

No. 619,824.

Patented Feb. 21, 1899.

E. B. FETZER.  
PUMP OPERATING ATTACHMENT.

(Application filed Mar. 31, 1898.)

(No Model.)

Fig. 1.

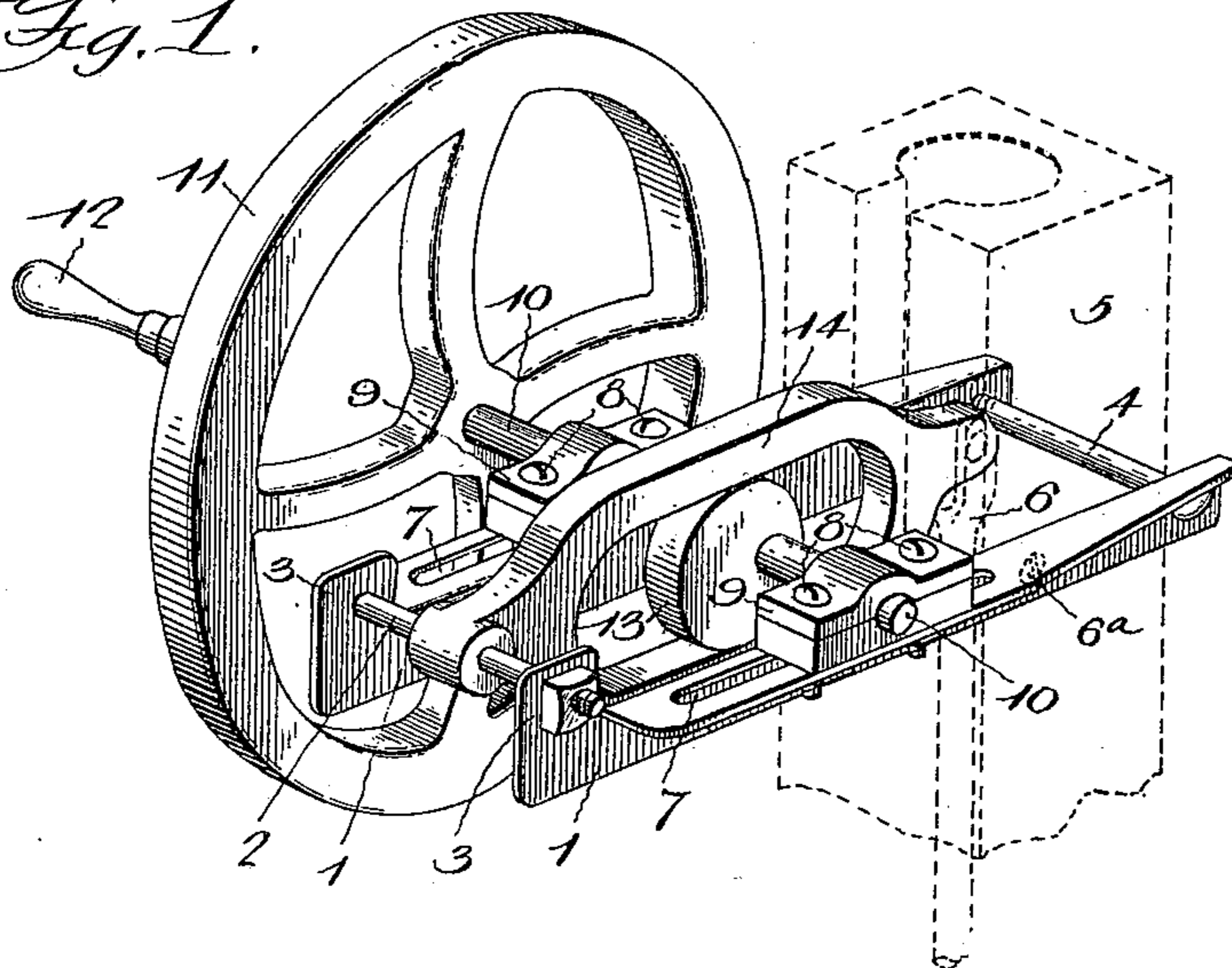


Fig. 2.

