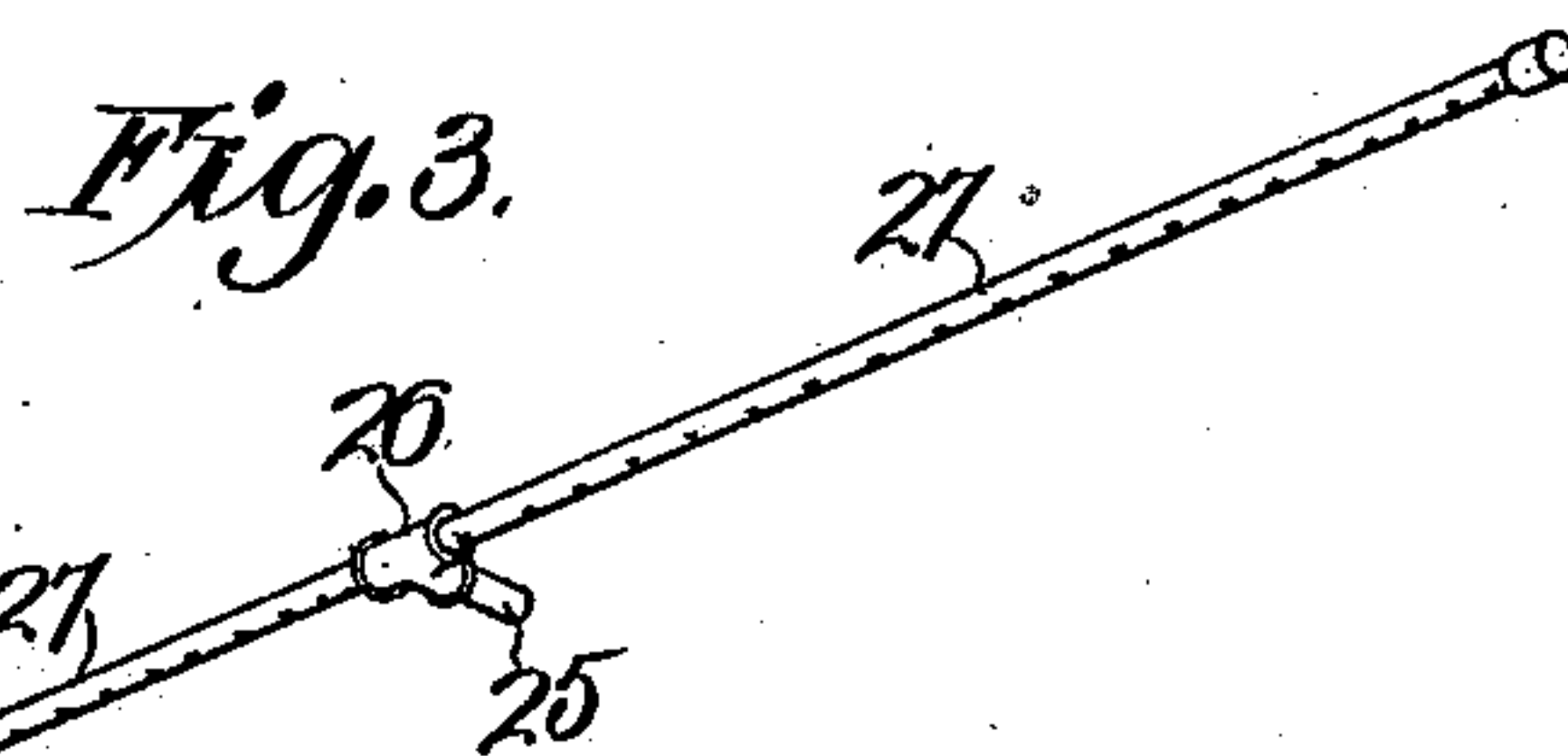
