J. KAZIENKO.

COLOR SIFTING MACHINE.

APPLICATION FILED JUNE 2, 1922.

1,432,866. Patented Oct. 24, 1922.

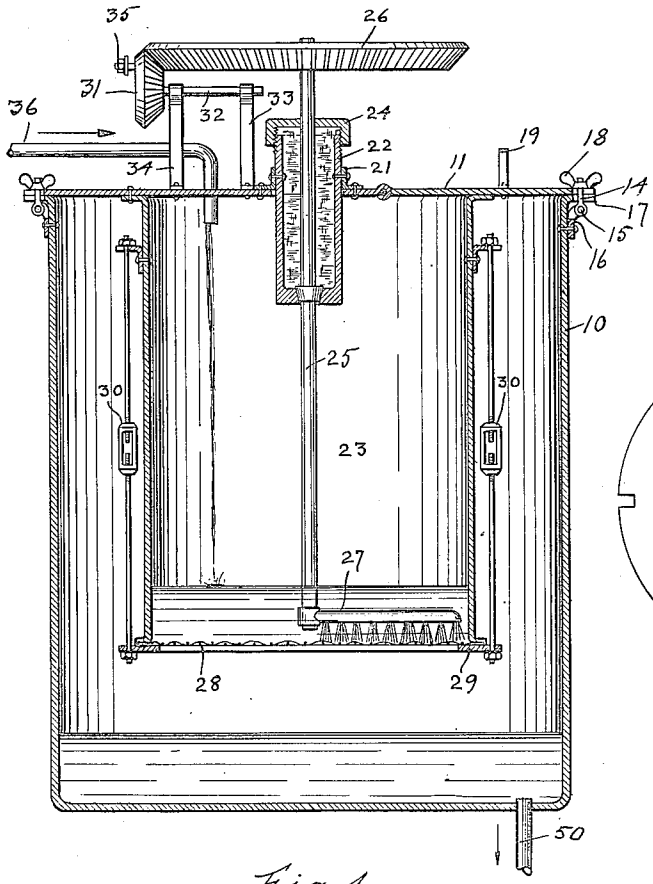


Fig. 1.

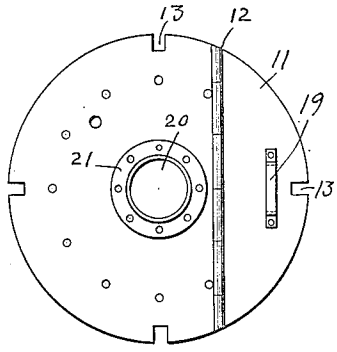


Fig. 2.

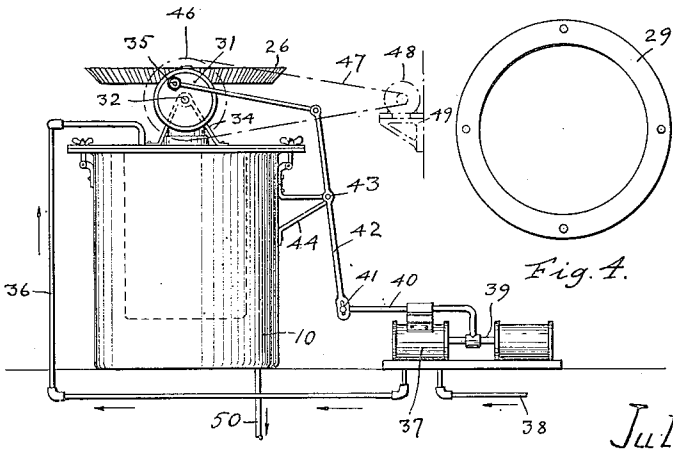


Fig. 3.

Fig. 4.

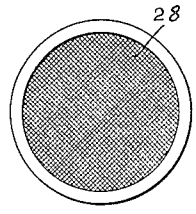


Fig. 5.

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UNITED STATES PATENT OFFICE.

JULIAN KAZIENKO, OF ROSEBANK, NEW YORK.

COLOR-SIFTING MACHINE.

Application filed June 2, 1922. Serial No. 565,462.

To all whom it may concern:

Be it known that I, JULIAN KAZIENKO, a citizen of Poland, residing at Rosebank, county of Richmond and State of New York, have invented certain new and useful Improvements in Color-Sifting Machines, of which the following is a specification.

This invention refers to improvements in color sifting apparatus principally intended for use in color manufacturing plants for freeing the colors of impurities carried by the pigments, etc.

The screens heretofore used for this purpose all had the disadvantage of clogging with the final result of causing an overflow of the screening vessel.

It is the principal object of the invention to avoid this disadvantage by providing a motor operated brush within the screening vessel co-operating with the screen to thoroughly sift the colors and squeeze the sifted pure product through the screen to avoid a clogging of the screen and an overflow of the vessel.

