

(No Model.)

J. F. VENSEL.
FORCE FEED LUBRICATOR.

No. 470,522.

Patented Mar. 8, 1892.

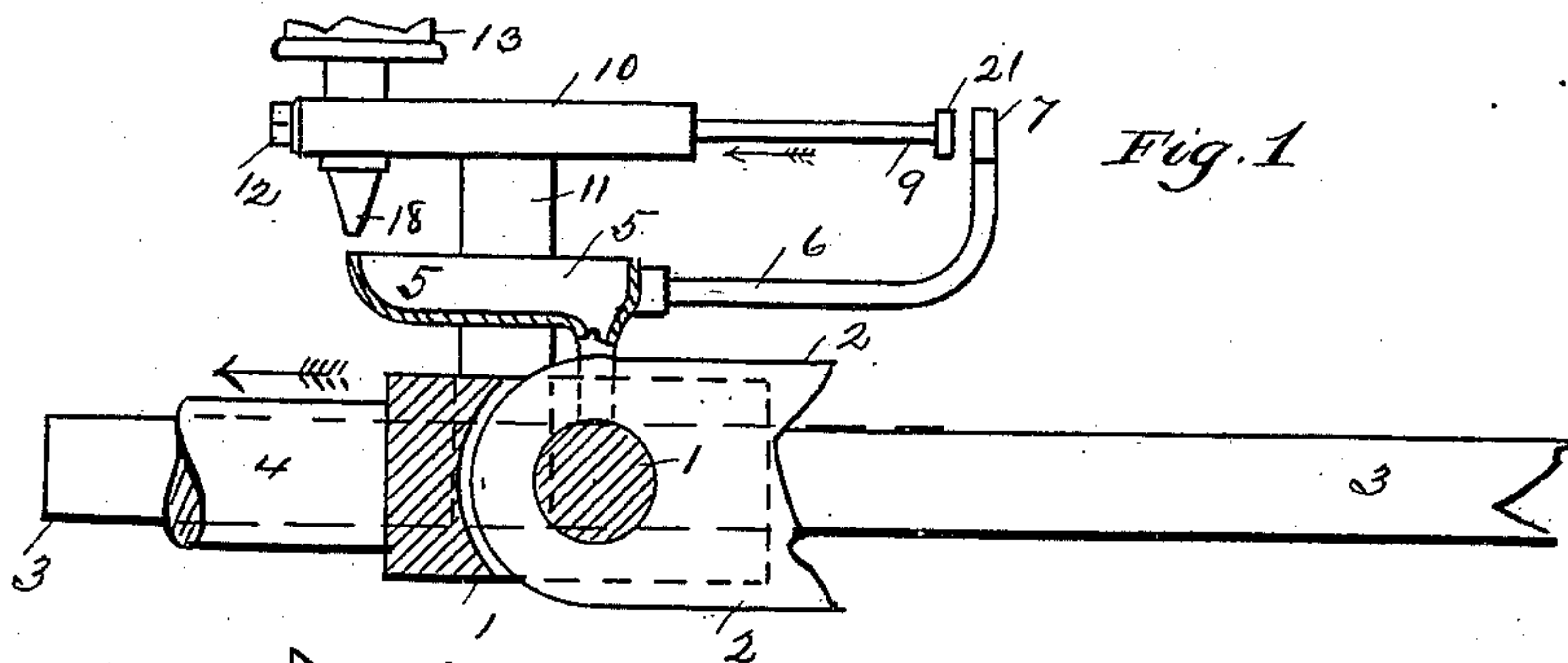


Fig. 1

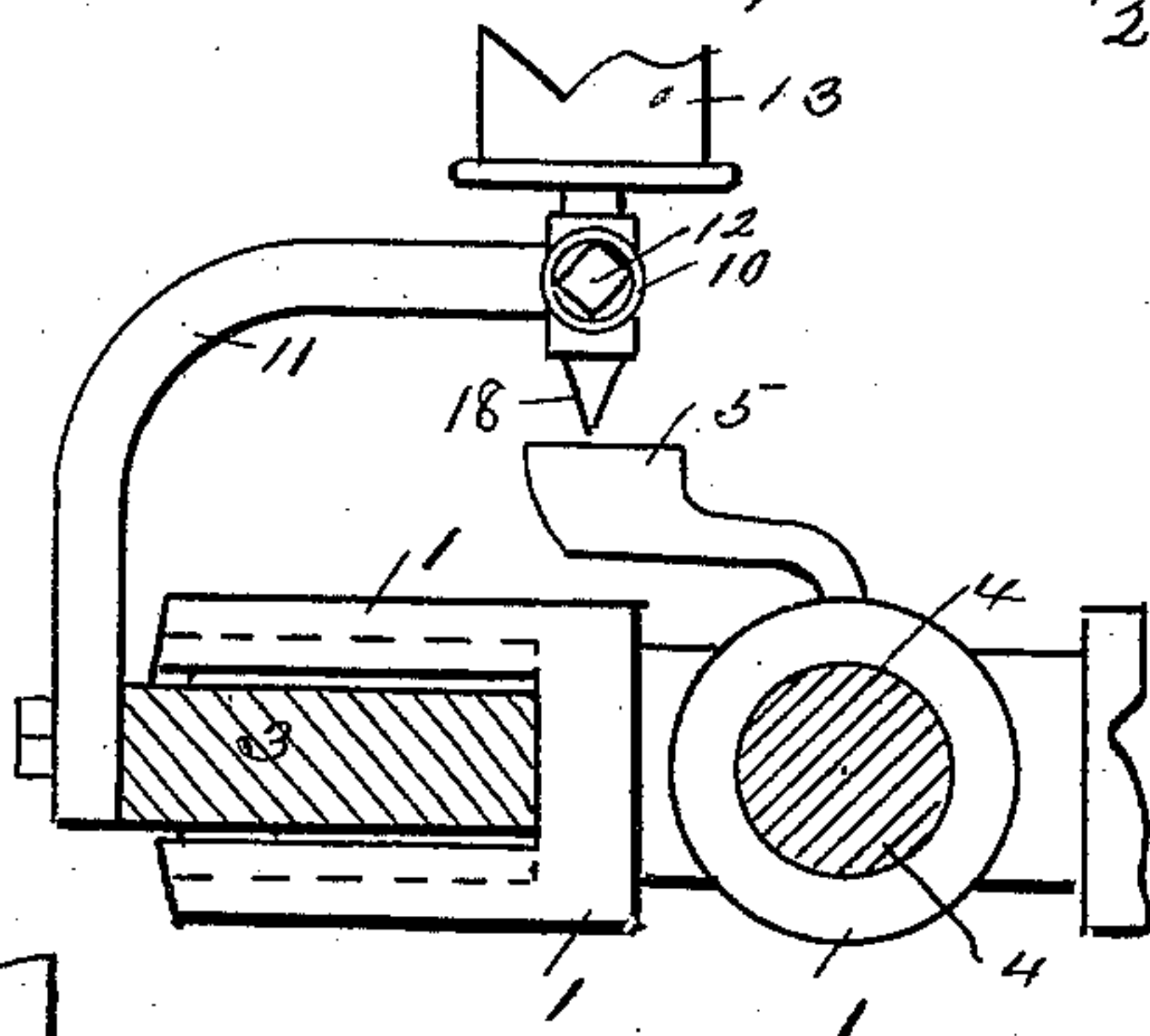


Fig. 2.

