J. H. GOSS.

SELF FEEDING SCRATCH BRUSH LATHE.

APPLICATION FILED JAN. 30, 1908. RENEWED APR. 3, 1909.

922,761. Patented May 25, 1909.

3 SHEETS—SHEET 1.

Fig. 1.

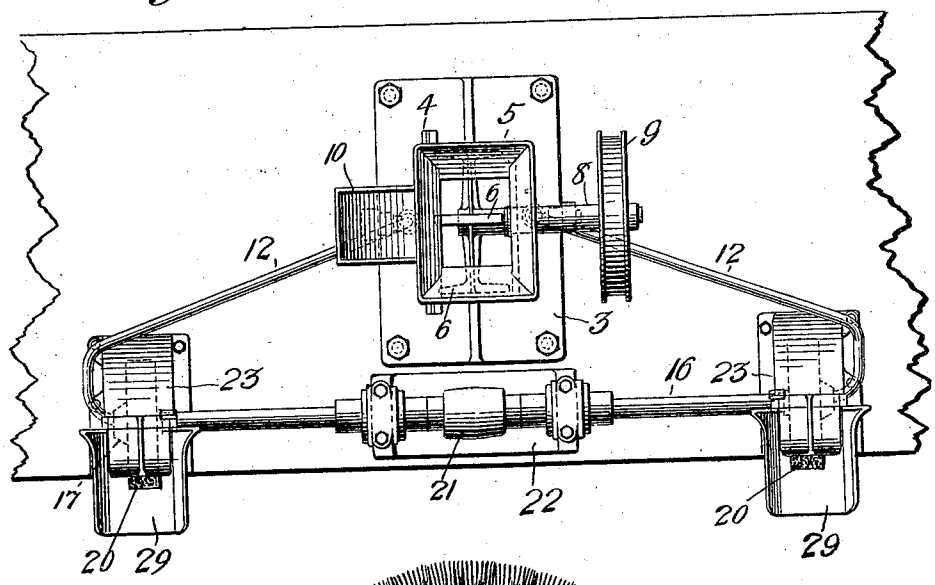


Fig. 4.

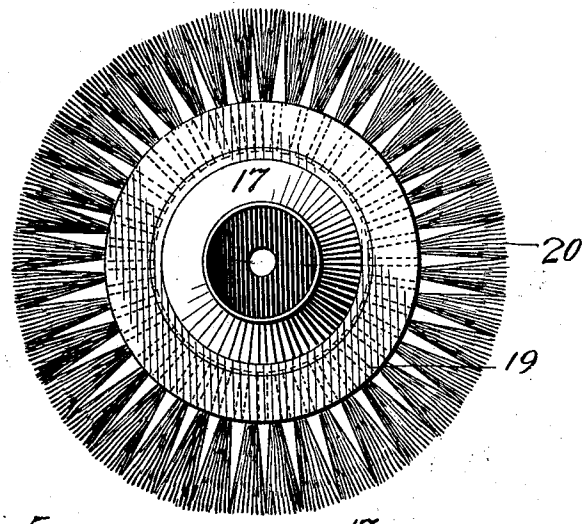
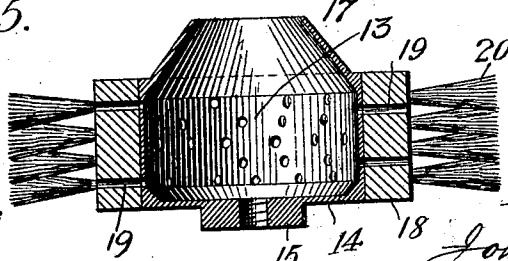


Fig. 5.



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3 SHEETS—SHEET 2.

Fig. 2.

