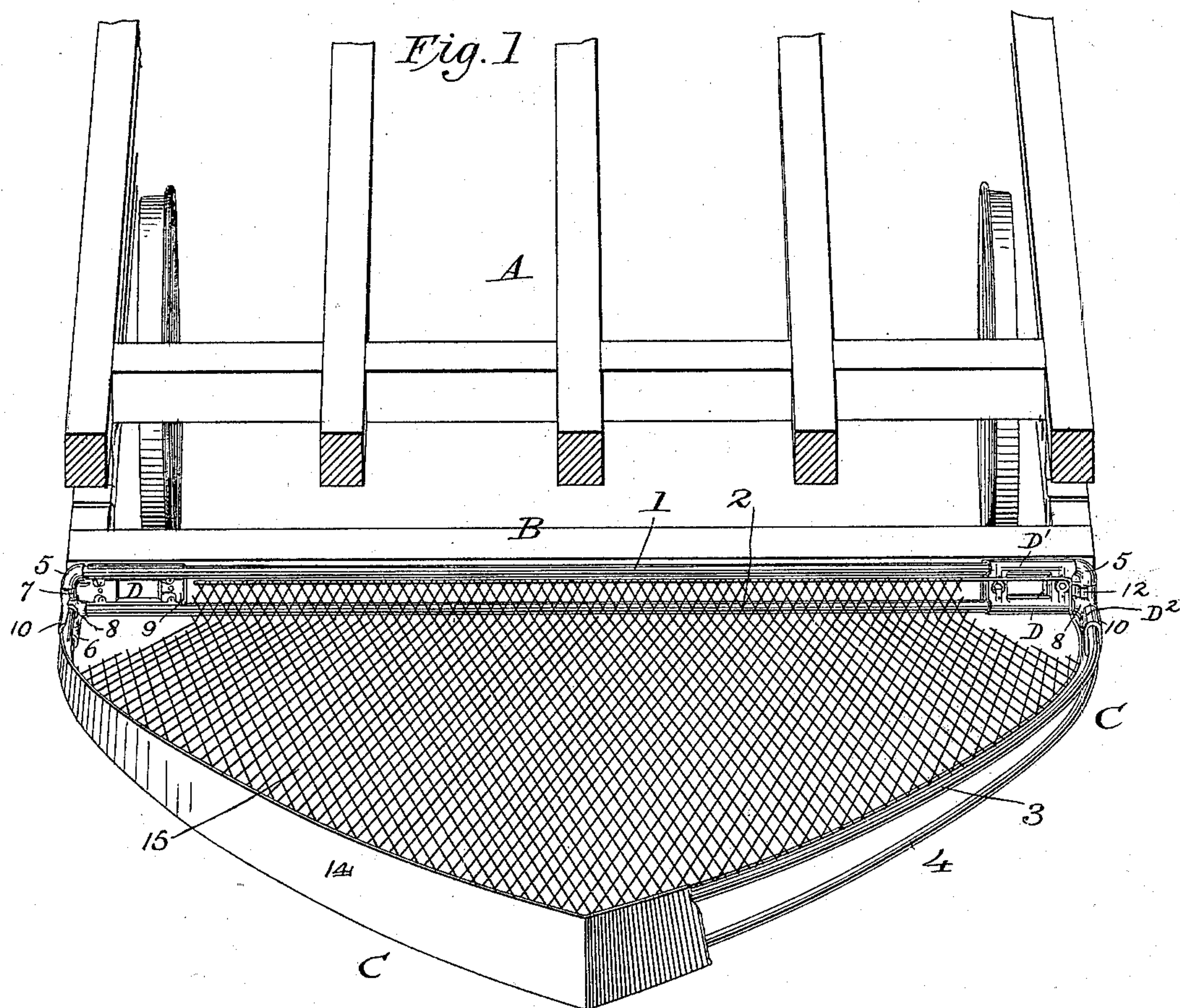