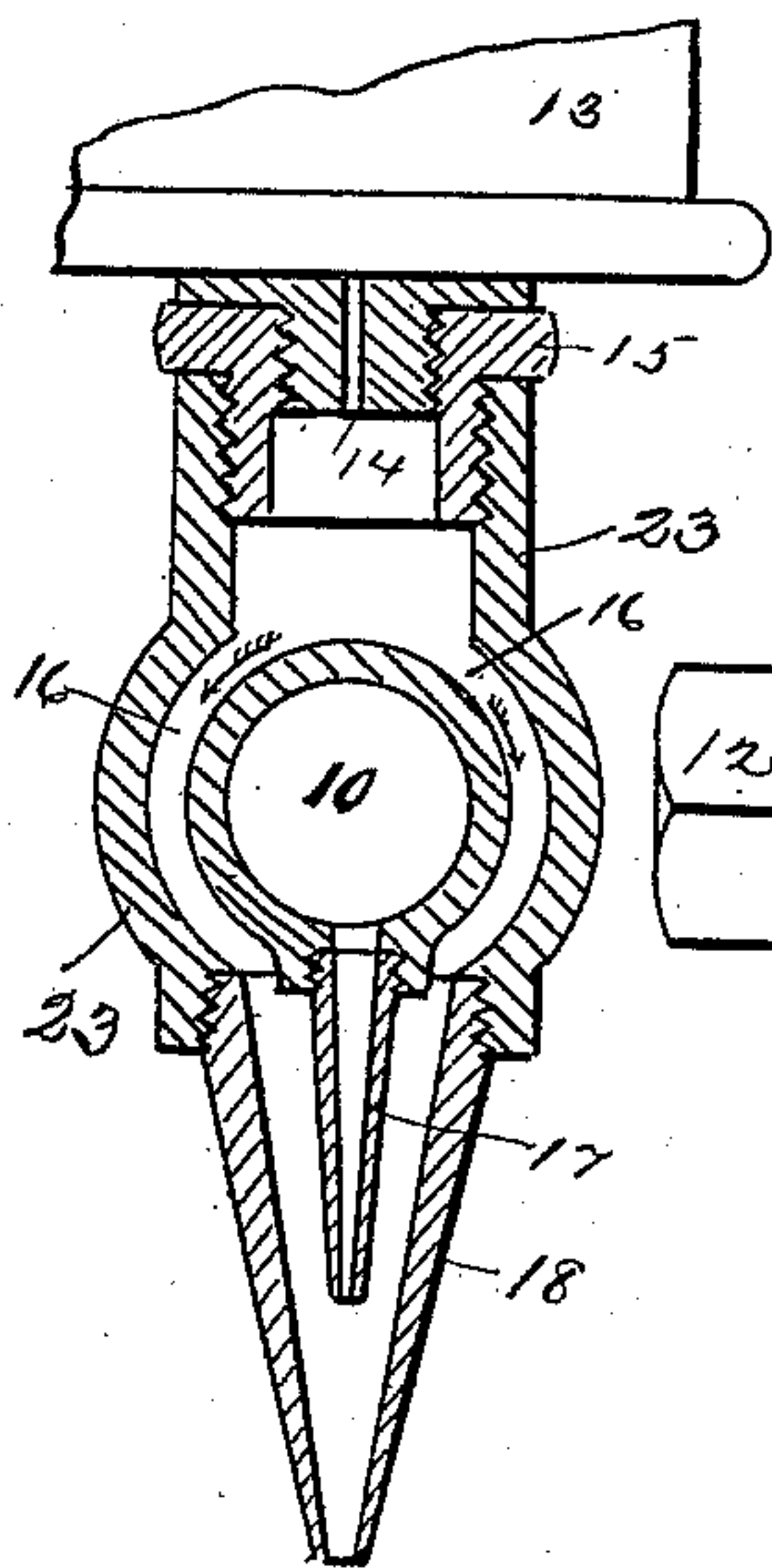


Fig. 3

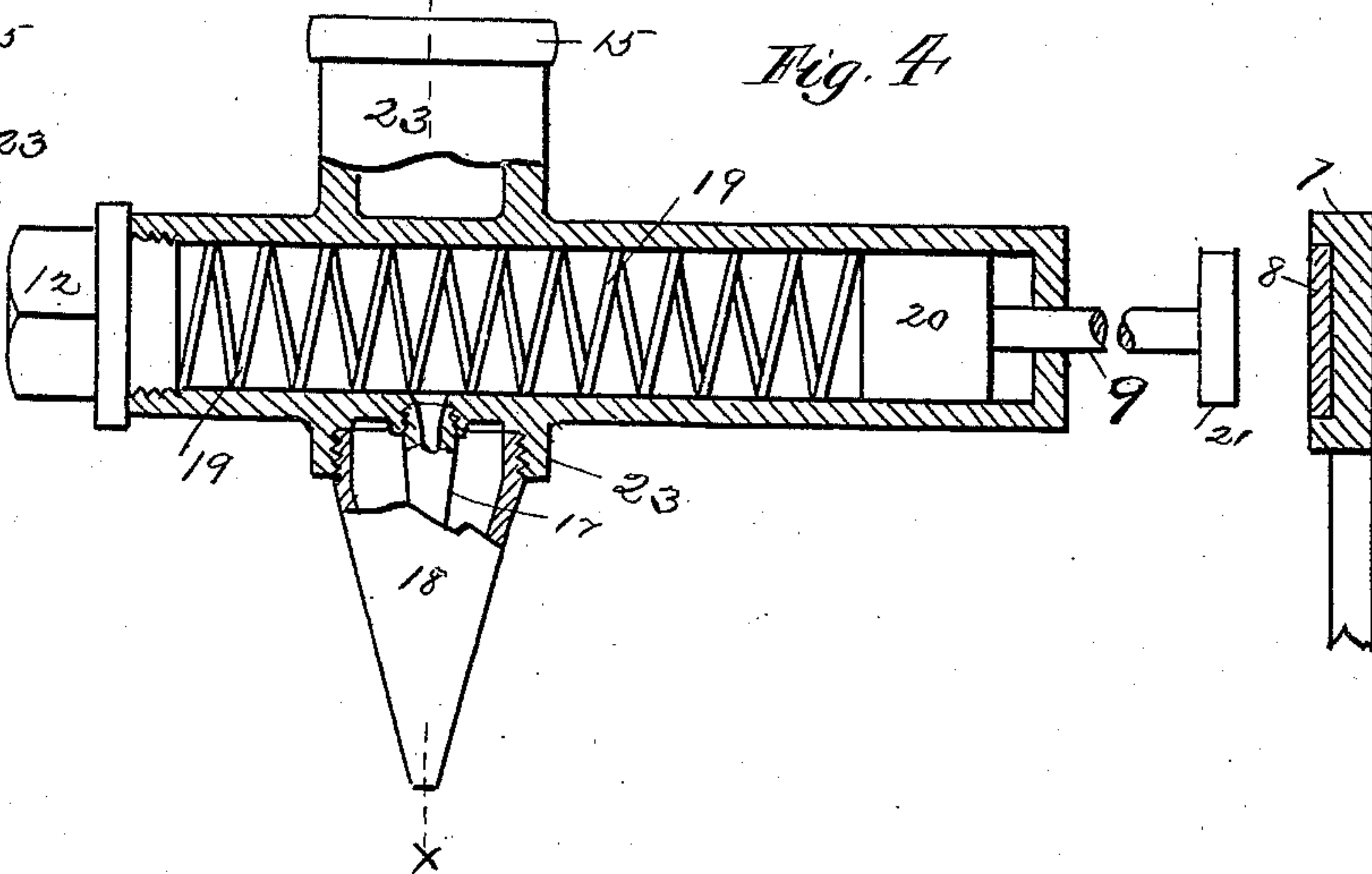


Fig. 4.

Witnesses:
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FORCE-FEED LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 470,522, dated March 8, 1892.

Application filed September 5, 1891. Serial No. 404,906. (No model.)

To all whom it may concern:

Be it known that I, JACOB F. VENSEL, a citizen of the United States, residing at Tarentum, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Oilers; and I do hereby 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved oiler for crank-pins and cross-heads; and it consists in certain details of construction and combination of parts, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a sectional side elevation of my improved oiler, showing the same in position on an ordinary cross-head. Fig. 2 is a sectional end elevation of the same. Fig. 3 is an enlarged sectional detailed elevation of the air-cylinder and its piston together with the jet for forcing the oil into the cup. Fig. 4 is a sectional end elevation of the same, taken on the line *x x*.

