H. GRIFFOUL.

WET SAND SIFTER.

APPLICATION FILED JAN. 10, 1921.

1,430,443. Patented Sept. 26, 1922.

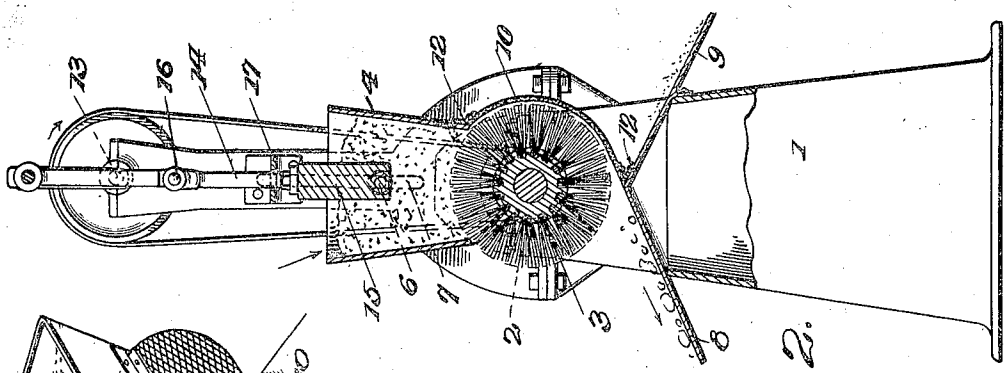


Fig. 2.

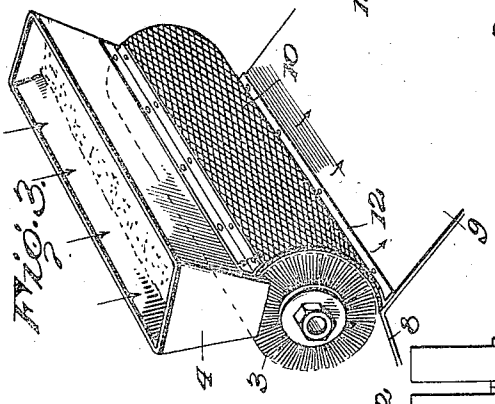


Fig. 3.