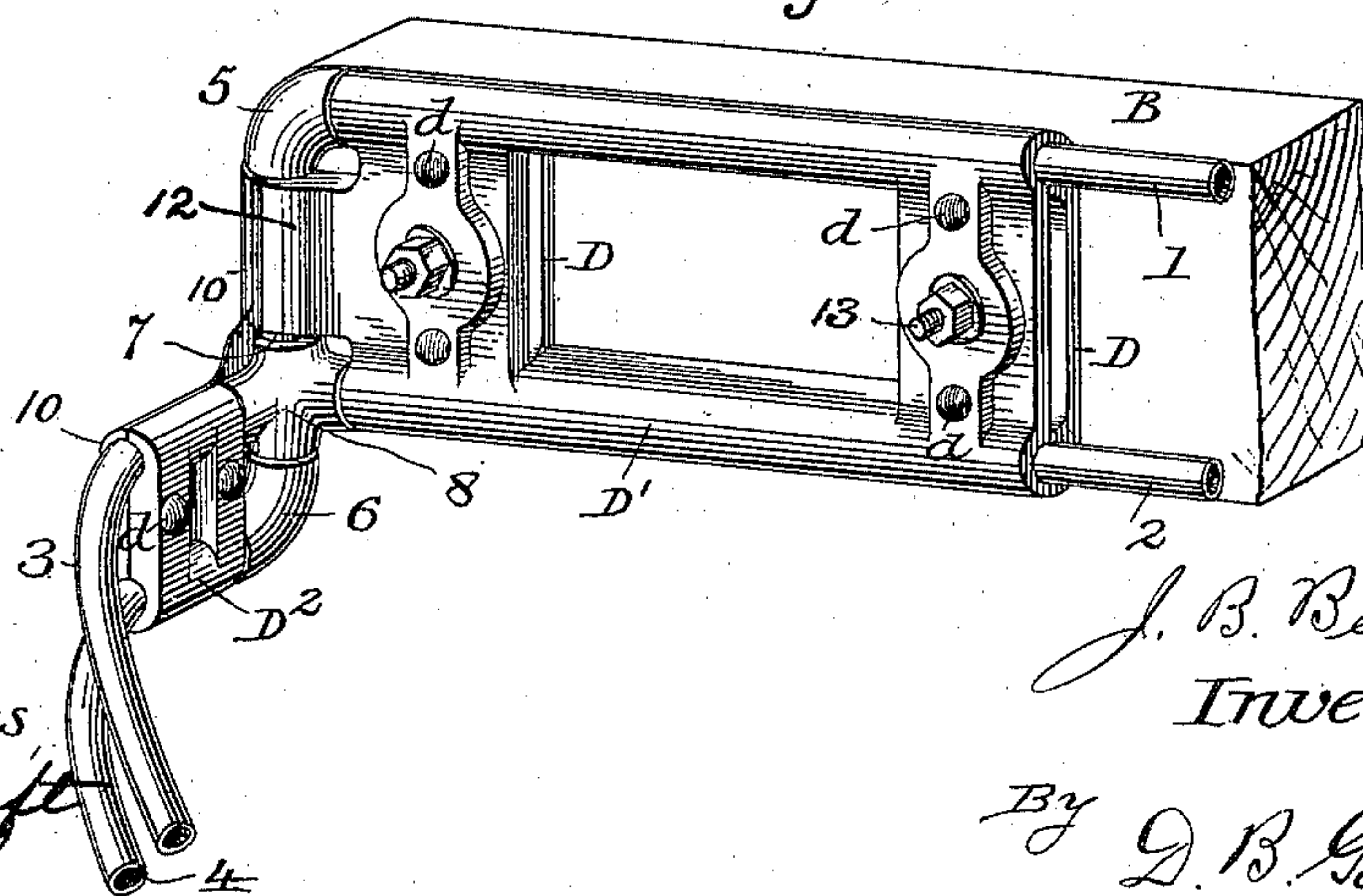


