March 29, 1927. 1,622,928

J. H. SKITT

PADDLE FOR DYEING MACHINES

Filed Feb. 27, 1924

Fig. 1.

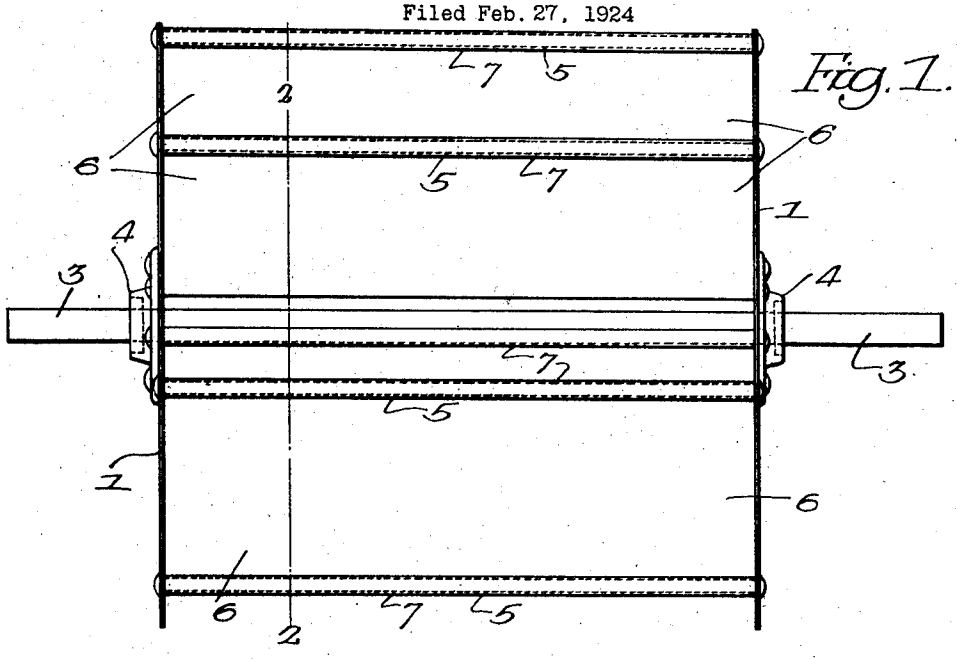


Fig. 2.

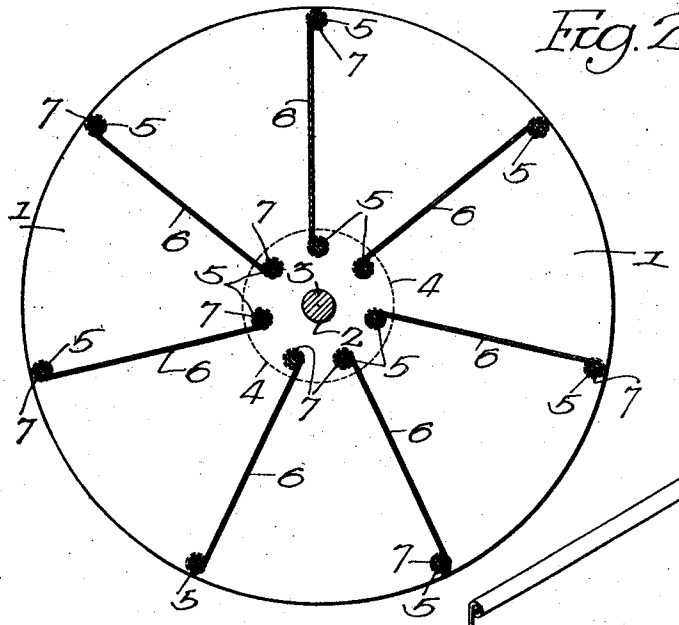
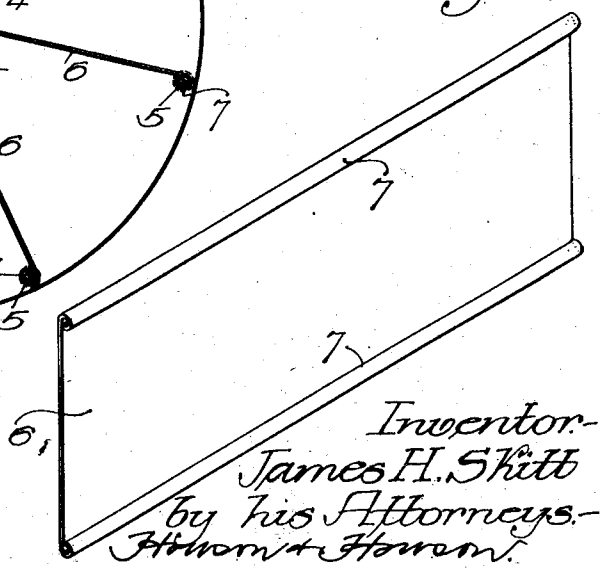


