No. 694,443. Patented Mar. 4, 1902.

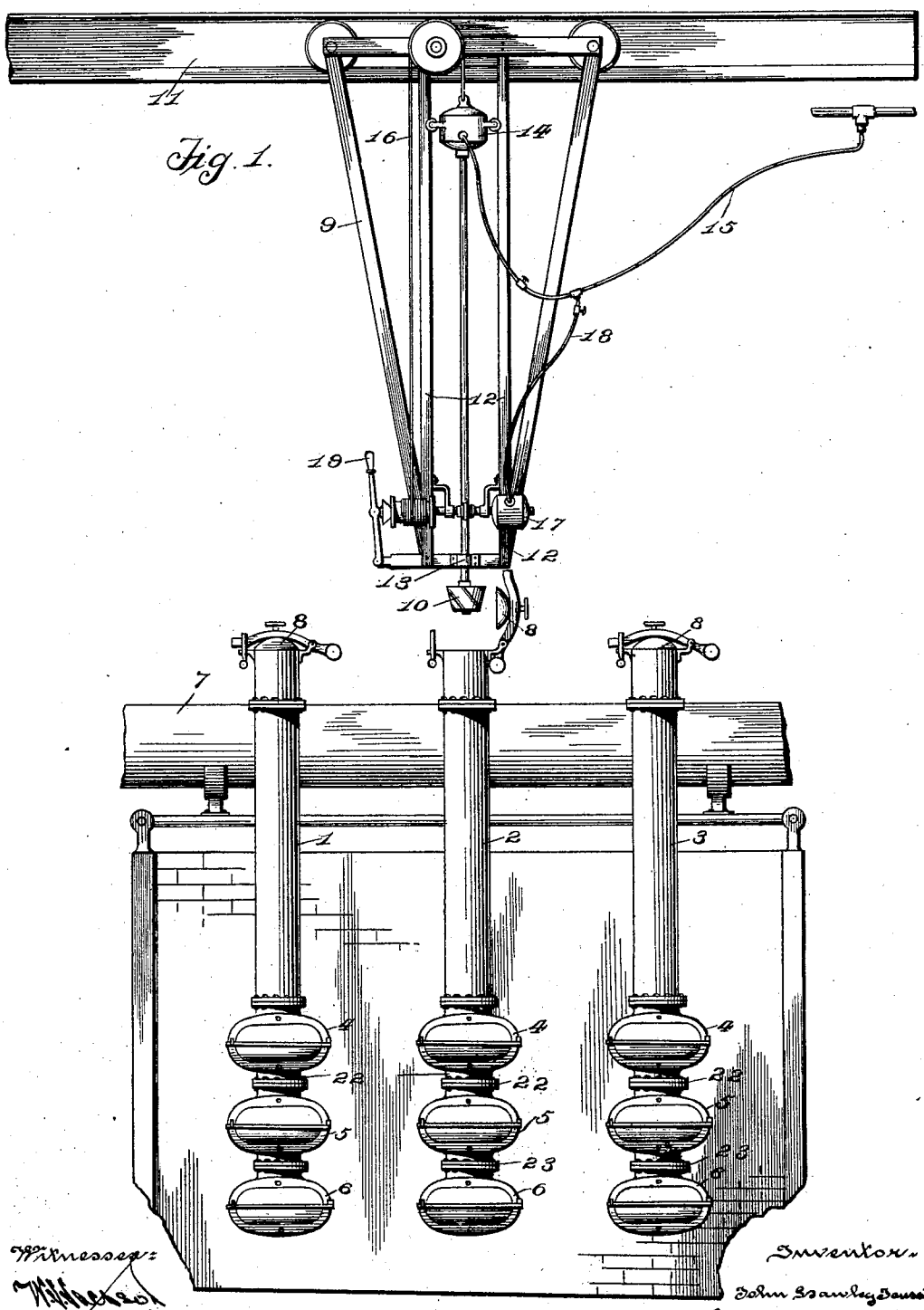
J. H. TAUSSIG.

APPARATUS FOR CLEANING STAND PIPES OF GAS RETORTS.

(Application filed Jan. 24, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



Witnesses:

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(No Model.) 2 Sheets—Sheet 2.

Fig. 4.