Fig. 2.



Witnesses

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

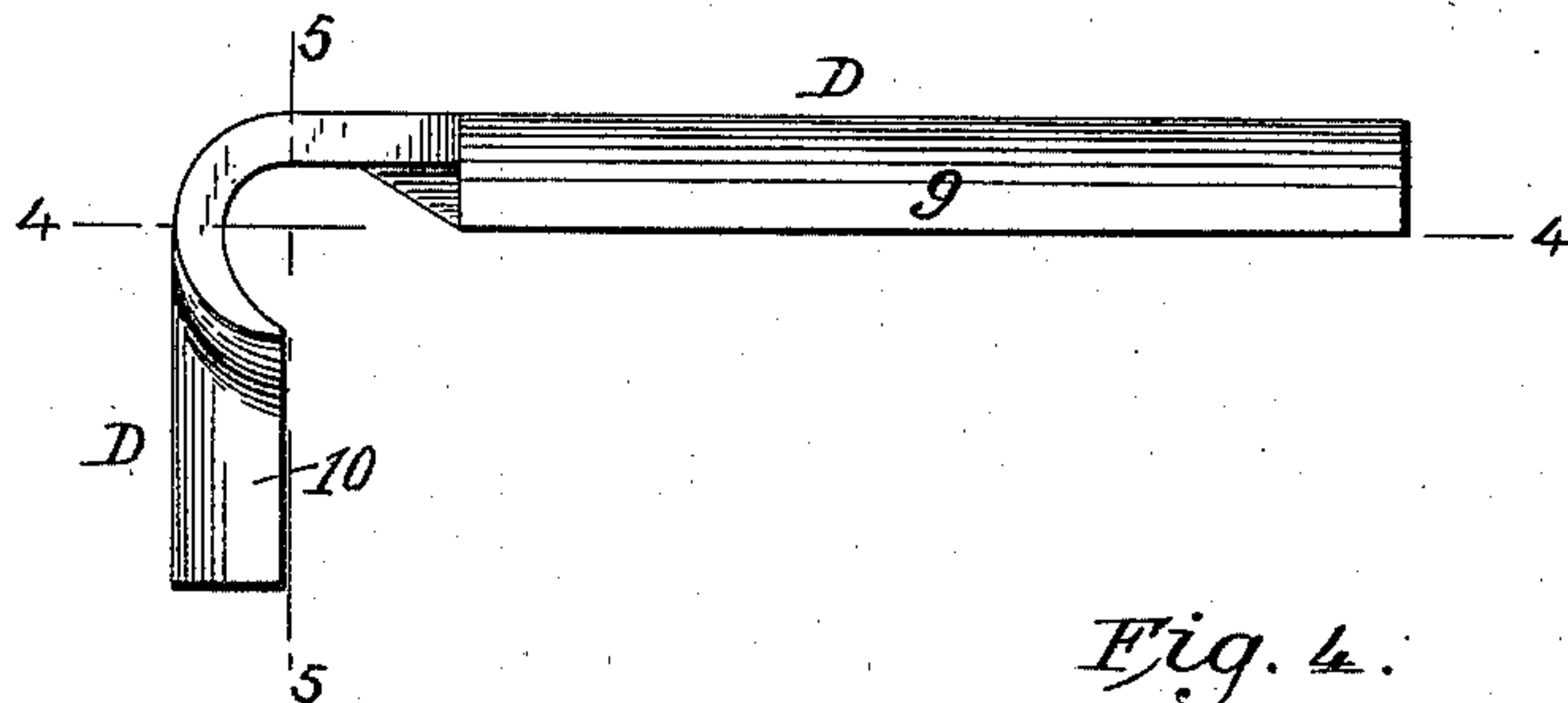


Fig. 4.