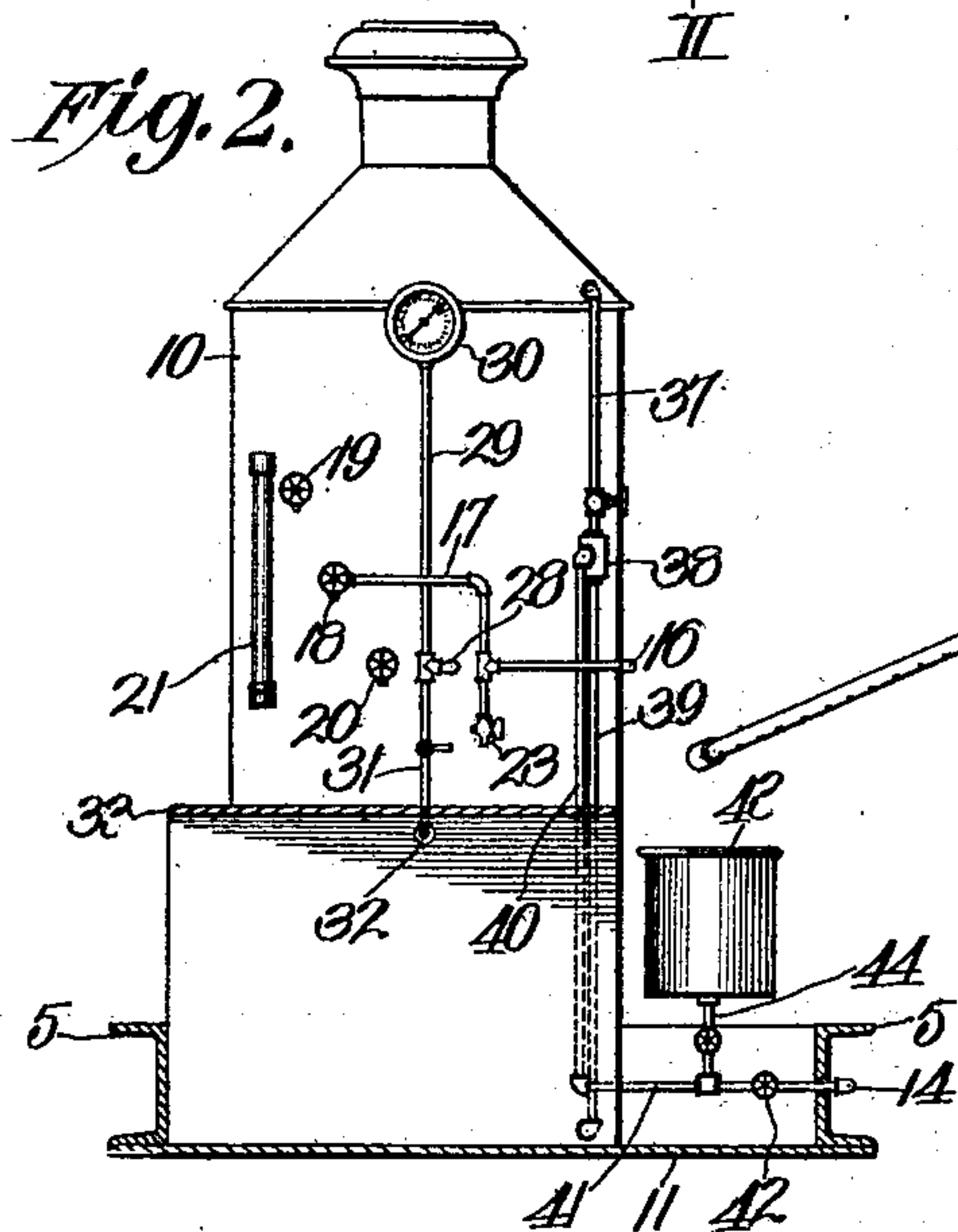
