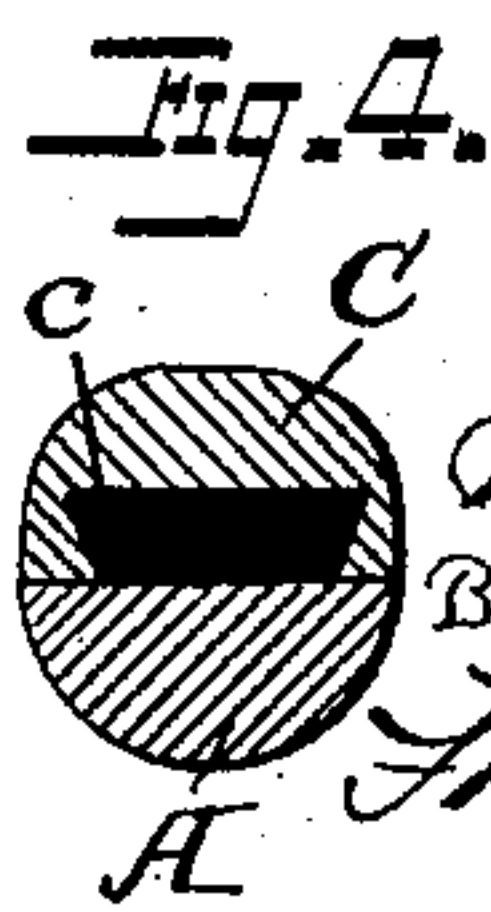