Another object of the invention is the provision of an apparatus of this character allowing a convenient exchange of the screen by the operation of simple means.

A further object of the invention is the provision of an apparatus of this class in which the brush is operated from a motor or pump which are simultaneously used to feed the colors to be screened to the screening vessel.

These and other objects and advantages of my invention will become more fully apparent as the description thereof proceeds, and will then be specifically pointed out in the appended claims.

In the accompanying drawing forming a material part of this disclosure:

Figure 1 is a sectional elevation of my improved apparatus.

Figure 2 is a top plan view of a cover.

Figure 3 illustrates on a reduced scale my apparatus and its operating mechanism.

Figure 4 is a detail view of a ring, and

Figure 5 is a detail view of a screen.

The apparatus comprises a vat 10 provided with a cover 11, illustrated in detail in Figure 2, where the cover is shown to be formed in two parts hingedly connected as at 12 and provided with recesses 13 for the passage of fastening pins 14 hingedly connected as at 15 to an ear 16 of vat 10, extending upwardly through a flange 17 of the vat, and carrying above the cover 11 a wing nut 18.

The cover 11 carries a lid handle 19 and has a central opening 20, the walls of which are reinforced by a collar 21 secured on the cover in any suitable manner.

Through the central opening 20, a cylinder 22 containing a packing material extends into a vessel 23 suspended into vat 10 and secured intermediate its ends to collars 21. A cap 24 is screwed on top of cylinder 22 and provided with a central opening through which a vertical shaft 25 extends, carrying at its upper end a bevel gear 26, and at its lower end, within the vessel 23, a brush 27 adapted to rotate with said shaft above and in contact with a sieve 28, held by a ring 29. The ring 29 is held against the lower mouth of the vessel by means of turn-buckle arrangements 30 as shown in Figure 1.

The bevel gear 26 is in mesh with another bevel gear 31 on a horizontal shaft 32 supported by brackets 33 and 34, and carrying on its outer face a crank pin 35.

A pipe conduit 36 leads through the top into vessel 23 ending below its cover 11. This pipe conduit leads to a pump 37 for pumping the color from a storage vessel not shown, through the intermediary of pipe conduits 38 and 36 into vessel 23.

To the piston rod of this pump an angle bar 40 is secured with one of its ends, while its other end is secured by means of a pin and slot connection 41 to an operating rod 42 pivoted intermediate its ends, as at 43, to a bracket 44 secured to the side wall of the vat 10.

The upper end of rod 42 has pivotally secured thereto one end of a link 45, the other end of which is secured to crank pin 35.

The shaft 32 may also carry a pulley 46 over which a belt 47 is guided which is also guided over a pulley on the shaft of a suitable motor 48 on a convenient bracket 49. An exhaust pipe 50 at the bottom of vat 10 allows the removal of the sifted color.

A removal of the residue of the sifting operation from vessel 23 is effected by means of the lid of cover 11.

It will be clear that by the proper manipulation of the turn-buckle arrangement 20 a sieve of any required width of mesh may be exchanged for sieve 28.

The operation of the device will be entirely clear from the above description without further explanation; it will however be

understood that changes may be made in the general arrangement and in the construction of the minor details of my device without departing from the scope and spirit thereof.

What I claim as new and desire to secure by Letters Patent of the United States is—

1. In an apparatus of the class described, comprising a sieve, a stirrer for forcing material through said sieve and a pump, a common actuating means for said stirrer and for said pump for pumping material on said screen.

2. In an apparatus of the class described, a vat, a sifting vessel suspended into said vat having an exchangeable sieve bottom, a pump for pumping material on said sieve, a vertical shaft, said shaft extending into said vessel and a brush at the lower end of said shaft and rotating therewith in close proximity to the sieve bottom of said vessel for forcing the material pumped on said screen through the same, and a common actuating means for said pump and said vertical shaft.

3. In an apparatus of the class described, a vat, a sieve vessel in said vat, a rotary brush in said vessel, means for rotating said brush and for feeding color to said vessel, said means comprising a pump, an angle bar secured to the piston rod of said pump, a bracket on the outer wall of said vat, an operating rod pivotally secured intermediate its ends to said bracket and a pin and slot connection between the lower end of said rod and the free end of said angle bar, and a link pivotally secured to the free end of said rod, a vertical shaft for said brush, a bevel gear on said shaft, a bevel gear in mesh with said first named bevel gear, a crank connected to said second bevel gear and to said link, and a pipe conduit leading from the pump to said vessel adapted for conveying color to said vessel upon the operation of said pump.

In testimony whereof I have affixed my signature.

JULIAN KAZIENKO.