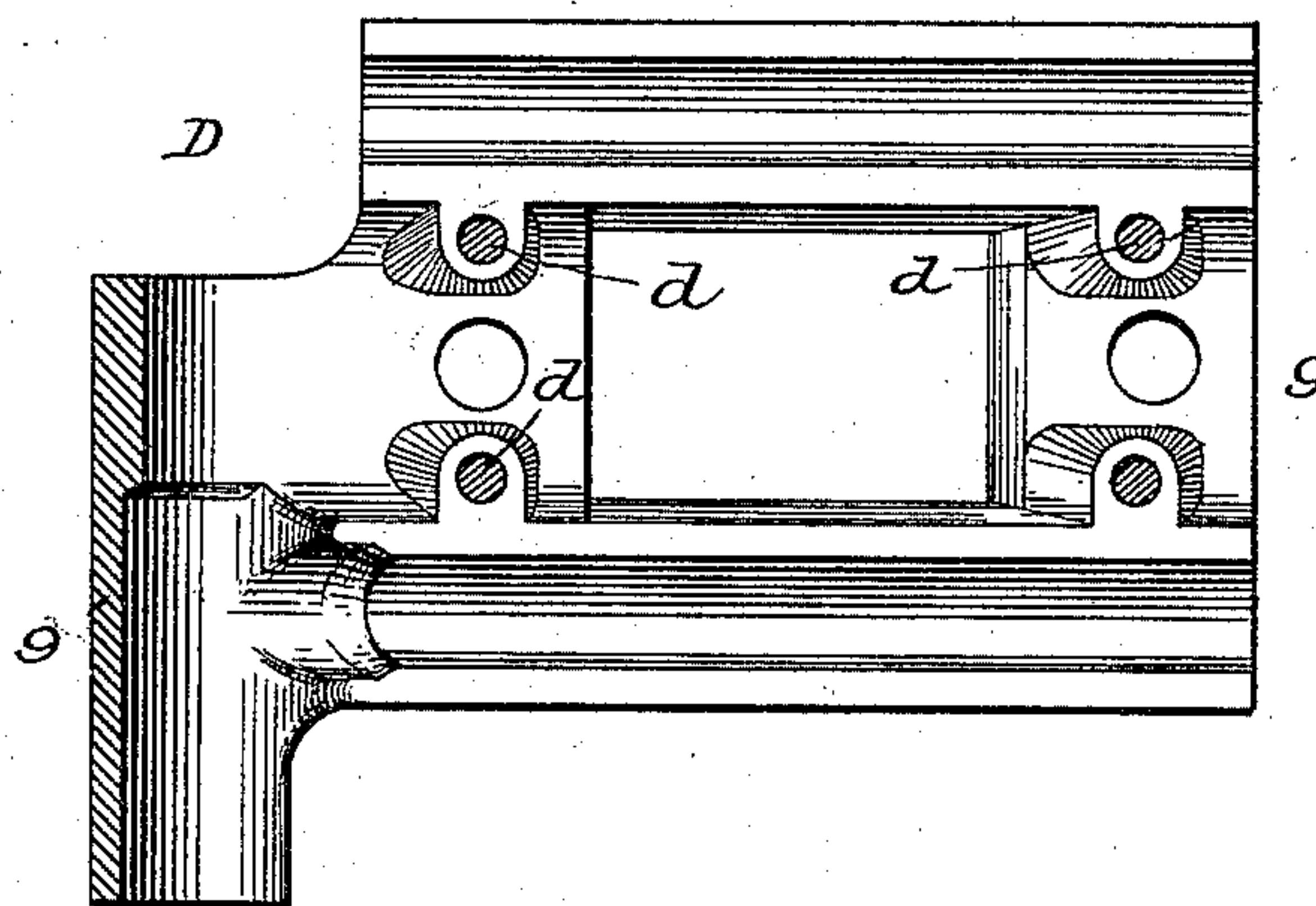


Fig. 5.

