No. 891,922. PATENTED JUNE 30, 1908.

F. L. FURBUSH.

WASHING OR SCOURING MACHINE.

APPLICATION FILED JUNE 1, 1907.

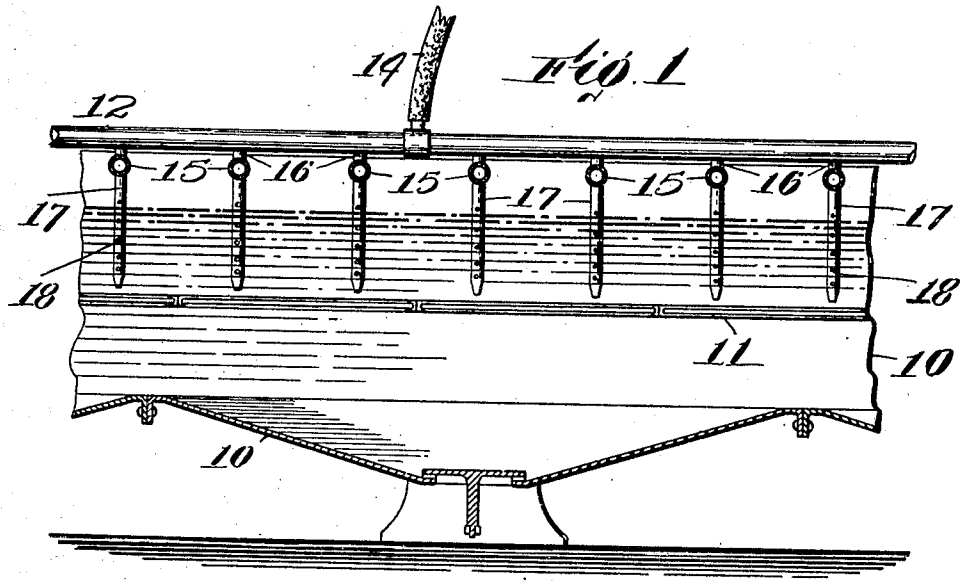


Fig. 1.

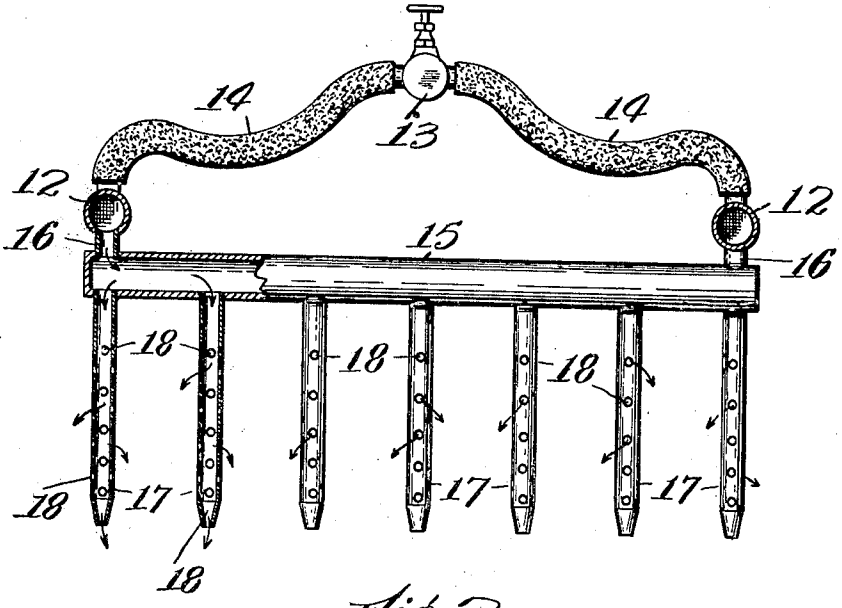


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK L. FURBUSH, OF WESTFORD, MASSACHUSETTS, ASSIGNOR TO C. G. SARGENT'S SONS, OF WESTFORD, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

WASHING OR SCOURING MACHINE.

No. 891,922. Specification of Letters Patent. Patented June 30, 1908.