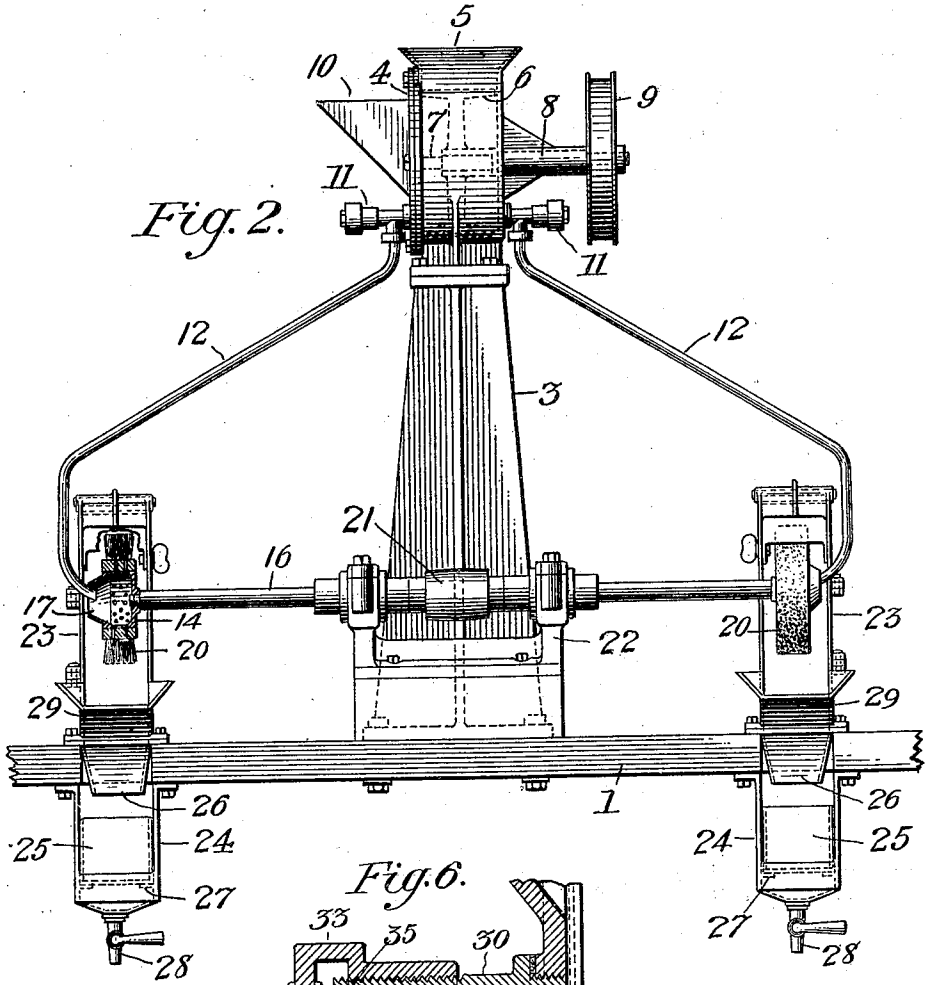
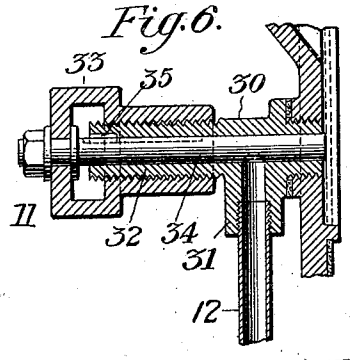


Fig. 6.



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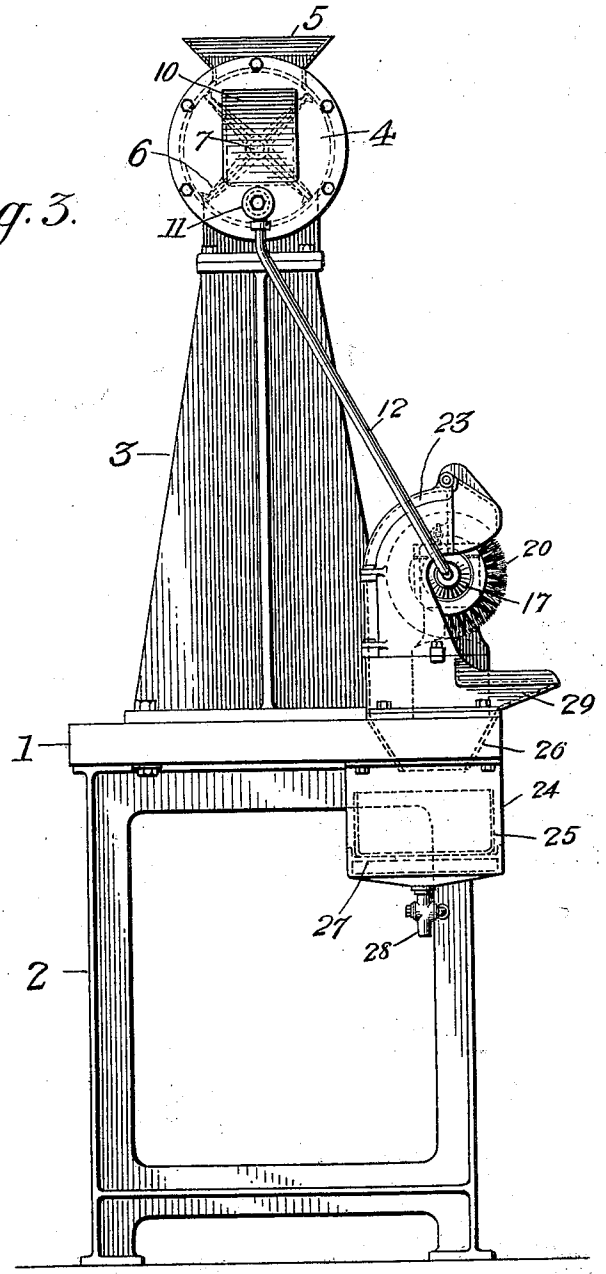
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3 SHEETS—SHEET 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN H. GOSS, OF WATERBURY, CONNECTICUT, ASSIGNOR TO SCOVILL MANUFACTURING COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