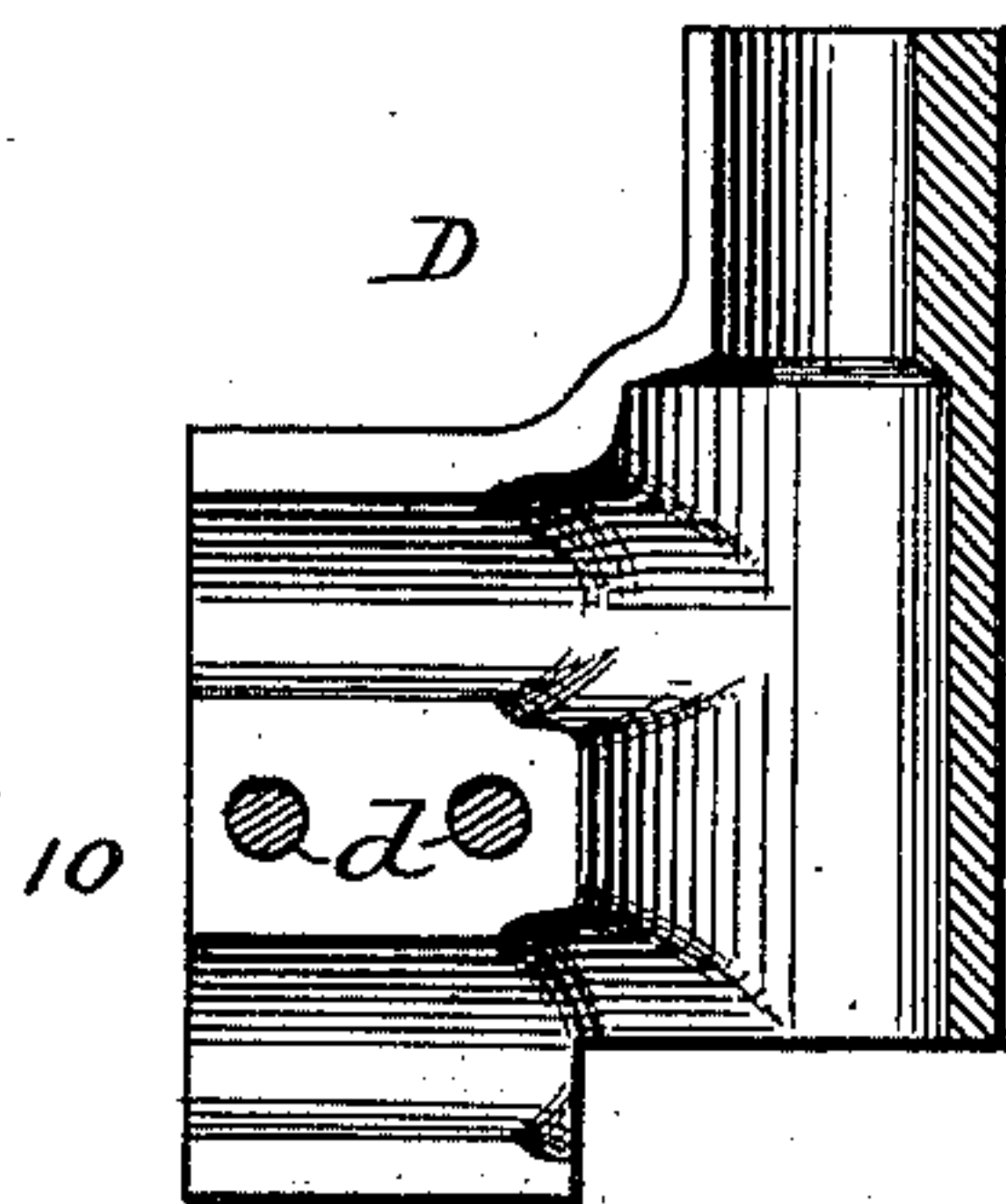


Fig. 6.