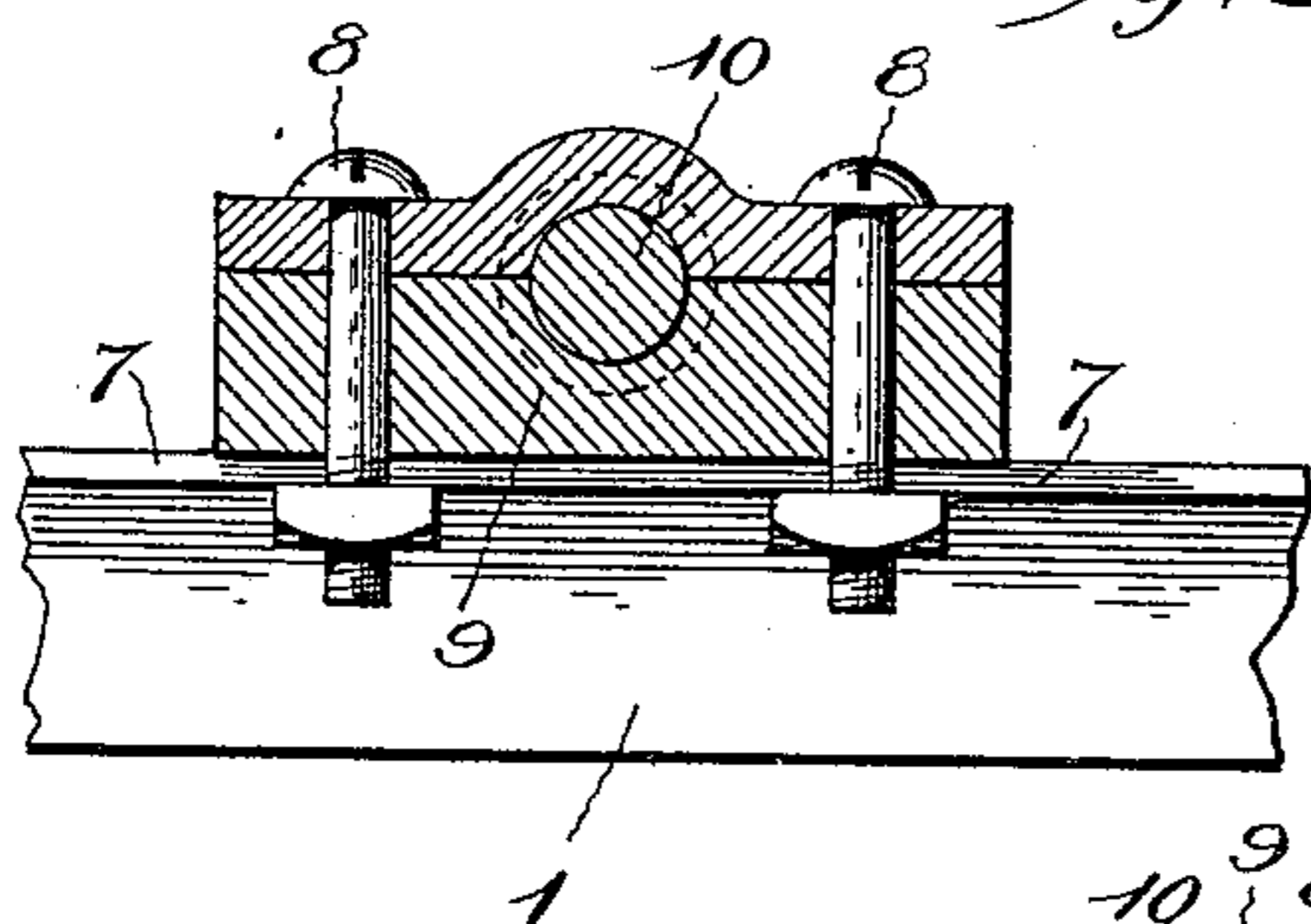