Application filed June 1, 1907. Serial No. 376,750.

To all whom it may concern:

Be it known that I, FRANK L. FURBUSH, a citizen of the United States, residing at Westford, in the county of Middlesex and State of Massachusetts, have invented a new and useful Washing or Scouring Machine, of which the following is a specification.

This invention relates to that type of machines for washing and scouring fibrous and other materials in which a rake is employed for moving the material operated upon in the tank.

The principal objects of the invention are to provide means whereby a continual flow of liquor or water, as the case may be, is maintained through the teeth of the rake itself, whereby the material is acted on in a more thorough manner.

Another object of the invention is to provide a convenient means for conducting the water or scouring liquor to the teeth of the rake.

Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings in which,

Figure 1 is a longitudinal central section of a wool washing machine having a parallel rake motion showing this invention as applied thereto, and Fig. 2 is an end elevation of the rake partly in section to show interior construction.

The invention can be applied to any type of machine for scouring, washing or rinsing fibrous or other material. It is shown as applied to a wool washing bowl 10 having the usual screen 11 therein on which the wool is located and provided with a parallel rake motion, that is, a rake moving substantially in a level or horizontal path.

The rake is moved in any desired way and is provided with passages through which a liquid may be introduced into the machine. In the present instance it is constructed of a pair of hollow longitudinal rails 12 preferably made of piping. These rails are connected with a supply pipe 13 by means of flexible pipes 14 to permit the supply of water or scouring liquor to be supplied continuously to the rails while the rake is in motion. These rails are connected by a number of cross-heads 15 which are also hollow and preferably made of piping and are connected with the longitudinal rails by means of short tubes 16 or the like. The cross-heads support a plurality of rake teeth 17 which are formed of hollow pipe and receive water or scouring liquor from the cross-heads. These rake teeth are provided with perforations 18 on their sides and ends through which the liquor can be discharged into the bowl.

In the use of the device, if it is used for washing or rinsing, water is led into the flexible pipes 14 and if it is used for scouring, scouring liquor is conducted into them, either by a pump or in any other desired way. The water or liquor flows through the flexible pipes into the longitudinal rails which conduct it into the cross-heads and from them to the teeth where it is discharged into intimate contact with the wool or other material to be operated upon continuously during the reciprocating motion of the rake or while it is stationary, as desired. As these teeth pass along under the liquor or water in the bowl, there is a continual flow from the perforations, substantially throughout their length, whereby the material is washed or rinsed in a very thorough manner.

While I have illustrated and described the invention as applied to a particular type of wool washing machine and while I have shown and described a particular form of the invention, I am aware that it can be applied to many other types of washing, rinsing and scouring machines and that it can be modified in many ways by a skilled mechanic without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited to the particular form or type of machine shown, but

What I do claim is:—

1. A washing or scouring machine having a bowl, a movable rake for moving and agitating the material to be washed or scoured, said rake comprising hollow, perforated rake teeth adapted to engage said material for operating upon it, and connections for supplying a liquid to the interior of the teeth.

2. In a rake for washing or scouring machines, the combination of hollow longitudinal rails forming the two sides of the rake, flexible tubes for supplying a liquid to said rails, and hollow perforated teeth connected with said rails.

3. In a rake for use in machines of the character described, the combination of hollow longitudinal rails forming the sides thereof, hollow cross tubes connected with

said rails, and hollow perforated teeth supported by said cross tubes and communicating with the interior thereof.

4. The combination with a washing or scouring bowl, of a rake movable in a substantially level path therein having passages and means for supplying the machine with a liquid through said passages continuously during the motion of the rake.

5. A washing or scouring machine having a bowl, a screen therein for supporting material to be washed or scoured, a rake comprising hollow rake teeth provided with a plurality of perforations at different heights in their side walls and movable along the screen for moving and agitating the material thereon and simultaneously discharging a liquid into contact with the material, and means for supplying a liquid to said teeth.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

FRANK L. FURBUSH.

Witnesses:
WM. F. SARGENT,
WM. A. MEAD.