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PADDLE FOR DYEING MACHINES.

Application filed February 27, 1924. Serial No. 695,531.

This invention relates to dyeing machines, and more particularly to that type of dyeing machine comprising a paddle wheel or wheels, it being the principal object of the invention to provide a paddle wheel having no sharp edges or flanges or projecting elements which might injure the fabrics being processed.

Another object of the invention is to provide a paddle wheel of extremely low manufacturing cost and one in which the parts are both easily manufactured and assembled.

The embodiment by which these and other objects hereinafter appearing are attained is illustrated in the attached drawings, in which:

Figure 1 is a side elevation of a paddle wheel made in accordance with my invention;

Fig. 2 is a transverse section on the line 2—2, Fig. 1, and

Fig. 3 is a view in perspective of one of the blades.

With reference to the drawings, the wheel comprises two end pieces or spiders 1, 1, which in the present instance are in the form of disks, each of which is provided with a central opening 2 for the reception of a shaft 3. The wheel further comprises a pair of hub plates 4, 4, adapted to be secured to the outside of the disks 1 in a manner hereinafter described, and also a plurality of cross bolts or rivets 5 which constitute not only the means for securing the said disks together, but also constitute supports for the blades or paddles 6.

These blades are well illustrated in Fig. 3, which shows one of them detached and in perspective. From this figure, it will be noted that the blades consist of plates whose longitudinal side edges are rolled over or beaded to form bearings for the said bolts or rivets 5. In assembling the wheel, the bolts 5 are first inserted through the turned-over edges 7 of the blade 6, and are then passed through the apertures in the disks 1 provided for that purpose, the projecting ends of the rods being then riveted over on the outside of the disks, as clearly illustrated. The blades 6 constitute the spacers for the disks 1, 1, and it will be noted that those of the tie rods 5 which hold the inner ends of the blades also constitute the means for securing the hub elements 4 to the disks.

The aforedescribed wheel not only is extremely easy and cheap to make and assemble, but provides a paddle wheel which is particularly well adapted for dyeing purposes, since, as is clear from the drawings, there are no sharp edges or projections which might tend to injure the fabrics during the dyeing operation.

I claim:

1. A paddle wheel comprising end pieces, tie rods securing the end pieces together and arranged in pairs with one rod of each pair further from the axis of the wheel than the other, and plates having beaded opposite edges through which the tie rods of the respective pairs extend and unbeaded side edges bearing against the said end pieces.

2. A paddle wheel comprising circular end pieces, hub elements of lesser diameter than said end pieces, two sets of tie rods radially spaced and securing the end pieces together, the inner set of rods passing through the hub elements and being riveted on the outside so as to secure the said elements in the structure and the outer set of rods also being riveted on the outside of the end plates, and substantially rectangular plates having in each case opposite edges beaded over an outer and an inner tie rod and constituting blades for the paddle and spacers for the end plates.

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