

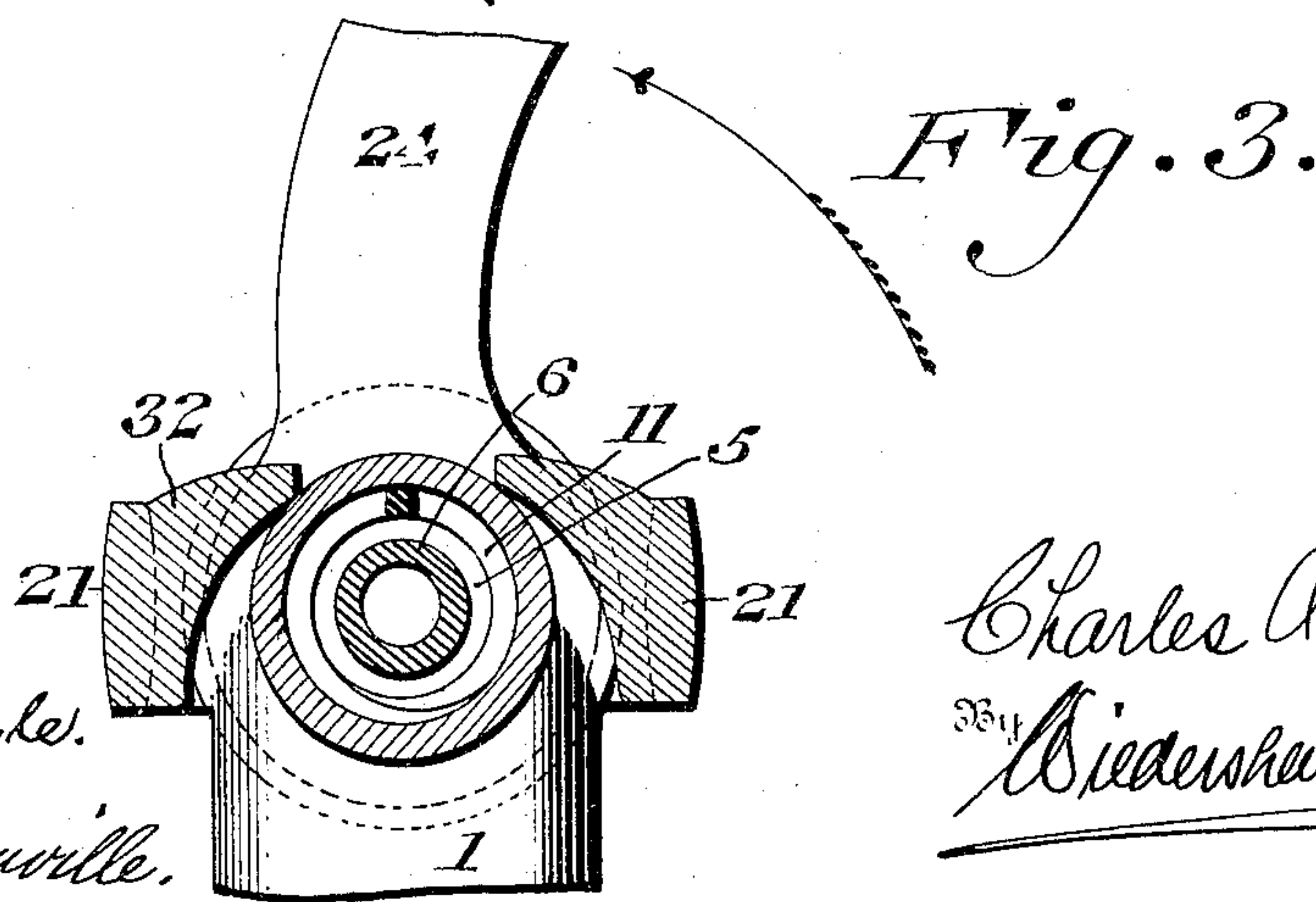
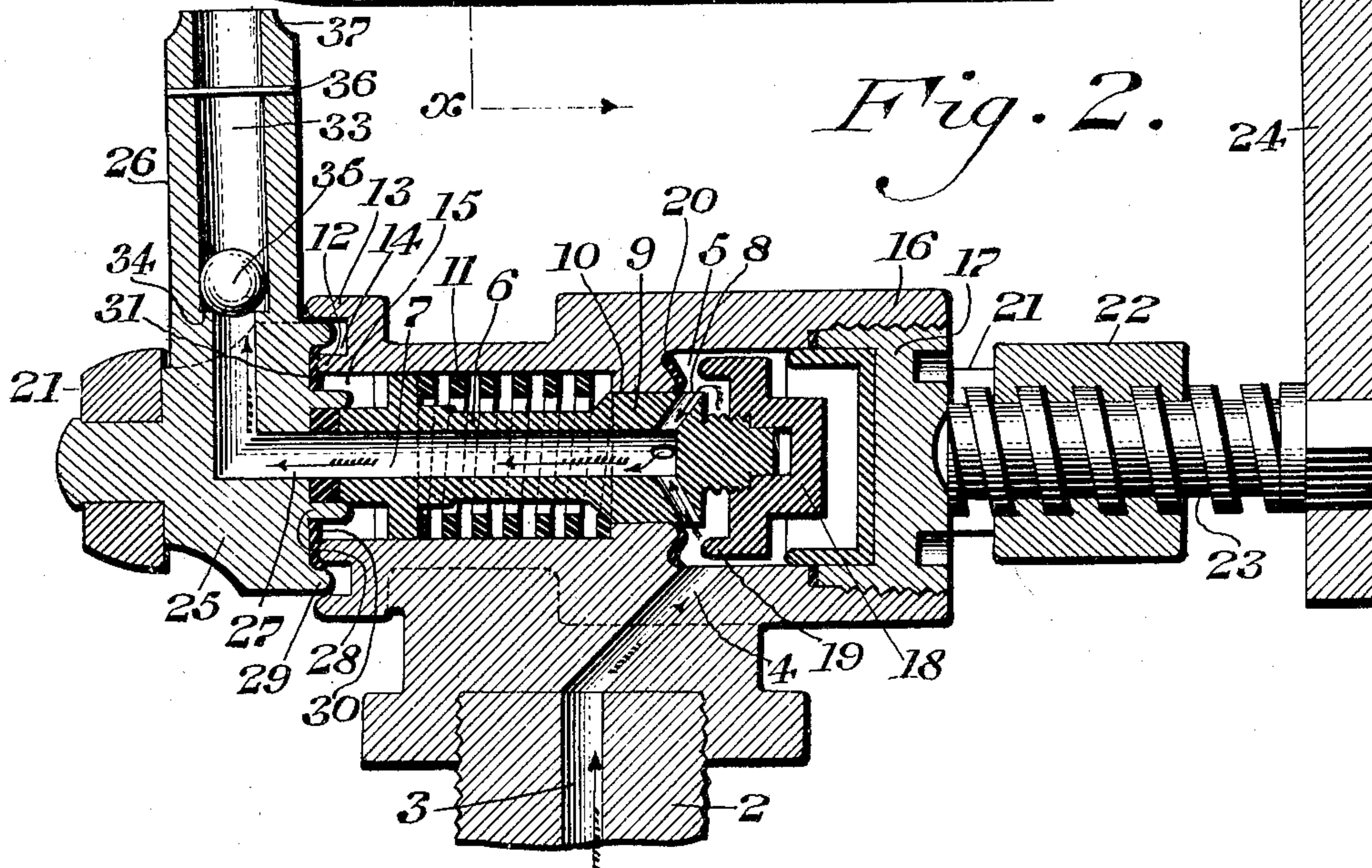