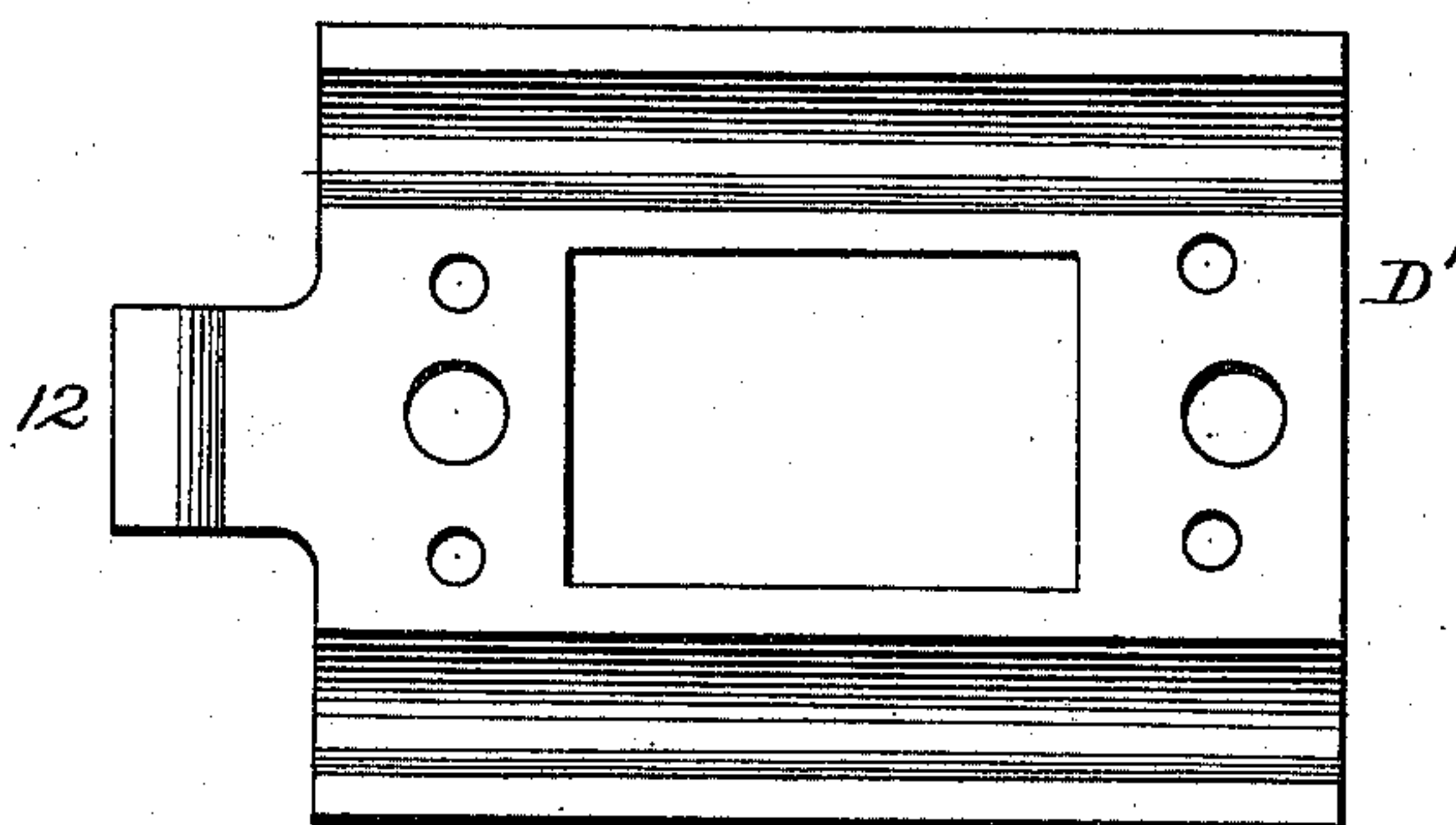
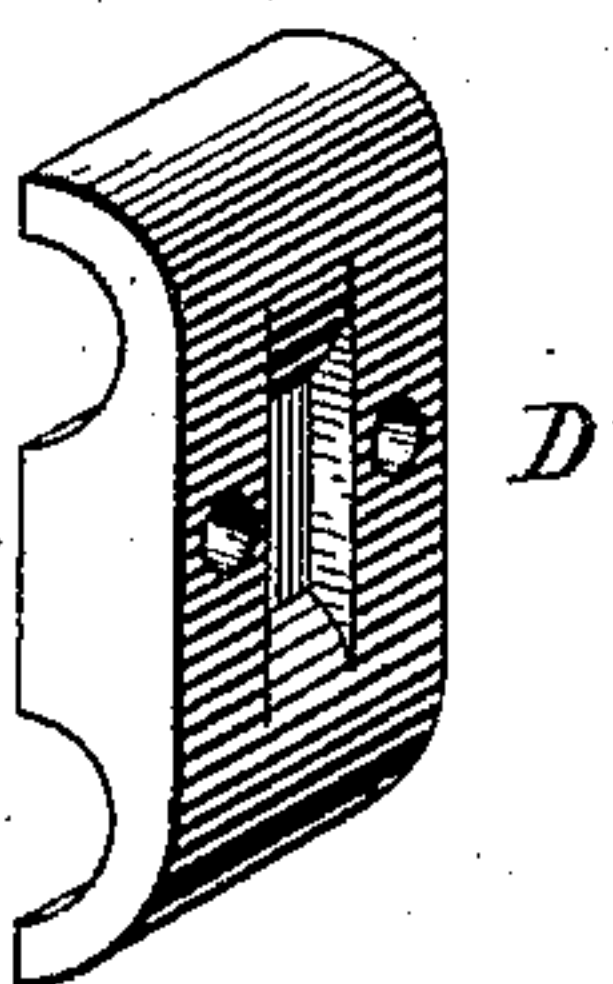