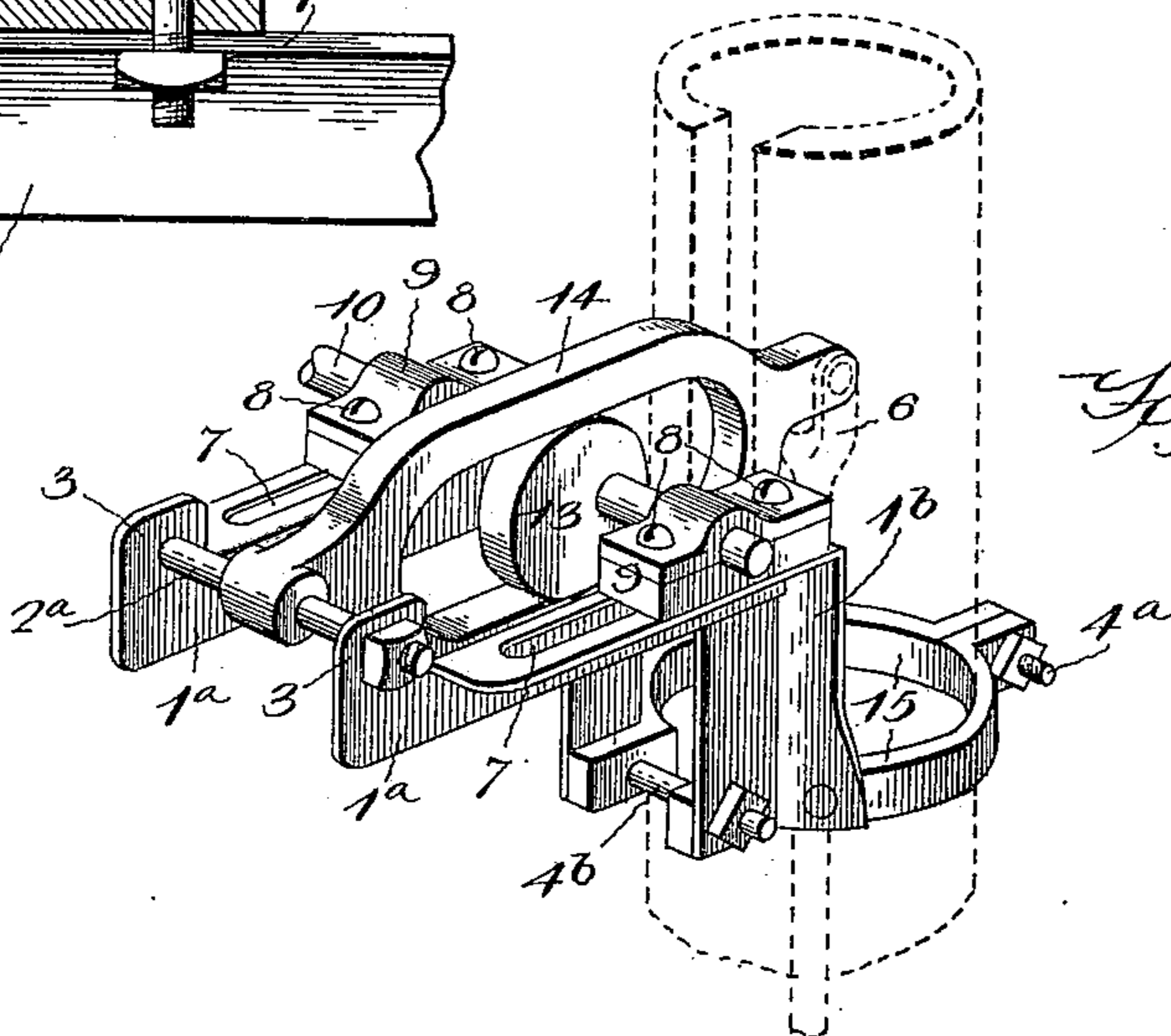