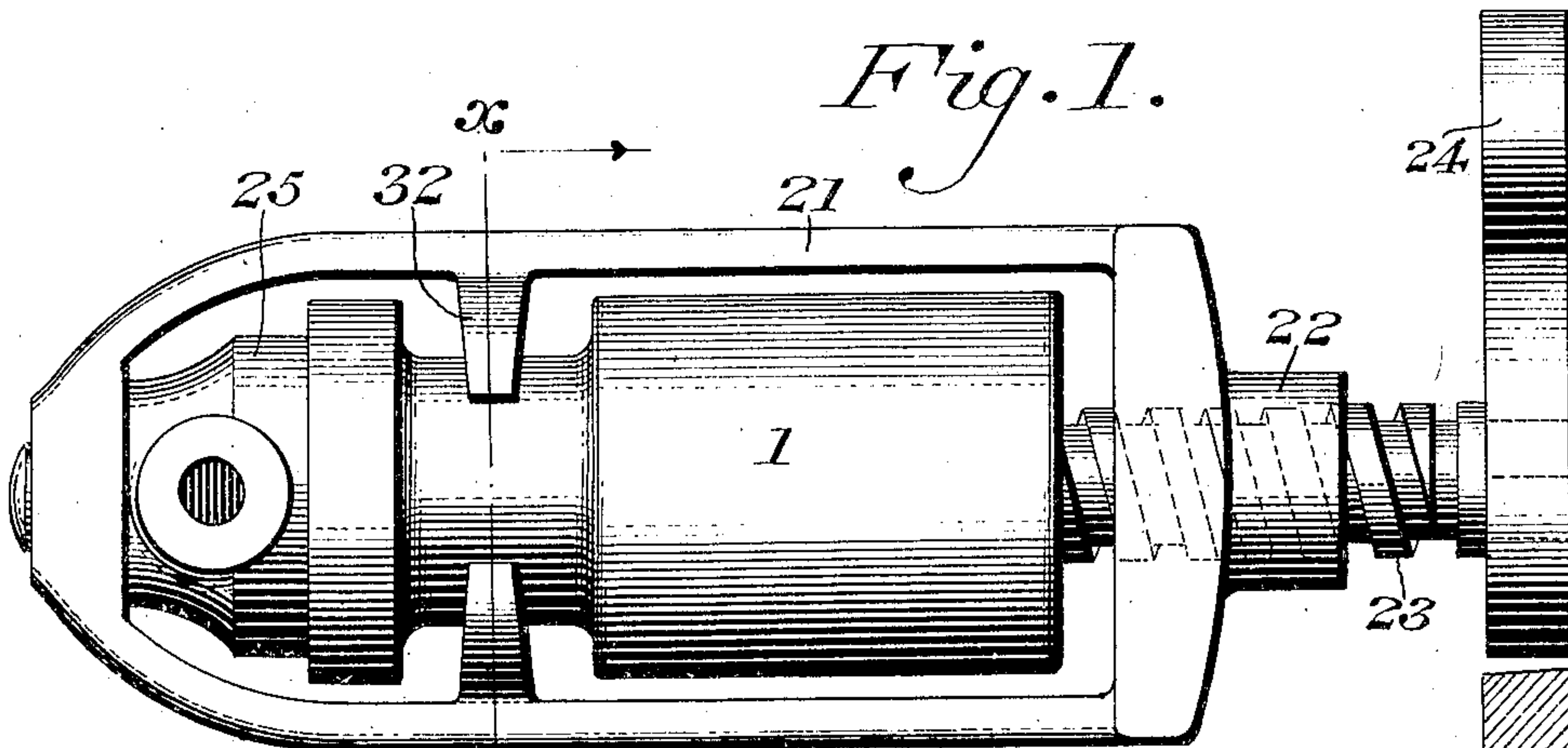
No. 770,570.