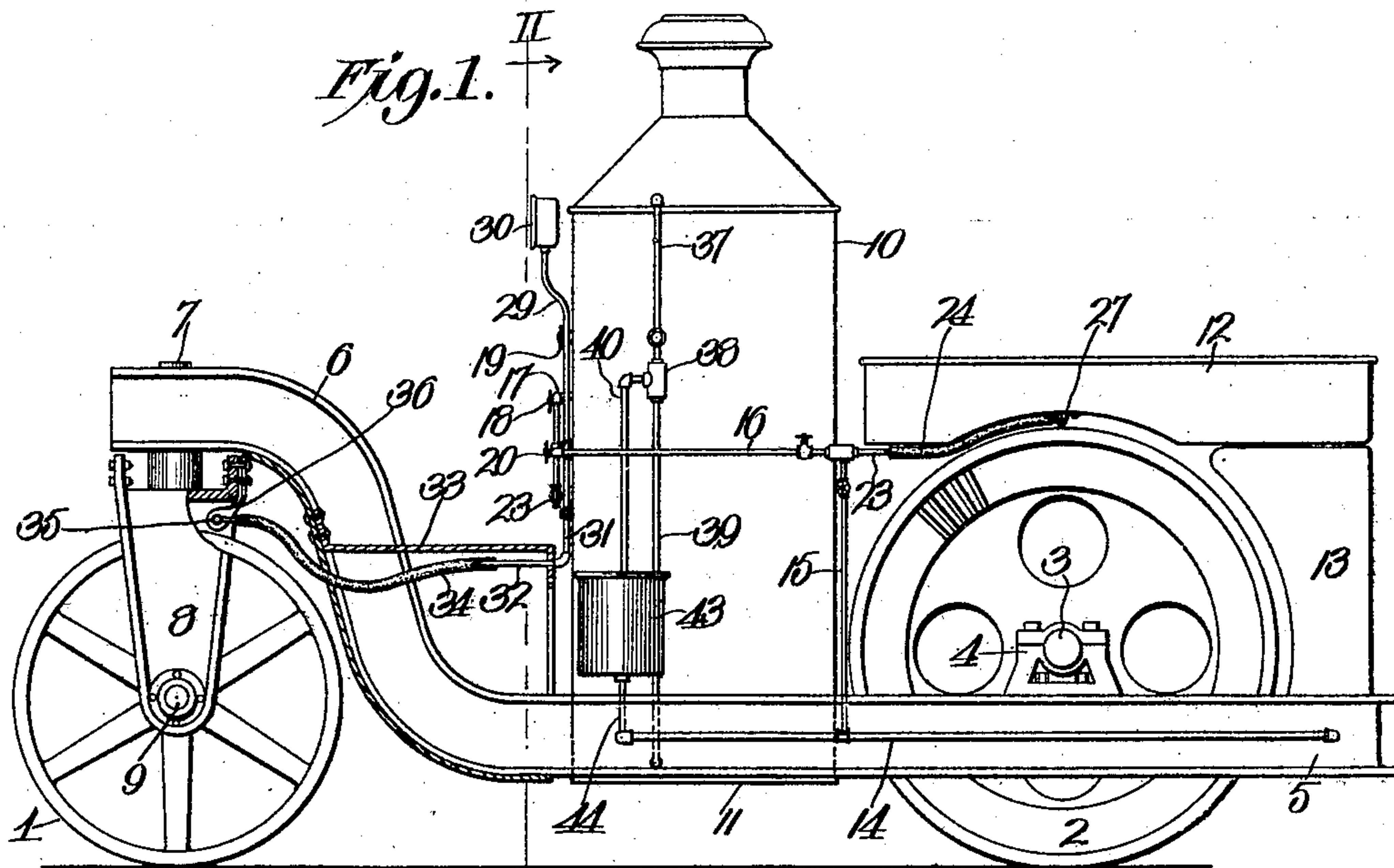