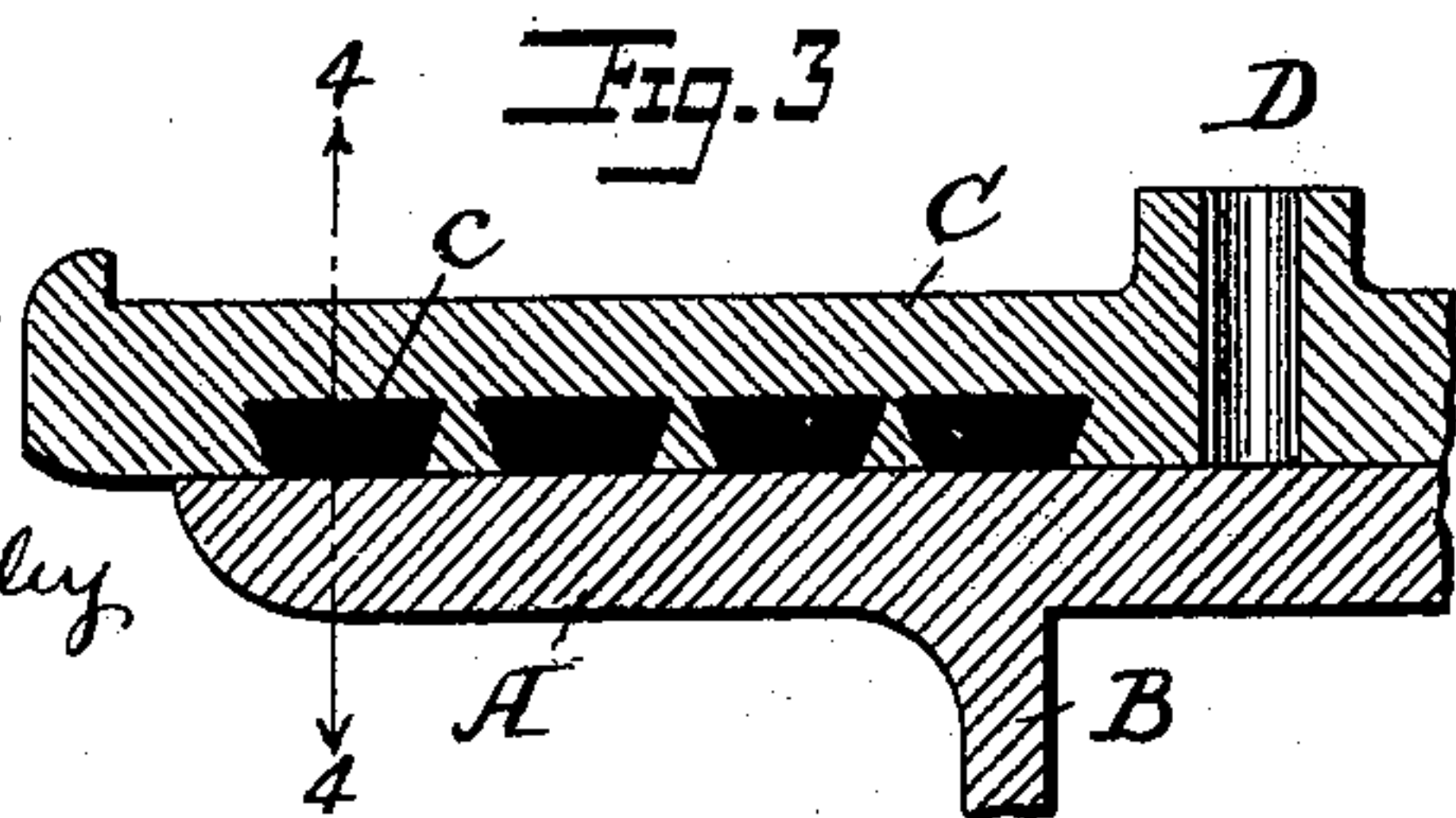
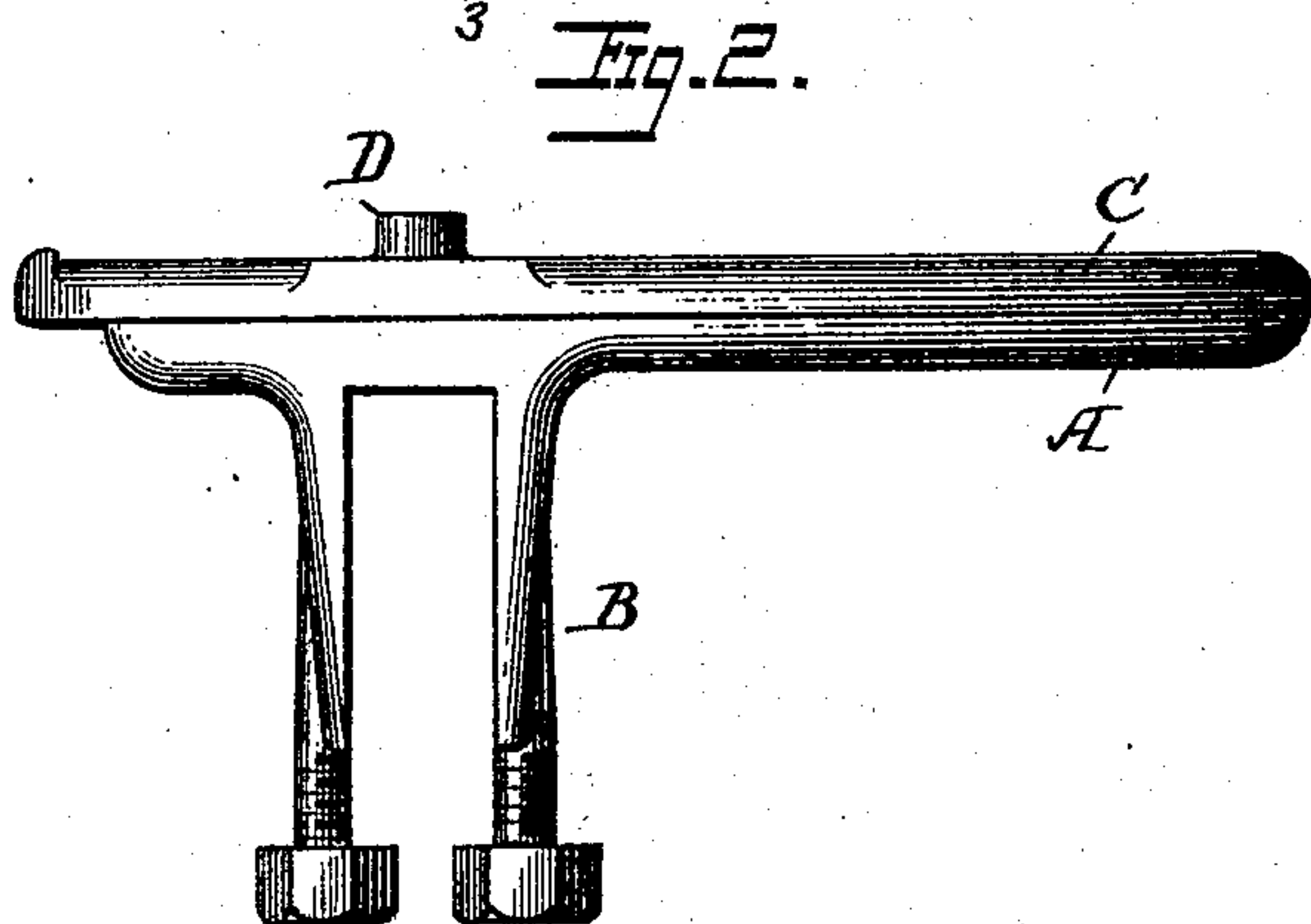