SELF-FEEDING SCRATCH-BRUSH LATHE.

No. 922,761. Specification of Letters Patent. Patented May 25, 1909.

Application filed January 30, 1908, Serial No. 413,490. Renewed April 3, 1909. Serial No. 487,770.

To all whom it may concern:

Be it known that I, JOHN H. GOSS, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Self-Feeding Scratch-Brush Lathes, of which the following is a full, clear, and exact description.

A main object of this invention is to provide a machine by which brass articles may be given a dull mat finish, or, as it is known in the brass works, a "scratch-brush" finish. In attaining this and other related objects, the scratch-brush is mounted in and forms part of a lathe, so-called, and preferably is of circular form, and has a hollow center surrounded externally by bristles or their equivalents with which communication is had through holes leading out from the hollow center, so that the proper solution, say of pulverized pumice-stone and water, or other substances suitable for the work, may be fed into the hollow center of the brush and by the revolution of the brush be delivered centrifugally to the bristles through the communicating holes, and the article to be surface-finished being brought up to the brush is subjected to its action and that of the applied solution until the desired dull mat or "scratch-brush" finish is obtained.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a top plan view. Fig. 2 is a front elevation. Fig. 3 is a side elevation. Fig. 4 is a plan view of the brush. Fig. 5 is a cross-section of the brush. Fig. 6 is a longitudinal section of the regulating valve.

1 is any suitable bench or table, mounted on frames 2.

3 is a stand mounted upon the bench and having at its top a mixing-chamber 4 herein shown as a cylinder, provided with a hopper 5, through which the material is fed into the cylinder. Within this mixing-chamber is mounted a rotary stirrer 6, secured to a shaft 7, having its bearings in a bracket 8, and on the end of the shaft, outside of the bracket, is a band-wheel 9 by which rotary motion may be imparted to the stirrer. On the other side of the mixing-chamber is an observation box 10, so that the workman may see the condition of the mixture within the mixing chamber. At the bottom of the mixing-chamber are regulating-valves 11, of any approved construction, from which lead pipes 12 to deliver the contents of the mixing-chamber to the scratch-brushes which are shown in position in Figs. 1, 2, and 3, and detached and in detail in Figs. 4 and 5.

Each of the scratch-brushes is of the following preferred construction, namely:—There is a hollow metal center 13, closed at one end 14, which is supplied with a hub 15, by means of which the brush may be attached to the spindle 16. The opposite end of the hollow center is of the form of a laterally projecting truncated cone 17, the opening, therefore, being contracted to an extent to permit turning about the feed-pipe's delivery end. This hollow center is surrounded by a wooden or other bristle-receiving member 18, and the hollow center and the member 18 are perforated radially, and these perforations 19 afford communication between the hollow center and the bristles 20 which are applied to the member 18 in any usual manner. These bristles may be animal bristles, or they may be of wire or any other suitable material capable of imparting the desired dull mat or scratch-brush finish to the brass or other article to be treated. As indicated more particularly in Figs. 4 and 5, these holes 19 are staggered so as to deliver the contents of the hollow center between the tufts of bristles.