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ATTACHMENT FOR STEAM ROLLERS.
APPLICATION FILED JAN. 31, 1908.

903,223.

Patented Nov. 10, 1908.



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UNITED STATES PATENT OFFICE.

GEORGE J. NEYERLIN, OF KANSAS CITY, MISSOURI.

ATTACHMENT FOR STEAM-ROLLERS.

No. 903,223.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed January 31, 1908. Serial No. 413,677.

To all whom it may concern:

Be it known that I, GEORGE J. NEYERLIN, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Attachments for Steam-Rollers, of which the following is a specification.

This invention relates to steam rollers and more particularly to attachments whereby oil may be automatically supplied to the boiler and with hot water from the latter sprinkled upon the front roller, said attachments also embodying means for sprinkling the rear roller.

A further object is to produce attachments of the character specified which are inexpensive and which can be easily, quickly and cheaply applied to a steam roller.

With these and other objects in view the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawing, in which,

Figure 1, is a side elevation of a steam roller equipped with attachments embodying my invention, a part of the rear end of the roller frame being in section. Fig. 2, is a section on the line II—II of Fig. 1, with the front roller and other parts forward of the boiler, omitted. Fig. 3, is a detail perspective view of a spray pipe forming part of the attachment.

In the said drawing, 1 indicates the rear and 2 the front roller of a street rolling machine, the shaft 3, of the front roller being journaled in bearings 4 mounted on the frame 5. The rear end of the frame is bent upward and rearward to approximately gooseneck form at 6 as customary and swiveled in the rear end of said frame is the usual yoke 8 forming a journal for the shaft 9 of roller 1.

10 is the boiler mounted on the base plate 11 secured to the frame in any suitable manner. 12 is the tool box and 13 the water tank also supported in the usual manner.

14 is a pipe communicating at one end with tank 13 in the usual manner (not shown) and connected by valve-controlled pipe 15 with a valve controlled pipe 16 connected by pipe 17 with the central gage

cock 18 of the boiler, the latter being also equipped as usual with gage cocks 19 and 20 respectively above and below gage cock 18 and with a water glass 21, the gage cocks being usually manipulated by the engineer for the purpose of determining the height of water in the boiler when it is too dark or inconvenient to ascertain such height from the water glass. Pipe 17 is also equipped with a valve-controlled blow off cock 23. Coupled to pipes 15 and 16 in front of their respective valves is a pipe 23, connected by a flexible pipe or hose 24 to a short pipe 25 connected by a T-coupling 26 to the horizontal jet pipes 27 secured to the underside of the tool box above the roller 2 for a purpose which hereinafter appears.

28 is a pipe communicating with the boiler in about the plane of the lower gage cock and with the stand pipe 29 equipped with a steam gage 30 at its upper end. Communicating with said pipes 28 and 29 is a downwardly extending valve controlled pipe 31 coupled to a rearwardly extending pipe 32 underlying platform 33 and connected by a flexible pipe or hose 34 to the transverse jet pipes 35 of the same construction as the jet pipes 27 but supported above the rear roller 1 by brackets 36, (one only appearing) secured to the yoke 8.

37 is a valve-controlled pipe communicating with the boiler above the water line and equipped at its lower end with an injector 38 connected by a pipe 39 with the lower end of the boiler and communicating with the injector is a pipe 40 connected by a horizontal pipe 41 with the rear end of pipe 14, a valve 42 controlling communication between pipes 14 and 41. 43 is an oil tank having a depending valve controlled pipe 44 communicating at its lower end with pipe 41 between the valve 42 and pipe 40. The machine is operated and controlled in the usual manner and if it is desired to simply wet the roller 2 for any reason, the engineer opens gage cock 18 and the valved pipes 15 and 16, this action resulting under the pressure of steam in the boiler, in the discharge through pipes 15 and 16 of hot water with sufficient force to create an upward suction through pipe 15 for the purpose of drawing cold water from tank 13 through pipe 14 and said pipe 15 and discharging it through pipe 23 hose 24 and the jet pipe 27 onto

roller 2, this discharge incidentally skimming the foam and surface mud from the water.

I have found in practice that in the cold seasons of the year asphalt tends to stick to the roller, particularly the front roller and that this difficulty may be avoided by warming said roller. To accomplish this purpose the valve of pipe 15 is left closed and gage cock 18 is opened, the result being the sprinkling of hot water by jet pipe 27 onto roller 2. The valve of pipe 16 is normally open and is only closed when it is not desired to heat the roller. When thus closed the gage cock is opened occasionally to try the water and blow the foam and surface mud therefrom to keep the flues and flue sheet clean.

If it is desired to also heat roller 1, the valve of pipe 31 is also opened to permit water to be forced from the boiler through pipe 28, pipe 31 and hose 34 to jet pipe 35, by which it is sprinkled on roller 1, it being understood in this connection that because of the violent agitation of the water in the boiler most of the impurities which collect on the surface are discharged therefrom with the water onto the rollers and thus tend to keep the boiler clean and free of scale-forming properties.

I have also found in practice that by impregnating the water of the boiler with oil or an oily mixture commonly known as boiler compound, by which the life of the boiler is lengthened, and discharging such oil-impregnated water on the rollers and particularly roller 2, that the tendency of the asphalt to stick is even less marked than where hot water alone is used. Furthermore that such mixture tends to close the pores of the asphalt upon which the roller is operating and thus increases its durability. This oil may be introduced into the boiler in any desired manner and as a rule a cupful is sufficient to accommodate a day's operation of the machine for the reason that the agitation of the boiling water is so violent that it keeps the oil in circulation and thus prevents but a small quantity of the same being discharged with each discharge of hot water. If desired, however, oil can be kept in tank 43 and when it is desired to supply the boiler with a quantity of oil the valve 42 and the valves of pipes 37 and 44 are opened to permit steam to be discharged downward through the injector and create a suction which draws water from pipe 14 and oil from tank 43 into the injector from which it passes downward through pipe 39 into the boiler, said valves being reclosed when the boiler is charged with sufficient oil. When water alone is to be discharged into the boiler the valve of pipe 44 is of course closed.