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C. A. GEDDES.
COUPLING HEAD FOR SODA TANKS.

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NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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COUPLING-HEAD FOR SODA-TANKS.

SPECIFICATION forming part of Letters Patent No. 770,570, dated September 20, 1904.

Application filed April 26, 1904. Serial No. 204,941. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. GEDDES, a citizen of the United States, residing in the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Coupling-Heads for Soda-Tanks, of which the following is a specification.

My invention relates to coupling-heads for soda-tanks.

It comprises means whereby the head may be instantly connected with the tank, whereby the escape of the charged liquid and gas is largely prevented.

It further consists of novel features of construction, all as will be hereinafter fully set forth.

Figure 1 represents in top plan view a head embodying my invention. Fig. 2 is a vertical section thereof. Fig. 3 is a transverse section through the line *x x*, Fig. 1.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates a valve-casing, to which is secured a threaded coupling 2, from which in practice depends a tubular stem or leg (not shown) adapted to reach to the lower end of a soda-tank. Apertures 3 4 in the coupling 2 and casing 1, respectively, lead to the valve-chamber 5. Within the chamber 5 is a tubular stem 6, the longitudinal bore 7 of which connects by means of lateral ports 8 with the valve-chamber 5. The head 9 of the stem 6 reciprocates within an internal collar 10 in the body 1, whereby the lateral ports 8 are alternatively opened and closed. The thrust-spring 11 serves to hold the valve in its closed position. At one end of the valve-casing 1 are provided concentric annular flanges 12 13, forming between them an annular groove 14. As will be seen in Fig. 2 of the drawings, the end 15 of the valve-casing is open, exposing the end of the tubular stem 6. The other end, 16, of the casing 1 is closed by a plug 17.