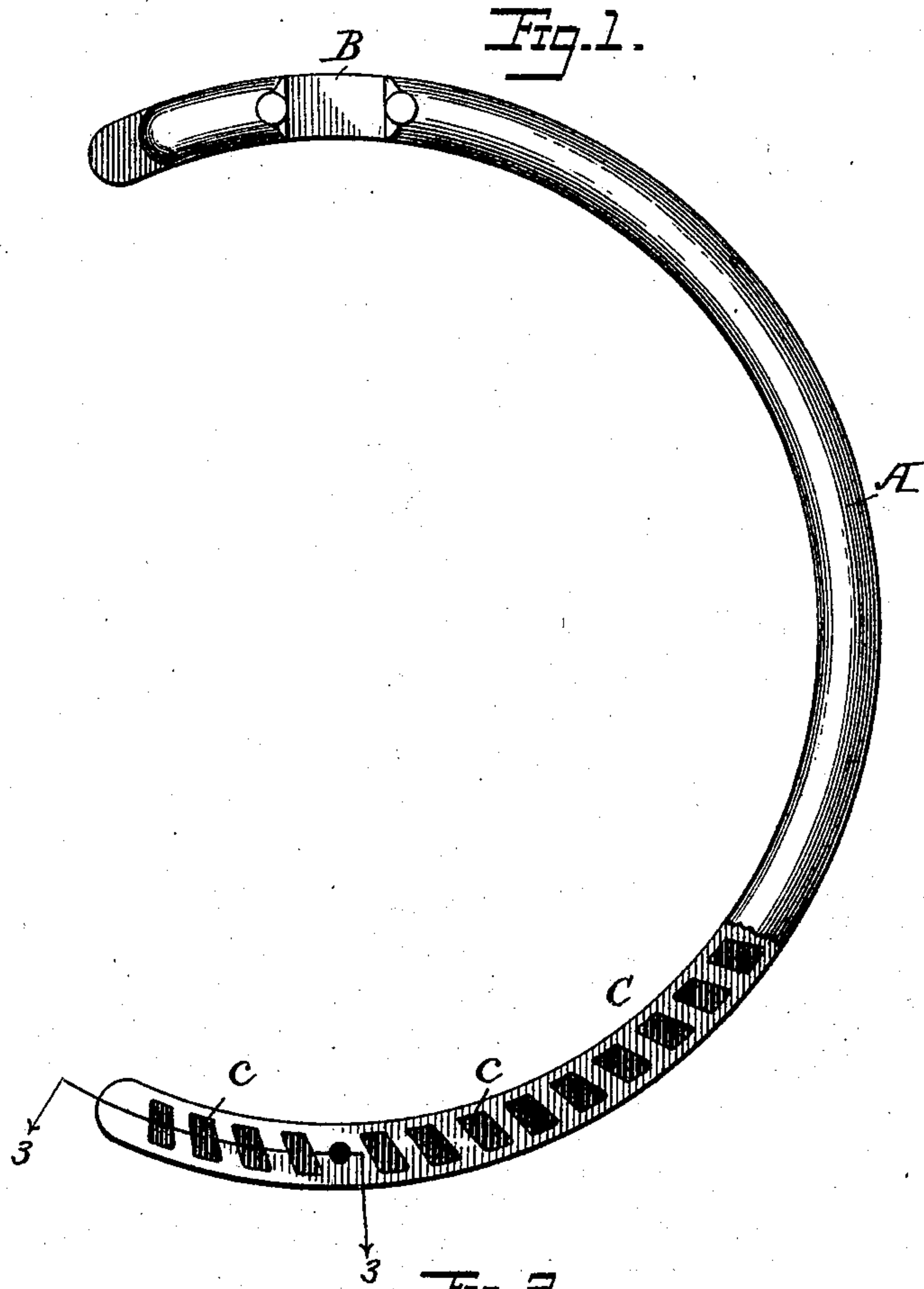


