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J. H. THOMPSON

1,760,798

DYEING MACHINE

Filed April 15, 1927

Fig. 1.

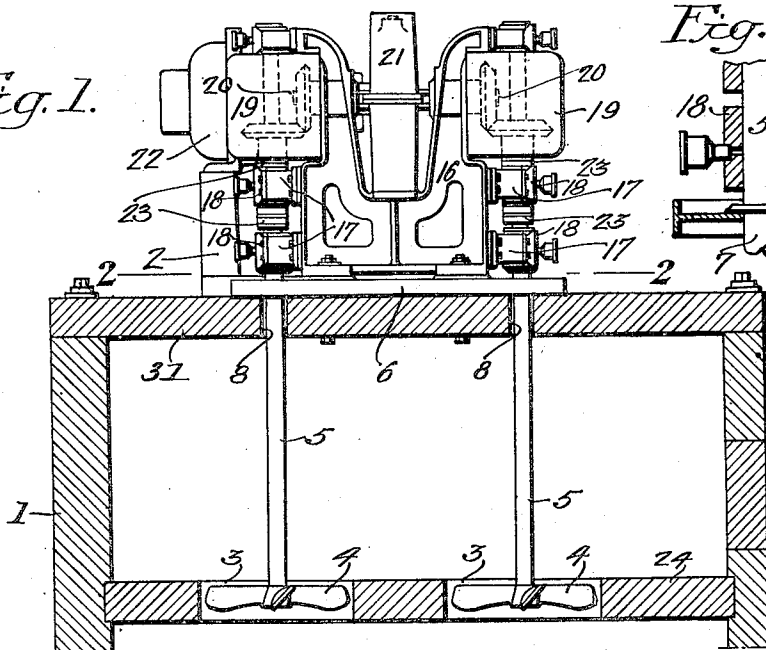


Fig. 6.

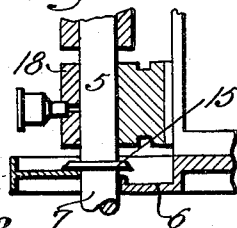


Fig. 2.

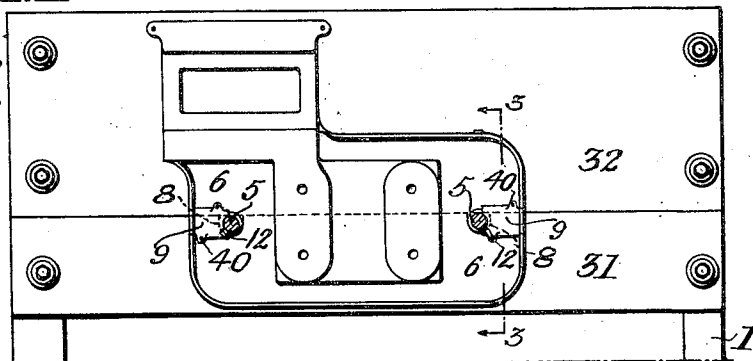


Fig. 3.

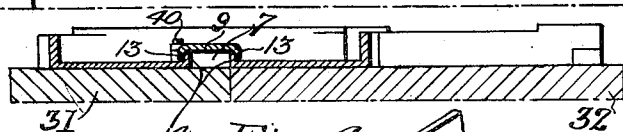


Fig. 4.

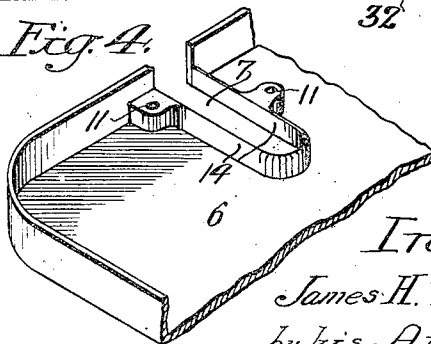
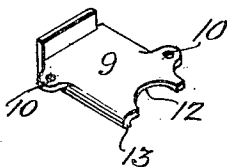


Fig. 5.



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UNITED STATES PATENT OFFICE

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DYEING MACHINE

Application filed April 15, 1927. Serial No. 184,091.

This invention relates to dyeing machines in which there is a driving head for operating the propellers which circulate the dye liquor in the dye vat.

5 An object of the invention is to so construct the mechanism that the propeller-shafts can be readily removed without dismantling the mechanism.

Another object is to produce an efficient strong and durable apparatus which may be economically constructed and operated.

Other objects and advantages will herein-after appear.

The views of the drawings are:—

15 Figure 1 is a vertical section through one end of a dye vat illustrating my invention applied thereto;

Fig. 2 is a plan view of the vat as seen from the line 2—2 of Fig. 1;

20 Fig. 3 is a detail section taken on the line 3—3 of Fig. 2, showing the construction of the oil pan;

Fig. 4 is a detail perspective view of a portion of the oil pan;

25 Fig. 5 is a detail perspective view of the cap plate which covers the opening in the oil pan, and

Fig. 6 is a vertical section showing an oil deflector on one of the propeller shafts.

30 At one end of the dye vat 1, is a closure comprising boards 31 and 32 on which is mounted the driving head 2.

Under the boards 31 and 32 is a partition 24 in which are openings 3 for propellers 4.

35 The propellers 4 are mounted on the lower ends of vertical shafts 5 that extend through openings 8 in the board 31, as well as through openings 7 in an oil pan 6, mounted on top of the boards.

40 The openings 7 in the pan are in the form of slots extending to the edge of the pan, as shown clearly in Fig. 4.

45 The openings 8 are also in the form of slots and extend to the edge of the board 31, as shown by the dotted lines Fig. 2.

The openings 7 in the pan are closed by cover plates 9, preferably of the form shown by Fig. 5.

50 Securing bolts 40 pass through openings

in lugs 10 projecting from the plates 9 and into openings 11 formed in the pan 6.

The inner edges of the plates 9 have curved notches 12 which fit the shafts 5.

Downwardly extending flanges 13 are also 55 formed on the plates 9 so as to fit over upwardly extending flanges 14 formed around the openings 7 in the pan 6.

There are two propeller shafts 5 in the present instance, and on each shaft is an oil collar 15 located directly above the pan, 60 as shown in Fig. 6, so that any oil that travels down the shaft from the driving mechanism or the bearings will be deflected and will drip into the pan.

65 Secured to the pan is the main frame 16 of the driving head. This frame has bearings 17 mounted thereon for the shafts 5. These bearings have detachable caps 18 on the removal of which the shaft can be withdrawn through the opening 7 and 8. Secured 70 to the frame 16 are covers 19 for the gearing by which the shafts 5 are driven from the main horizontal shaft 20, driven from the shaft of a motor 22 by a chain located in the 75 casing 21. On the shaft 5 are thrust collars 23.

The invention set forth herein is, of course, susceptible of various modifications and 80 adaptations.

The invention claimed is:—

85 A drip pan for vertical shafts, said pan having a slot formed in an edge thereof through which the shaft may be removed, a peripheral flange on the pan and around the said slot, and a cap secured to said pan and covering the outer end of said slot while leaving an opening at the inner end of the slot for said shaft.

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