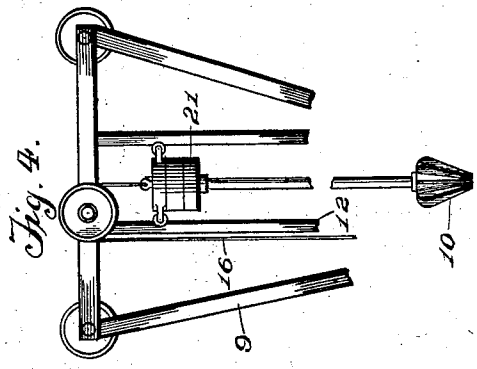


Fig. 3.

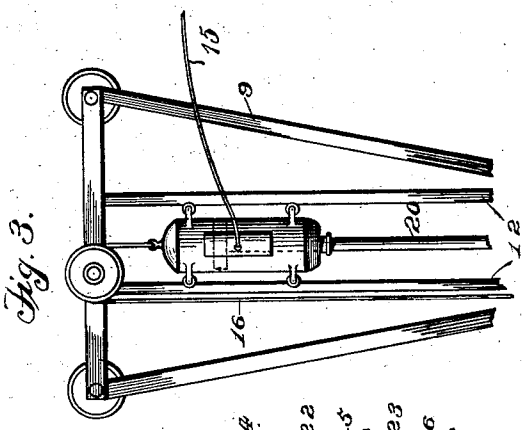
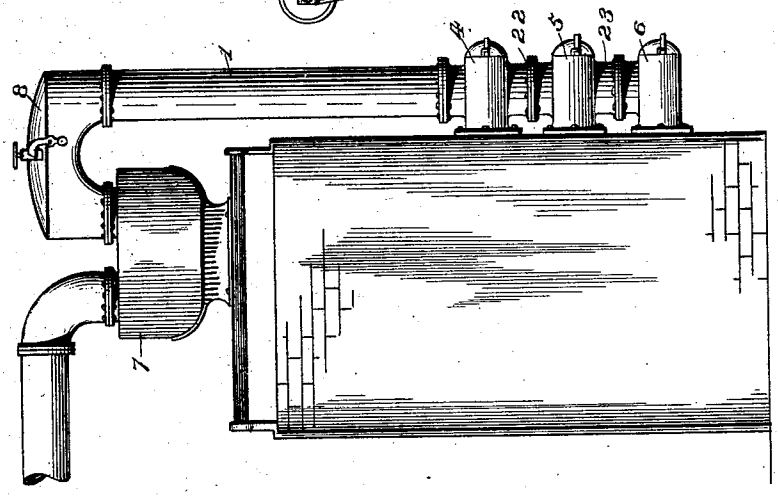


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN HAWLEY TAUSSIG, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE UNITED GAS IMPROVEMENT COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

APPARATUS FOR CLEANING STAND-PIPES OF GAS-RETORTS.

SPECIFICATION forming part of Letters Patent No. 694,443, dated March 4, 1902.

Application filed January 24, 1901. Serial No. 44,598. (No model.)

To all whom it may concern:

Be it known that I, JOHN HAWLEY TAUSSIG, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Cleaning the Stand-Pipes of Gas-Retorts, of which the following is a specification.

The stand-pipes which lead from the mouthpieces of gas-retorts to the water-sealed gas-main are peculiarly liable to become internally stopped up or clogged. The result of this is that gas from the retort cannot reach the main and is therefore forced to escape either by the mouthpiece or by any opening that may exist in the retort, and, in any event, it is lost. To keep these stand-pipes free is a very laborious operation and one often imperfectly performed under the present practice, which is to manually force a cleaner or "bull," as it is sometimes called, through them, and when they become stopped up it is an exceedingly difficult operation to clear them. Under normal conditions the time allowed for cleaning these stand-pipes is necessarily short, because in order to avoid interference with the production of gas it is necessary to accomplish it while the coke is being withdrawn and a fresh charge inserted.

The principal object of the present invention is to overcome these defects and disadvantageous features and to provide means by which the stand-pipes may be kept free and clean and by which they can be rapidly freed if they should become clogged.

To these and other ends hereinafter set forth the invention consists of the improvements hereinafter described and claimed.

The nature, characteristic features, and scope of the invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a front elevational view illustrating mechanism and apparatus embodying features of my invention. Fig. 2 is a side view illustrating the mouthpieces of the retorts and also stand-pipe connections embodying features of the invention, and Figs. 3 and 4 are front views illustrating means embodying modifications of the invention.