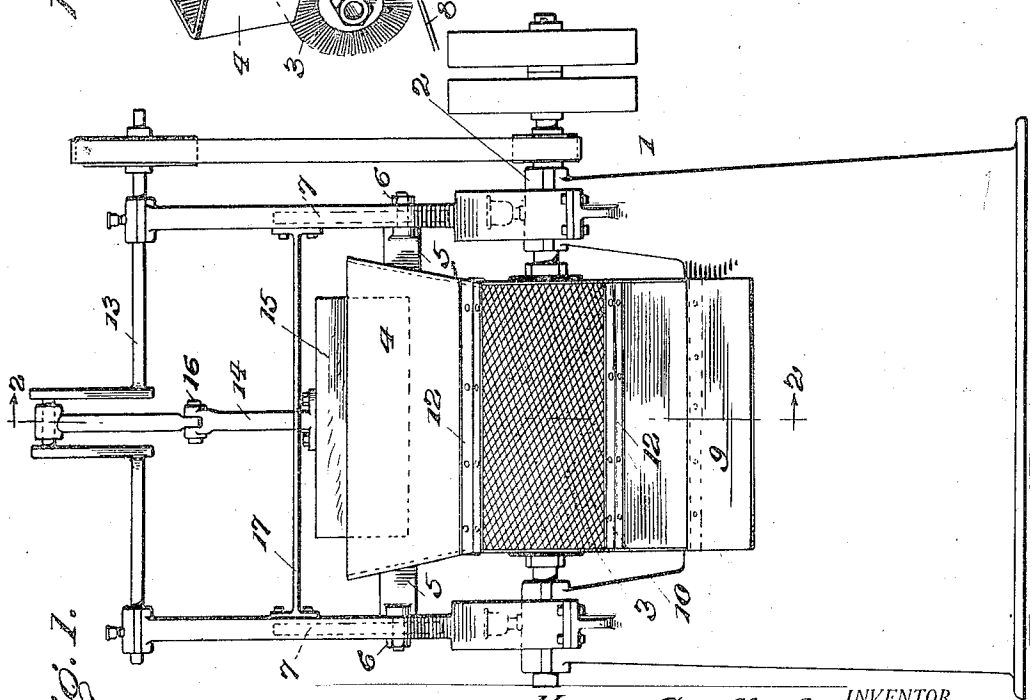


Fig. 1.

Henry Griffoul. INVENTOR.

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UNITED STATES PATENT OFFICE.

HENRY GRIFFOUL, OF NEW BRIGHTON, PENNSYLVANIA.

WET-SAND SIFTER.

Application filed January 10, 1921. Serial No. 436,252.

To all whom it may concern:

Be it known that I, HENRY GRIFFOUL, of New Brighton, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Wet-Sand Sifters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention provides improved means for sifting sand that is wet and heavy and which naturally has a tendency to clog the operating parts. It is well known in this art that machines capable of sifting or separating dry substances, such as seed, grain or sand, are not available for sifting wet sand.

In Figure 1 I have shown a side elevation of a machine embodying my invention. Figure 2 is a vertical section on line 2—2, Figure 1, and Figure 3 is a detail perspective.

In an upright frame 1 is a horizontal shaft 2 adapted to be rotated by power and carrying a brush 3. This brush comprises a series of steel wire strands or bristles so closely arranged as to constitute a substantially solid surface. A hopper 4 is mounted above the brush and has a wide throat portion extending over the brush so as to create an extended area of contact between the contents of the hopper and the brush surface. The hopper is shown equipped with short side arms 5 engaged by bolts 6 adjustable in slots 7 in the uprights of frame 1. By this means when the brush becomes worn the hopper may be lowered and thus maintain it in the desired relation to the brush.

A pair of guides or deflecting boards 8, 9, are shown mounted in the frame beneath the brush and slanted so as to conduct material falling upon them into suitable receptacles.

A wire screen or sieve 10 is adapted to cover the portion of the brush between deflecting board 9 and hopper 4. It is of fine mesh wire and of arc shape to conform to the brush and separated from it about a quarter of an inch. I have shown the screen on a metallic frame 12 which may be bolted to the hopper and to deflecting board 9. This permits of ready removal for substitution or repairs.

I have shown a power driven crank shaft 13 at the top of the machine to the wrist portion of which is attached a rod 14 carrying a feeder plate 15 which extends into hopper 4. A knuckle 16 allows the upper section of rod 14 to swing with the crank, while a perforated plate 17 furnishes a guide for the reciprocating action of the lower section.

With the shafts 2 and 13 rotating, wet sand is supplied to the hopper 4. The reciprocation of the feeder plate 15 effects a positive pressing action upon the material and forces it into contact with the revolving brush which, in turn, forces it against the screen 10, causing the finer particles to sift through onto board 9, while the stones and coarse contents pass over the screen area and are ejected over board 8. Thus the action upon the sand is by pressure at every stage. In consequence there is no opportunity for clogging, either in the hopper or between the brush and the screen.

I claim as my invention:

1. In a wet sand sifter, the combination with a rotary brush and fixed screen substantially concentric therewith on one side thereof, of a hopper arranged above the brush and having a throat over which said brush extends, a feeder plate movable within said hopper above said throat, and means for reciprocating said feeder plate.

2. In a sand sifting machine, the combination with a frame having side uprights formed with slots, of a hopper having side arms, bolts adjustable in said slots and supporting said side arms, and a rotary brush beneath said hopper and extending across the throat thereof.

In testimony whereof I have signed this specification.

HENRY GRIFFOUL.