To put my invention into practice with a cross-head 2, of ordinary construction, and thereby provide a means for lubricating the pitman pin or journal 1, I attach to the said pitman 2 an oil-cup 5, of a greater length than width and provided with a passage communicating with the journal 1. Attached to this cup 5 and extending in the direction of the length of the said pitman is an arm 6, having an upward extension 7 and the said extension fitted with a disk 8, of a suitable sound-deadening substance. Attached at a suitable position on the slides 3 is a bent arm 11, to which is connected a cylinder 10, which is arranged and made to occupy a position in line with the center of the disk 8. Formed integral with this cylinder 10 is an upward-extending portion 23, which is provided with passages 16, extending about the cylinder, and the lower end of the said portion 23 fitted with a nozzle 18. The upper part of this portion 23 is used for the purpose of connecting an oil-reservoir 13 thereto, which communicates with the interior by means of a small passage 14. Fitted centrally within the nozzle

18 and in communication with the interior of the cylinder 10 is a small jet-nozzle 17. Operating within this cylinder 10 is a piston 20, attached to a rod 9, which projects through the one end of the cylinder and is connected to a small disk 21, which is adapted to strike against the disk 8 and move the piston inward. The opposite end of this cylinder 10 is fitted with a screw-cap 12 and the intervening space between this cap 12 and the piston 20 filled with a light spiral spring 19.

In operation as the cross-head in its movement along the slides 3 brings the disk 8 in contact with the rod 9 the same is moved inward, thereby expelling the air from the cylinder through the jet 17, and when the pressure is removed from the rod 9 the spring moves the piston 20 back to its former position. This forced draft through the jet 17 tends to draw the oil from the reservoir 13 through the passages 16 and nozzle 18 and force the same into the cup 5. The position of the nozzle 18 is such as to bring the same over the cup 5 for the last several inches of the stroke of the cross-head.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an oiler, the combination, with a cylinder having two passages, one encircling the other, the inner passage being for air and the outer passage for oil, a nozzle 17 for said inner passage, and a nozzle 18 for said outer passage, said nozzle 18 inclosing said nozzle 17, of a piston operating in said inner passage for causing a forced draft through said nozzle 17, a cup adjacent to the discharge end of said nozzle 18 and adapted to receive the oil therefrom, and a tube connecting said cup with the part to be lubricated.

2. In an oiler, the combination, with a cylinder having two passages, one encircling the other, the inner passage being for air and the outer passage for oil, a nozzle 17 for said inner passage, and a nozzle 18 for said outer passage, said nozzle 18 inclosing said nozzle 17 and having connection with the part to be lubricated, of a piston operating in said inner passage and having an outwardly-extending rod, and a movable rod engaging said piston-rod for operating the same.

3. In an oiler, the combination, with a cyl-

inder having two passages, one encircling the
other, the inner passage being for air and the
outer passage for oil, a nozzle 17 for said in-
ner passage, and a nozzle 18 for said outer
5 passage, of a piston operating in said inner
passage and having an outwardly-extending
rod, an oil-cup supported by a movable part
of the machinery, whereby it will move with
said movable part, said oil-cup being adapted
10 to receive the oil from said nozzle 18 and hav-
ing a tube for conducting the same to the
part to be lubricated, a rod extending from
said oil-cup to a point adjacent to the outer
end of the piston-rod and adapted to engage
15 said piston-rod and force the piston inward,
and means for forcing said piston outward.

4. In an oiler, the combination, with a cyl-
inder having a jet-nozzle, an extension 23,
having a nozzle 18, said extension encircling

said cylinder and having interior communi- 20
cation with an oil-reservoir and said nozzle
18, inclosing said jet-nozzle, and means for
conducting the oil from said nozzle 18 to the
part to be lubricated, of a piston operating in
said cylinder and having an outwardly-ex- 25
tending stem or rod, a spring in said cylinder
for forcing said piston outward, and a rod
having connection with and operated by a
moving part of the machinery for engaging
said piston-rod and forcing said piston inward. 30

In testimony that I claim the foregoing I
hereunto affix my signature this 15th day of
July, A. D. 1891.

JACOB F. VENSEL. [L. S.]

In presence of—

M. E. HARRISON,
CHARLES LARGE.