The pipes 12 have their lower ends turned into and opening within the hollow centers of the brushes, as shown clearly in Fig. 2. As shown, there are two brushes, and these are mounted on a spindle 16, common to both, and this spindle has a band-pulley 21 by which rotary motion may be imparted to the brushes, and it is supported in a lathe-head 22 erected on the bench. Each brush is incased in a hood 23, mounted upon the bench, in order to catch whatever material or solution may be thrown from the revolving brushes, and beneath these hoods are catch-basins 24 within which are placed removable catch-boxes 25, into which the material or solution falling from the brushes is directed by means of the funnels 26 placed immediately below the hoods and brushes. The catch-boxes are mounted upon shelves 27, somewhat above the bottoms of the catch-basins 24, so as to provide chambers in the catch-basins below the catch-boxes to catch any overflow from the catch-boxes, and these catch-basins may be emptied by

means of the cocks 28 in their bottoms. As shown in Figs. 1 and 3, the hoods have outwardly projecting portions 29 which guide the solution that may be thrown from the brushes back into the catch-basins.

Any material may be used suitable for the purpose in view, but for the ordinary operation of imparting a dull mat or scratch-brush finish to brass articles, a mixture of powdered pumice-stone and water is preferred. The material is fed into the mixing-chamber 4 and thoroughly stirred and mixed and then led down into the pipes 12 by regulation of the valves 11, and delivered into the centers of the brushes. By the centrifugal action incident to the rapidly revolving brushes, the solution is fed out through the holes 19 onto the bristles and so applied by the bristles to the article under treatment. The portion 17 of the hollow center projecting laterally from the brush, is of such character as to prevent the loss of solution, or in other words, is of such character as to confine the solution within the hollow center, as it is delivered to it by the feed-pipe and permit it to be thrown out to the bristles by centrifugal action due to the revolution of the brush. The outwardly projecting portions 29 of the hoods may also serve as rests on which to support the work, although the operator usually holds the work in his hands up against the brush in the operation of finishing it.

The regulating valve 11, shown in detail in Fig. 6, is composed of a body 30, having a nipple 31, to which the pipe 12 is attached, and on the screwthreaded end 32 of the body is an adjustable cap 33, carrying the valve proper 34 which is swiveled to said adjustable cap and keyed by a key 35 to the body 30, so as not to rotate with the cap, as the cap is adjustable longitudinally on the body to control admission to the pipe 12.

The mechanism on which the brush is mounted and by which the solution is mixed and fed to the brushes, and the collecting mechanism for the waste, and the form or configuration of the brushes themselves, are variable within the scope and purpose of the invention. So also the regulating valve 11, shown in Fig. 6, may be of any other construction than that shown.

What I claim is:—

1. A self-feeding scratch-brush lathe, having a brush provided with peripheral bristles, a hollow center closed on one side and open on the other and having radial holes connecting it with the bristles, and means to supply a suitable fluid to the hollow center whence it is delivered centrifugally through the holes to the bristles, the closed side having a hub whereby the brush may be mounted upon a suitable spindle.

2. A self-feeding scratch-brush lathe, having a brush provided with peripheral bristles, a hollow center closed on one side and open on the other and having radial holes connecting it with the bristles, and means to supply a suitable fluid to the hollow center whence it is delivered centrifugally through the holes to the bristles, the open side being made in the form of a truncated cone, projecting laterally from the brush.

3. A self-feeding scratch-brush lathe, having a brush provided with peripheral bristles, a hollow center closed on one side and open on the other and having radial holes connecting it with the bristles, and means to supply a suitable fluid to the hollow center whence it is delivered centrifugally through the holes to the bristles, the open side projecting laterally from the brush and having a contracted opening, and the closed side provided with a hub for engagement with the shaft.

4. In a self-feeding scratch-brush lathe, the combination of a mixing chamber, feed-pipes leading therefrom, a regulating valve in each feed-pipe, a rotary shaft, a hollow brush on each end of said shaft and whose hollow portion communicates with its periphery, an open-faced hood for each brush, and a catch-basin for each brush.

In testimony whereof I have hereunto set my hand this 29th day of January A. D. 1908.

JOHN H. GOSS

Witnesses:

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