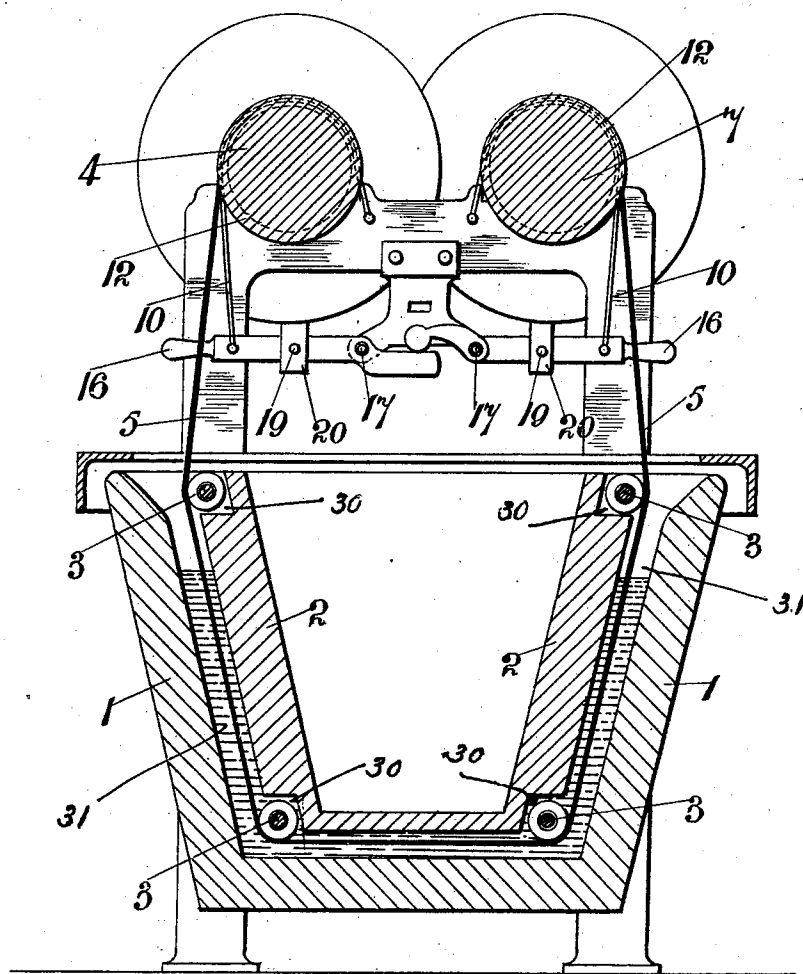


F. SHAW.
DYE JIGGER.
APPLICATION FILED OCT. 22, 1908.

937,652.

Patented Oct. 19, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRED SHAW, OF WHITEFIELD, NEAR MANCHESTER, ENGLAND.

DYE-JIGGER.

937,652.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed October 22, 1908. Serial No. 459,072.

To all whom it may concern:

Be it known that I, FRED SHAW, residing at Whitefield, near Manchester, in the county of Lancaster, England, have invented certain new and useful Improvements in or
5 Connected with Dye-Jiggers or Dyeing Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others
10 skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in or connected with dye jiggers or dyeing apparatus for dyeing textile piece goods and
15 the like, the object being to economize the amount of dye liquor used and at the same time to thoroughly immerse saturate and dye the piece under operation.

The invention consists in the use in combination with the dye vat of a displacer and
20 immerser which displaces the liquor over a greater area and consequently subjects the piece to a comparatively longer immersion.

The drawing shows a vertical section of a
25 dye vat constructed according to this invention.

The vat 1 is formed of any suitable material, such as metal or porcelain. The vat is substantially rectangular, and it is provided with an immerser 2.
30

The immerser 2 is substantially rectangular and it is provided with recesses 30 at its corners for the purpose of receiving the guide-rollers 6, so that the passage 31 for
35 the dye and the material may be very narrow and of substantially uniform width.

The piece 5 passes from one jig roller 7 under or around the immerser 2 to the other jig roller 4 in the usual manner and the
40 roller or immerser 2 almost filling the vat 1 a comparatively small quantity of dye liquor is required owing to the displacement by

the immerser 2 the small quantity being spread over a much larger comparative area and the piece 5 is thus subjected to a longer immersion though less liquor is used. The
45 immerser 2 may be corrugated or fluted to allow the liquor to more readily saturate the piece 5 and it may be provided with apparatus for raising and lowering it out of the
50 vat when necessary.

A convenient method of applying or removing friction to or from the jig rollers 4—7 comprises the bands 10—10 passing
55 over brake wheels 12 on the shafts or axes of the jig rollers 4—7 and the frictional contact is easily regulated on both rollers simultaneously from either side of the machine by means of the hand levers 16—16
60 pivoted at 17—17 and with their inner ends in contact as shown. When adjusted the levers 16 can be fixed by pins 19—19 passing through same and through the brackets
20—20.

Having now described my invention what
65 I claim as new and desire to secure by Letters Patent is:—

In dyeing apparatus, the combination with a substantially rectangular vat for the dyeing liquid, of a stationary and substantially
70 rectangular immerser secured in the vat and provided with recesses at its corners, revoluble guide-rollers arranged in the said recesses, and driving devices for sliding the material to be dyed over the said rollers and
75 through the passage formed between the vat and the immerser.

In testimony whereof I affix my signature, in presence of two witnesses.

FRED SHAW.

Witnesses:

ERNALD SIMPSON MOSELEY,
MALCOLM SMETHURST.