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN B. BENTON, OF ELIZABETH, NEW JERSEY.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 540,379, dated June 4, 1895.

Application filed April 11, 1895. Serial No. 545,333. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. BENTON, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Car-Fenders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to car-fenders of the type commonly known as pilot fenders, and the objects sought to be obtained are—economy in the cost of construction, lightness, durability and convenience in attaching the fender to, and removing it from the car or fender-board.

To these ends the invention comprehends a fender made of ordinary gas-pipe in the form of a rigid pilot adapted to be conveniently attached and removed as a whole.

It also comprehends a clamp-bracket constructed and applied to the fender at the joints thereof to embrace and firmly hold the coupled members in such manner as to give rigidity to the structure and to prevent the joints from wearing and becoming loose under the constant jars and vibrations to which the fender is subjected in use.

It further comprehends a construction of the clamp-brackets whereby, in addition to strengthening the joints of the fender, they are adapted to be bolted to the truck or fender-board in their applied condition as parts of the coupled structure, all as hereinafter fully described.

In the accompanying drawings, which illustrate my invention and form a part of this specification, Figure 1 is a front perspective showing the relations between the fender and the truck-frame, the clamp-brackets being omitted. Fig. 2 is a broken perspective showing one of the clamp-brackets in its relation to the fender-frame and to the car-truck or fender-board. Fig. 3 is a plan view of the base of the clamp-bracket. Figs. 4 and 5 represent inner face views of the main and angular portions of the base-plate of the clamp-

bracket, said views being also sectional views on the lines 4 4 and 5 5 of Fig. 3. Fig. 6 is an inner face view of the clamping-plate which coacts with the main portion of the base-plate shown in Fig. 4. Fig. 7 is a perspective view of the clamp-plate which coacts with the angular portion of the base-plate shown in Fig. 5.

Referring to the drawings, A designates the floor frame of the car, B one of the end bars of the truck frame and C the fender as a whole.

The fender comprises two straight parallel bars 1, 2, and two forwardly curved pilot bars 3, 4, coupled together as hereinafter explained. The two pilot bars are curved forward at their centers approximately in the form of the ordinary locomotive pilot, the lower bar projecting slightly in advance of the upper one to give the front of the fender an upward and backward inclination, and the two ends of said bars are bent back parallel to each other. The upper bar 1, and the lower pilot bar 4, are rigidly coupled together by elbow-couplings 5, 5, and 6, 6, and intermediate vertical connecting bars 7, 7, the whole constituting a rigid frame. The lower transverse bar 2 and the upper pilot bar 3 are coupled together by right angular couplings 8, 8, sleeves on the vertical connecting bars 7, 7. The couplings 8 are ordinary four-way couplings such as plumbers use, and they may be screwed upon the bars 7, the latter being threaded for this purpose, or the threads in the opposite sockets, through which the bars 7, extend, may be reamed or bored out to enlarge the said sockets so that they will receive the plain or unthreaded bars.

All the parts above referred to as bars,—that is the parts—1, 2, 3, 4 and 7 are made of ordinary gas-pipe and the couplings 5, 6 and 8 are ordinary couplings obtainable in the market as plumbers' supplies, so that the fender as thus far described is constructed wholly of cheap and readily obtainable material and requires no special work.

