

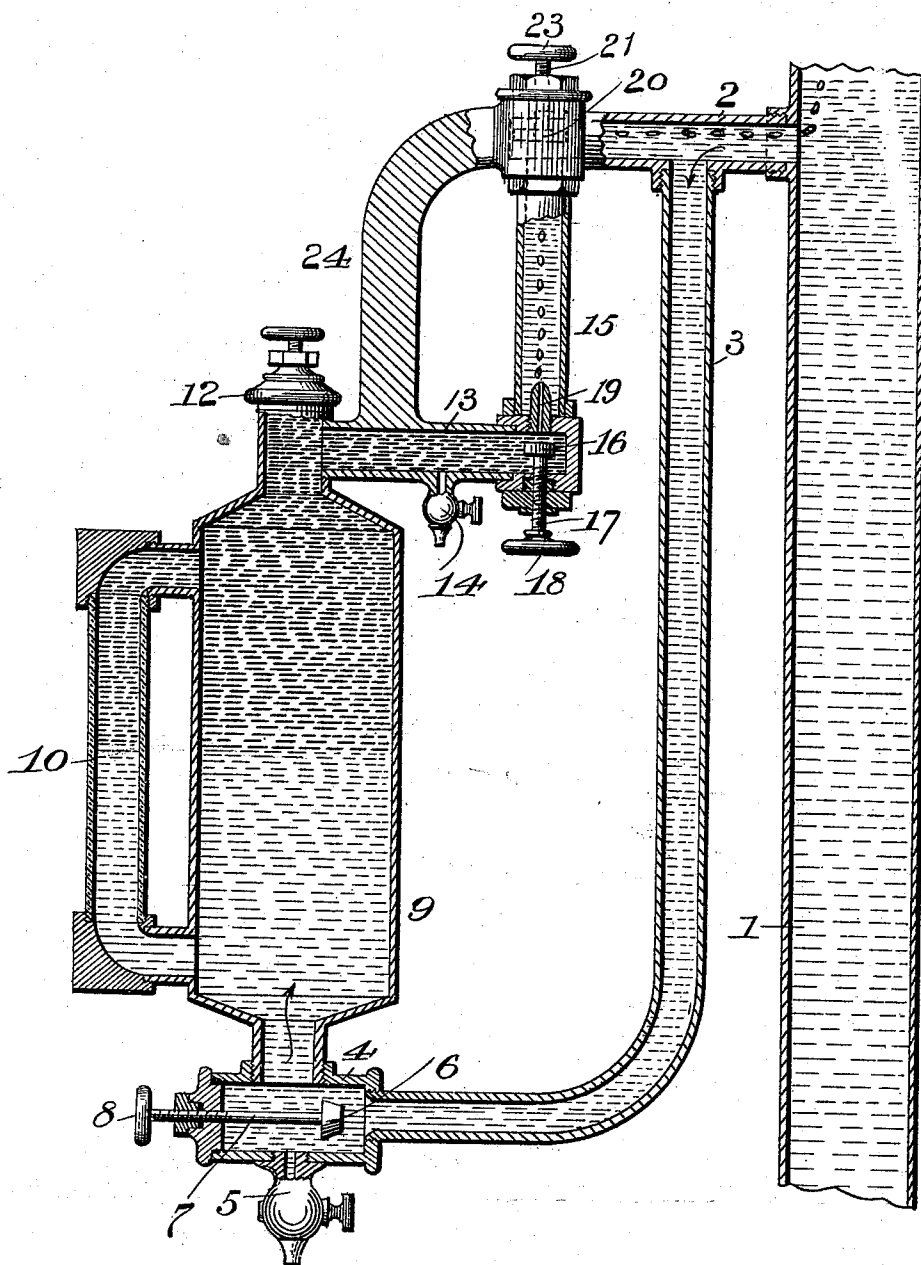
(No Model.)

W. S. REED & F. R. STEVENSON.

AUTOMATIC OIL FEEDER.

No. 545,108.

Patented Aug. 27, 1895.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WINFIELD S. REED AND FRED R. STEVENSON, OF GALION, OHIO.

AUTOMATIC OIL-FEEDER.

SPECIFICATION forming part of Letters Patent No. 545,108, dated August 27, 1895.

Application filed October 23, 1894. Serial No. 526,745. (No model.)

To all whom it may concern:

Be it known that we, WINFIELD S. REED and FRED R. STEVENSON, residents of Galion, in the county of Crawford and State of Ohio, have invented certain new and useful Improvements in Automatic Oil-Feeders; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, which forms a part of this specification.

Our invention relates to improvements in automatically feeding oil boiler compounds to a water-column heater, boiler, or other receptacle containing water.

In carrying our invention into effect we take advantage of the difference in specific gravity between the water and oil and provide a feeding apparatus in which the water contained in the boiler or other receptacle acts by gravity to elevate the oil in the oil-vessel, while the oil, owing to its being of less specific gravity than the water, will escape the said receptacle, as will be hereinafter fully described and claimed.

In the accompanying drawing the figure represents a horizontal sectional view of a feeding apparatus constructed in accordance with our invention.

In the said drawing the reference-numeral 1 designates a water receptacle or vessel, being shown in the present instance as a water column. Near its upper end it is provided with a lateral pipe 2, with which is connected a vertical pipe 3, having its lower end curved outwardly and provided with a coupling 4, provided with a draw-off cock 5 and a valve 6, having a stem 7 and hand-wheel 8. Connected with this coupling is an oil-cup 9, provided with an ordinary glass gage 10 and having a filling-opening at the top closed by a removable plug 12. The oil-cup is also provided with a lateral pipe 13, having a draw-off cock 14, and at its outer end is connected with the lower end of a sight feed-column 15, provided with a valve 16, having a valve-stem 17 and a hand-wheel 18. At the lower end of said sight feed-column is a small tube 19, adapted to admit oil in minute particles or globules into said column. The outer end of the lateral pipe 2 communicates with the up-

per end of the sight feed-column, which latter is provided with a valve 20, stem 21, and hand-wheel 23. The numeral 24 designates a bracket for supporting the upper end of column 15.

The operation is as follows: The valves 6 and 16 are closed and the water-receptacle filled with water and the oil-cup with oil. The said valves 6 and 16 are then opened, when the water from pipe 3 will enter the lower end of the oil-cup, forcing the oil up through tube 19, from whence it will drop, by drop, into the feed-column 15, and, owing to its less specific gravity than the water, will rise in said column and escape through pipe 2 into the water-receptacle 1, as will be seen by the drawing. It will thus be seen that oil and other liquids of a less specific gravity than water can be fed automatically to the water-receptacle, requiring no other attention or assistance.

Having thus described our invention, what we claim is—

In a feeding apparatus, the combination of the water receptacle, the lateral pipe secured thereto provided at its outer end with a curved downwardly extending bracket, the vertical pipe curved outwardly at its lower end and connected at its upper end with said lateral pipe, the coupling secured to the lower end of said vertical pipe provided with a valve for opening and closing the same and with a draw off cock, the oil cup connected with said coupling, provided with a gage and with a filling opening and plug at its upper end, the lateral pipe connected with the oil cup and provided with a draw off cock the vertical feed column having a small tube at its lower end and connected at its upper end with the pipe leading from the water receptacle, the valve for opening and closing said tube and the valve for opening and shutting off communication between said column and the pipe leading to the water vessel, substantially as described.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

WINFIELD S. REED.

FRED R. STEVENSON.

Witnesses:

C. R. MILLER,
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