Secured to the inner end of the stem 6 is a portion 18, having an annular flange 19 adapted to bear against a portion 20 when the valve is closed.

Detachably connected with the casing 1 is a yoke 21, provided at one end with a threaded boss 22, within which plays a stem 23, having a thread of quick pitch and having mounted at its outer end a lever or wrench 24. At the opposite end of the frame or yoke 21 is pivotally mounted a block 25, to which is connected a lateral tube 26. The bore of the tube 26 connects with an axial bore 27 in the block 25. At the inner end of the block 25 are concentric annular flanges 28 29, forming between them a groove 30. An annular packing 31 is placed within the groove 30 and a smaller annular packing within the flange 28. As clearly shown in Fig. 2 of the drawings, the bore 7 of the valve-stem 6 and the bore 27 of the block 25 are in alinement when the parts are connected, the packing-washer 31 forming a part of the tubular passage. Lugs 32 on the frame 21 rest on the valve-casing 1 and serve to support the frame in position.

The operation is as follows: The yoke 21 and connected parts being removed from the valve-casing 1, it is evident that by the action of the spring 11 the valve-stem will be forced to the left of the drawing, so that the ports 8 will be within the collar 10 and the valve will be closed. After the coupling 2 has been screwed into the soda-tank and the tube 26 connected with the draft-cock the yoke 21 is placed in position, as shown, and the lever 24 given a very quick movement in the direction of the arrow, Fig. 3. The rotation of the screw 23, the inner end of which presses against the closed end of the valve-casing 1, serves to draw the block 25 into instant contact with the casing 1, as shown in Fig. 2 of the drawings. This acts to force the flange 12 against the packing 31 and to force the stem 6 to the position shown in Fig. 2, so that the ports 8 are in free communication, through the chamber 5 and passages 4 and 3, with the tank.

I have shown the bore 33 of the tube 26 as enlarged to form a shouldered valve-seat 34, on which rests a ball-valve 35, which is retained in position by a cross-rod 36 or by any well-known device. The ball 35 rises freely from its seat under the pressure of the fluid, but

acts to prevent any return flow from the draft-tube when the block 25 is disconnected from the casing 1. The reduced end 37 of the tube 25 is adapted to have the tube which leads to the fountain soldered or otherwise attached thereto without overheating or in any way interfering with the valve 35.

The great advantage of my device lies in the speed with which the connection is made, whereby practically all escape of charged liquid or gas is prevented and whereby the connection can be as easily broken without loss of gas or water. The single lever 24, acting on the quick-pitched screw 23, enables the operator by a single motion of his hand to connect or disconnect the device.

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

1. A coupling-head for soda-tanks comprising a valve-casing provided with means for connecting it to the tank and with a longitudinally-movable tubular valve-stem, a block having a bore adapted to cooperate with said tubular stem, a draft-tube secured to said block, a yoke adapted to connect said valve-casing to said block, and a screw of quick pitch in said yoke and provided with a lever for instantly engaging said block with said valve-stem and for reciprocating the latter.

2. A coupling-head for soda-tanks compris-

ing a valve-casing, means for coupling said casing to the tank, a longitudinally-movable valve-stem in said casing, one end of said casing and of said stem being open, a yoke detachably engageable with said casing, a hollow block in said yoke adapted to engage with the open ends of said casing and of said stem, a draft-tube connected to said block, a screw of quick pitch in said yoke and adapted to bear against the closed end of said casing, and a laterally-extending lever on said screw, whereby said block and said casing may be instantly connected and said valve-stem moved to open the valve.

3. A coupling-head for soda-tanks provided with means for connecting it to the tank and with a longitudinally-movable tubular valve-stem, a block having a bore adapted to cooperate with said tubular stem, a draft-tube secured to said block, a yoke adapted to connect said valve-casing to said block, a screw of quick pitch in said yoke and provided with a lever for instantly engaging said block with said valve-stem and for reciprocating the latter, and a ball-valve and valve-seat in said draft-tube.

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Witnesses:

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