It is not broadly new to construct fenders of gas-pipe, but it has been found that the constant jarring to which the fender is subjected in use, and the vibrations caused thereby, soon wear the threads, loosen the joints, and destroy the rigidity of the structure; and

therefore with the view of remedying this difficulty I strengthen the joints by applying thereto clamping plates constructed and adapted to clamp and hold the coupled bars in rigid relation to each other. These clamping plates are conveniently and cheaply made of cast iron, as follows:

D designates the base plate of the clamp comprising a main body portion 9, and a right angular extension 10 adapted to lie respectively against the rear side of the frame bars 1, 2 and the outside of the pilot or fender bars 3, 4 and grooved to receive and partially embrace the said bars.

D' is a complementary clamping-plate of size and shape corresponding with the body portion 9 of the base plate and grooved along its edges to receive and partially embrace the bars 1, 2. It is reduced in width at its outer end to pass the couplings 5, 8, as shown at 12 in Figs. 2 and 6, and this reduced portion, which is beveled or hollowed out at the rear, coacts with the angular portion 10 of the base plate to clamp and tightly hold the vertical end bar 7. The base plate and its complementary clamping-plate being applied to the bars as represented in Fig. 2, are firmly bolted or riveted together by bolts or rivets *d*.

The grooves in the base plate D and its complementary clamping-plate D' for the reception of the bars 1, 2 are somewhat less in depth than the semi-diameters of said bars, so that when the plates are applied, as represented in Fig. 2, and tightly bolted or riveted together they will tightly clamp and hold the bars 1, 2, 7, relieving the joints of strain and preventing the vibrations whereby the threads are worn and the joints loosened.

D² is a second clamping-plate which coacts with the angular extension 10 of the base plate D to clamp and hold the fender bars 7 and 8 to prevent sagging and vibration of the same and incidental strain and wear of the joint threads. It will thus be seen that the base plate D with its complementary clamping plates D', D² effectually strengthens and stiffens all the joints and prevents the strain and wear of the threads to which they would otherwise be subjected.

In addition to their function of strengthening and stiffening the joints of the fender, the brackets serve also as a means for securing it to the truck or fender-board, being provided for this purpose with through bolt holes for the reception of bolts 13 whereby it is securely but removably attached.

It will thus be seen that the fender is completely set up before it is attached, and that it may be detached without separating any of its parts by simply removing the nuts from the bolts 13.

The front of the fender or pilot is covered with an apron 14 of suitable flexible fabric preferably heavy rubber belting or similar

material, the lower edge of which depends into close proximity to the track or road bed as shown in Fig. 1; and the top is covered with wire netting 15, which is securely attached to one of the pilot or fender bars and to one of the rear transverse bars, this netting being sufficiently strong to support any person or object picked up by the fender or thrown thereon.

Having now described my invention, I claim—

1. A car fender constructed of iron pipe or tubing and having a forwardly curved pilot in combination with clamping plates applied to the joints to hold the coupled members rigidly in fixed relation to each other.

2. A car fender constructed of iron pipe or tubing coupled together and having a rigid forwardly projecting pilot, in combination with a bracket comprising an angular base plate adapted to fit against the rear of the fender frame and against the side of the pilot, and clamping plates adapted to clamp and hold the fender bars to prevent vibrations at the joints thereof.

3. In a car fender the combination of rear transverse bars, forwardly curved fender bars coupled with said rear bars, a bracket plate having two arms in angular relation to each other adapted to sustain, respectively, the rear bars and the fender bars, and clamping plates applied to the arms of the brackets to clamp and hold the coupled members of the fender.

4. In a car fender the combination of horizontal and vertical bars coupled together to form a rectangular frame forwardly extending fender bars coupled to said frame, bracket plates, each comprising two arms in angular relation to each other and adapted respectively to embrace the rear frame bars and the fender bars, and clamping plates applied to said bracket arms to clamp and hold the coupled members of the fender to strengthen the joints and prevent vibrations.

5. In a car fender constructed of iron pipe or tubing coupled together and comprising a rear frame and forwardly curved fender bars, the combination with said frame and fender bars of angular clamp-brackets extending around the joints to clamp and hold the coupled members at opposite sides of each joint, said brackets adapted to be attached to the truck or fender board in their applied condition, whereby the fender is adapted to be set up in completed form and to be attached and detached as a whole.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN B. BENTON.

Witnesses:

GRACE M. FINLEY,

HERBERT C. GALLATIN.