In the drawings, 1, 2, and 3 designate stand-pipes which lead from the mouthpieces 4, 5, and 6 of the retorts to the gas-main 7, which conducts the gas to the scrubbers and other appropriate apparatus, which is not illustrated. At the bridge-pipes or upper parts of the stand-pipes they are provided with suitable covers 8, that can be opened, so as to afford access to their interiors. Above the stand-pipes and in line with them is arranged a guide 9, which serves to properly direct the cleaner 10 through the open upper ends of the stand-pipes and downward through them, and this cleaner serves to keep them free and also to free them if they should become stopped up.

11 indicates a track or ways along which the guide may be propelled or caused to travel, so as to bring it in position for cleaning any one of the stand-pipes 1, 2, and 3. The number of stand-pipes, of course, is immaterial and in large gas-works they are very numerous. The guide 9 is equipped with ways 12, which, together with a suitable bearing 13, serve to afford the shank of the cleaner 10 a range of up-and-down motion in a vertical direction. The cleaner may be rotated in its passage through the stand-pipes, or it may be forced through under the influence of a series of intermittent progressive strokes, such as might be described as hammering, or it may be simply forced through.

In Fig. 1, 14 indicates a motor—for example, a pneumatic motor—for imparting rotation to the cleaner 10.

15 is a supply for the motor 14, and the latter is shown as equipped with wheels or rollers coöperating with the guides 12.

16 is a cord or chain passing over a suitable pulley and adapted to be wound upon or unwound from a drum, which in its turn may be actuated by a motor 17, supplied by a branch feed 18.

19 is a controlling-handle for causing the cord 16 to be wound or unwound, as desired,

and it is shown as connected with a friction-clutch.

The supplies 15 and 18 are shown as provided with valves, so that by properly manipulating the clutch and valves it is possible to feed the cleaner through any one of the stand-pipes with a rotary motion, it being of course understood that the guide is shifted on its track into proper position over the stand-pipe which it is desired to clean.

As shown in Fig. 3, the motor 14 is replaced by a piston 20, which is adapted to reciprocate the cleaner and its shank and in that way give it an intermittent back-and-forth motion in its descent through the stand-pipe.

As shown in Fig. 4, use is made of a properly-weighted head 21, which serves to force the cleaner through the stand-pipe.

Obviously the cleaner can be worked in respect to its guide manually. Should the stand-pipes be somewhat curved, the shank of the cleaner may be flexible, so as to permit it to conform to such curvature. To avoid the presence of curved stand-pipes, I have devised an arrangement (illustrated in Fig. 2) in which the mouthpieces 4, 5, and 6 of the retorts that are arranged in vertical alinement are connected by straight sections of stand-pipe 22 and 23, which are arranged in alinement with the usual stand-pipe 1, that leads upward from the bank or group of retorts.

It will be obvious to those skilled in the art to which the invention appertains that modifications may be made in details without departing from the spirit thereof. Hence I do not limit myself to the precise construction and arrangement of parts hereinabove set forth, and illustrated in the accompanying drawings; but,

Having thus described the nature and objects of the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A cleaner for gas apparatus comprising a horizontal track arranged above and parallel with the row of stand-pipes of the apparatus, a swinging guide depending from the track, a cleaner movable vertically in the guide, and means for actuating the cleaner, substantially as described.

2. A cleaner for gas apparatus comprising a pendent guide arranged over the top of the stand-pipe, and a cleaner movable up and down in the guide to enter the top of the stand-pipe, substantially as described.

3. A cleaner for gas apparatus comprising a pendent guide arranged over the top of the stand-pipe, a cleaner movable up and down in the guide to enter the top of the stand-pipe, and means for shifting the cleaner up and down in respect to the guide, substantially as described.

4. A cleaner for gas apparatus comprising a pendent guide arranged over the top of the stand-pipe, a cleaner movable up and down in the guide to enter the top of the stand-pipe, means for shifting the cleaner up and down in respect to the guide, and devices for rotating the cleaner, substantially as described.

In testimony whereof I have hereunto signed my name.

JOHN HAWLEY TAUSSIG.

In presence of—
W. J. JACKSON,
JAS. A. RICHMOND.