(No Model.)

W. H. BACHE.  
FIFTH WHEEL.

No. 486,060.

Patented Nov. 8, 1892.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM H. BACHE, OF BOUND BROOK, NEW JERSEY, ASSIGNOR OF ONE-HALF TO WILLIAM W. SMALLEY, OF SAME PLACE.

## FIFTH-WHEEL.

SPECIFICATION forming part of Letters Patent No. 486,060, dated November 8, 1892.

Application filed April 20, 1892. Serial No. 429,942. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. BACHE, a citizen of the United States, residing at Bound Brook, in the county of Somerset and State of New Jersey, have invented certain new and useful Improvements in Fifth-Wheels, of which the following is a specification.

My invention relates to fifth-wheels; and it has for its object to provide a simple, cheap, and effective structure which shall be self-lubricating and in which the wheel is light and the lubricating material is so arranged that it is not liable to be displaced or to be disturbed by mud, water, or dust; and to these ends my invention consists in a structure arranged and operating substantially as more particularly pointed out hereinafter.

Referring to the accompanying drawings, Figure 1 is a bottom plan view of the fifth-wheel, the parts being broken away to show the bottom surface of the upper plate. Fig. 2 is a side view. Fig. 3 is a vertical section on the lines 3 3, Fig. 1, and Fig. 4 is a transverse section on the lines 4 4, Fig. 3.

In order to overcome the wear incident to a fifth-wheel, which is liable to cause noise or chattering, various inventions have been made, and in Patent No. 370,718 a construction is shown whereby two different metals are used in the wheel, one of which is provided with a solid lubricant. In this construction, however, the brass plate is a separate plate interposed between the two ordinary plates of the fifth-wheel and the lubricating material is placed in the upper surface of this separate plate, which plate is secured to the bottom plate of the wheel by bolts or rivets. While this wheel has proven more or less effective, the object of my invention is to overcome certain disadvantages arising from its use and to provide an improved and much simpler and more effective wheel, which not only avoids objections overcome by this patent, but others, as will appear from the description of my invention.

Referring to the drawings, A represents the bottom plate of the fifth-wheel, which may be of any suitable construction, preferably of wrought-iron, and may be provided with suitable clips B, by means of which it may be secured to the axle of the vehicle in the ordi-

nary manner. The upper surface of this plate A is preferably flat and smooth. Mounted upon this plate is the upper plate C of the fifth-wheel, which is preferably made of brass or some relatively-soft metal than the plate A, which may be molded and cast and has a configuration substantially agreeing with said plate, and it is provided, preferably, with suitable studs or bearings D, by means of which it can be more readily secured to the head-block or other portion of the vehicle.

In order to prevent wear between the two plates, I provide the upper plate C with a hard lubricant, and while various lubricants can be used I prefer one composed of graphite mixed with a suitable material for hardening and holding it in place. This lubricant is held in recesses c, formed in the under surface of the plate, and in order that it may be prevented from dropping out under jolts or jars these recesses or pockets are smaller at their surface than at their bottoms, or, in other words, their edges are undercut, as clearly shown in Figs. 3 and 4, so that when the lubricant is compressed in the pockets it will be securely held against displacement.

In order that the lubricant may extend over as much of the contacting surfaces of the two plates as possible, I make elongated pockets, as shown in Fig. 1, arranged each at an angle to a radial line drawn from the center of the wheel, as in this way I am enabled to almost completely cover the bearing-surfaces of the two plates with the lubricant, and the lubricating material will spread itself under wear over practically all parts of the contacting surfaces. Furthermore, the lubricant being applied to the upper portion or plate of the wheel, mud, water, or dust are prevented from lodging or remaining on the surface of the lubricant and causing excessive wear between the faces of the wheel. Moreover, I have found it is much easier to apply and retain the lubricant in the recesses in the cast upper half of the wheel than in the separate plate of the patent, which on account of its being thin is liable to bend or spring out of shape and loosen or throw out the lubricant.

The separate plate heretofore used is difficult to secure without buckling or warping, difficult to maintain flat under changes of



temperature, and is expensive in its application, all of which objections are avoided by my improved construction.

It will thus be seen that I provide an exceedingly simple and practical wheel which is self-lubricating, not liable to wear, and which avoids many objections to the wheels as now ordinarily made and used, and while I have shown my invention as applied to a wheel having features of construction which are common it is evident that my invention may be applied to other shapes and forms of wheels in which like results may be produced.

What I claim is—

15 1. A fifth-wheel comprising two contacting plates, the upper plate being provided with recesses for the reception of a hard lubricant, substantially as described.

20 2. A fifth-wheel comprising two plates, the upper plate of which is of relatively-soft material than the lower plate and is provided with pockets for the reception of a solid lubricant, substantially as described.

3. A fifth-wheel comprising two plates, one

of which is of wrought-iron and is adapted to be attached to the axle and the other of which is of softer cast metal and adapted to be attached to the head-block of the wagon and provided with recesses on its under side for the reception of a solid lubricant, substantially as described.

4. In a fifth-wheel composed of two plates, the upper cast plate provided with pockets having undercut edges for the reception and retention of a solid lubricant, substantially as described.

5. In a fifth-wheel composed of two plates, the upper cast plate provided with elongated pockets for the reception of a hard lubricant, arranged at angles to radial lines, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

W. H. BACHE.

Witnesses:

GEORGIA P. KRAMER,  
ALLE N. DOBSON.