When the machine is to remain inoperative for any period—all night for instance—

I preferably charge the tank 43 with a boiler compound of the character hereinbefore mentioned, and then open the valves of pipes 37 and 44 and valve 42.

In practice because of the lack of affinity between oil and water, the suction will break after a small quantity of the compound has been withdrawn from tank 43 with a sound which the engineer from experience instantly recognizes. He then closes the valve of pipe 44 for an instant, and then reopens such valve and another small quantity of oil will be carried into the boiler and another break will follow. He then recloses the valve of pipe 44 and then reopens the same, continuing this operation until all of the compound, if desired, is withdrawn from the tank and discharged into the boiler, where it stands over night and prevents the formation of scale to any considerable degree. Another feature of advantage derived by the use of oil in the boiler, is that it has a tendency to lubricate the valves and joints of the various pipes through which it passes and increases their period of service. The compound softens and loosens the scale formed during the day and such matter is blown off in the morning through the jet pipes before the engine is started, so that the steam afterward admitted to the cylinder (not shown) shall be free from impurities injurious to the valves of the cylinder. Furthermore the steam through the presence of oil in the boiler, tends to lubricate the valves of the cylinder.

From the above description it will be apparent that I have produced an attachment for steam rollers possessing the features of advantage enumerated as desirable and I wish it to be understood that I reserve the right to make such changes in the form, proportion, detail construction and arrangement of the parts as shall not be a departure from the spirit and scope of the appended claims.

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

1. The combination with a steam roller, of a tank containing oil or its equivalent, and a valve-controlled pipe extending downward from the tank to the feed water pipeway of the boiler between the controlling valve of the same and the injector.

2. The combination with a steam roller, of a perforated pipe supported above and adapted to discharge downwardly upon one of the rollers, a pipeway connecting the perforated pipe with the water pipeway of the machine and the boiler below the normal water level of the same, and valves controlling the passage of water to the perforated pipe.

3. The combination with a steam roller, of a perforated pipe supported above and

adapted to discharge downwardly upon each of the rollers, pipeways connecting said perforated pipes with the boiler below the normal water level of the same, and valves controlling said pipeways.

4. The combination of a steam roller, a perforated pipe arranged above and adapted to discharge downwardly upon the rear or guide roller of the machine, a valve-controlled pipeway communicating at one end with the boiler at a point below the normal water level of the same, and a flexible pipe-way connecting the opposite end of said pipeway with the perforated pipe.

5. The combination with a steam roller, a pipeway connected to the boiler above and below the water level thereof and provided with a controlling valve, an injector in said pipeway below said valve, a valve controlled pipeway connecting the water tank with the injector, an oil tank, a valve controlled pipe extending downward from the same and connected to the pipeway leading to the injector between the valve of said pipeway and the injector, a valve controlled pipe connected to the pipeway leading from the water tank between its valve and said tank, a valve controlled pipe connecting the upper end of the pipe connected to the pipe leading from the water tank with the boiler at a point normally below the water level of the latter, a perforated pipe supported

above and adapted to discharge down upon the front roller, and a pipeway connecting the perforated pipe with the connected ends of said valve-controlled pipes connected to the boiler and the pipeway leading from the water tank.

6. The combination with a steam roller, a pipeway connected to the boiler above and below the water level thereof and provided with a controlling valve, an injector in said pipeway below said valve, a valve-controlled pipeway connecting the water tank with the injector, an oil tank, a valve controlled pipe extending downward from the same and connected to the pipeway leading to the injector between the valve of said pipeway and the injector, a valve controlled pipe communicating with the boiler at a point below the normal water level of the same, a perforated pipe supported above and adapted to discharge down upon the rear or guiding roller of the machine, and a flexible pipeway connecting said perforated pipe with the opposite end of said valve-controlled pipe communicating with the boiler below the normal water level thereof.

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

GEORGE J. NEYERLIN.

Witnesses:

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G. Y. THORPE.