Fig. 3.



Witnesses

J. Graupliverwell, By His Attorneys,

*[Signature]*

Elias B. Fetzner, Inventor.

*[Signature]*

# UNITED STATES PATENT OFFICE.

ELIAS B. FETZER, OF MONTANDON, PENNSYLVANIA.

## PUMP-OPERATING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 619,824, dated February 21, 1899.

Application filed March 31, 1898. Serial No. 675,914. (No model.)

*To all whom it may concern:*

Be it known that I, ELIAS B. FETZER, a citizen of the United States, residing at Montandon, in the county of Northumberland and State of Pennsylvania, have invented a new and useful Pump-Operating Attachment, of which the following is a specification.

My invention relates to pump mechanism, and particularly to an attachment for pumps whereby the manual operation of the pump-rod is facilitated, and, furthermore, to provide simple and efficient means of adjustment for securing the desired length of stroke.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of an attachment embodying my invention applied in the operative position to a pump-barrel, the latter being shown in dotted lines. Fig. 2 is a detail sectional view of one of the bearings. Fig. 3 is a perspective view of a slightly-modified construction of supporting-frame, showing the eccentric and operating-lever in connection therewith.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The attachment embodying my invention is adapted for application to pump-barrels of different constructions without previous preparation of the pump, said attachment embodying all of the means necessary for operating and securing the desired throw of the pump-rod. In the construction illustrated in Fig. 1 the frame of the attachment consists of side arms 1, preferably of cross-sectionally angular construction, connected at their front ends by a transverse tie-bolt 2, engaging upturned ears 3 at the extremities of said arms, and connected at their rear ends by a transverse tie-bolt 4, which extends exteriorly across the rear side of the pump body or barrel 5. The auxiliary intermediate means of attachment, such as screws 6<sup>a</sup>, extending through the vertical flanges of the side arms and engaging the pump barrel or body, may also be used when desired; but the tightening of the tie-bolts under ordinary circumstances will be found sufficient to properly clamp the frame of the attachment upon a

pump-barrel of cross-sectionally rectangular construction.

The horizontal members or flanges of the side arms are slotted, as shown at 7, for the reception of bolts 8, by which bearing-boxes 9 are locked in place, said bearing-boxes being designed for a driving-shaft 10, which extends transversely of the supporting-frame and is provided beyond the same with a fly or driving wheel 11, preferably fitted with a handle or other crank 12. This shaft, between its bearings, also carries an eccentric 13 for coöperation with a slotted operating-lever 14, fulcrumed at one end upon the transverse tie-bolt 2 and extending at its other end into a slot of the pump-barrel 5 for attachment to a pump-rod 6 or the equivalent thereof. The slot of the operating-lever is of a width equal to the diameter of the eccentric, but of a length exceeding twice the diameter thereof, whereby in order to vary the length of the stroke accomplished by means of the lever the bearings for the driving-shaft may be adjusted toward or from the fulcrum of the lever by means of the slots provided for that purpose without affecting any of the other members of the apparatus.

In the modified construction of frame illustrated in Fig. 3 the side arms 1<sup>a</sup> are provided with extensions or attached clamp members 15 for contact with opposite sides of a pump-barrel of cross-sectionally round construction, the opposite extremities of said arms, however, being connected by transverse tie-bolts 2<sup>a</sup> and 4<sup>a</sup>, as hereinbefore described in connection with the other form of the apparatus. Also an auxiliary tie-bolt 4<sup>b</sup> is employed at an intermediate point to span the interval between the frame at the front side of the pump-barrel. This additional or auxiliary tie-bolt is necessitated in the modified form of the apparatus by reason of the fact that it is desirable in the latter to offset the arms in front of the pump-barrel, as shown at 1<sup>b</sup>, thus raising the operating mechanism above the plane of those portions of the side arms which engage the pump-barrel.

It will be understood that the device embodying my invention is applicable to any of the ordinary forms of pump-barrels and embodies in its construction all of the mechanism necessary for operating a pump-rod with

a stroke of the desired length, and the means employed for actuating the pump-rod are such as to vastly facilitate the operation of pumping by providing driving means capable of  
5 a continuous uniform motion, which is converted into a reciprocatory motion of the driven member. Furthermore, it will be seen that the apparatus embodying my invention comprises a minimum number of parts for  
10 converting a continuous uniform rotary motion of the driving part into a reciprocatory motion of the driven member.

Various changes in the form, proportion, and the minor details of construction may be  
15 resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

20 1. An operating attachment for pumps having a frame comprising parallel side arms, transversely opposite bearing-boxes mounted upon the side arms for adjustment parallel therewith toward and from a pump-stock,  
25 means for securing the bearing-boxes at the desired adjustment, a driving-shaft mounted

in said bearing-boxes and carrying an eccentric, and a slotted pump-rod-actuating lever pivoted upon the frame and cooperating with the eccentric, substantially as specified. 30

2. An attachment for pumps having parallel side arms for arrangement in contact with opposite sides of a pump-stock, transverse tie-bolts connecting said side arms at opposite sides of the plane of the pump-stock,  
35 a longitudinally-slotted pump-rod-actuating lever adapted for connection at one end to a pump-rod and fulcrumed at the other end upon one of said side-arm-connecting tie-rods, and an eccentric arranged for cooperation  
40 with the slot of said lever, and having its shaft mounted in transversely opposite bearings on the side arms and capable of adjustment toward and from the fulcrum of the lever, substantially as specified. 45

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELIAS B. FETZER.

Witnesses:

WM. P. WENDLE,

S. H. SANDERS.