

July 12, 1927.

1,635,245

O. BRÄNDLI

WASHING MACHINE

Filed Oct. 7, 1924

2 Sheets-Sheet 1

Fig. 1

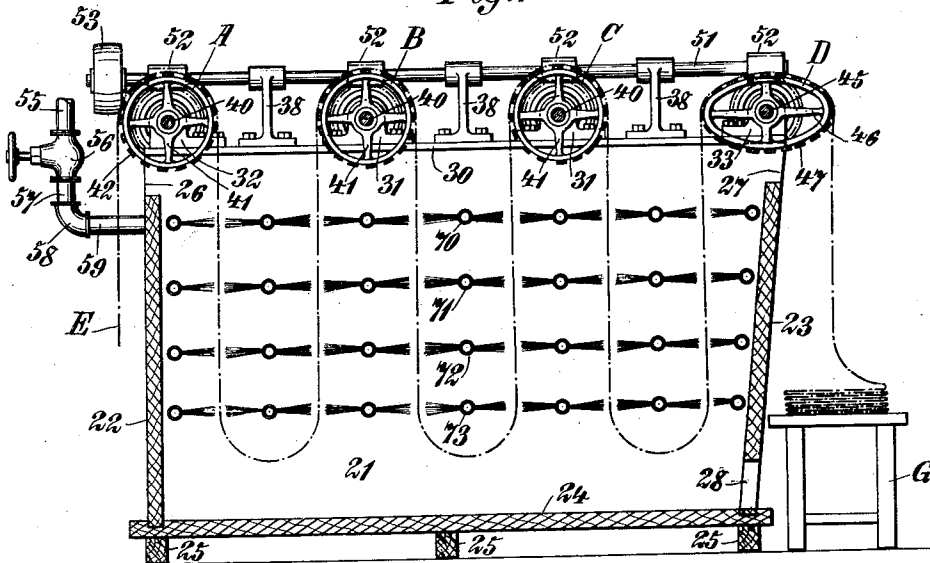
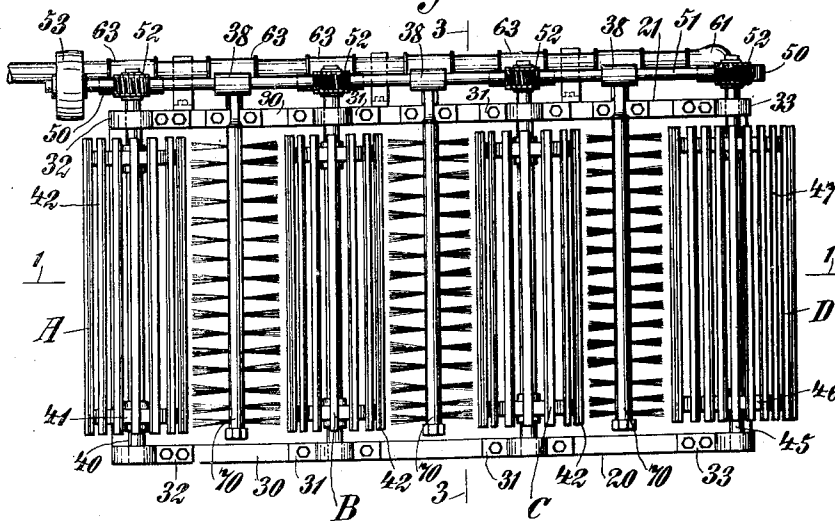


Fig. 2



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Fig. 3

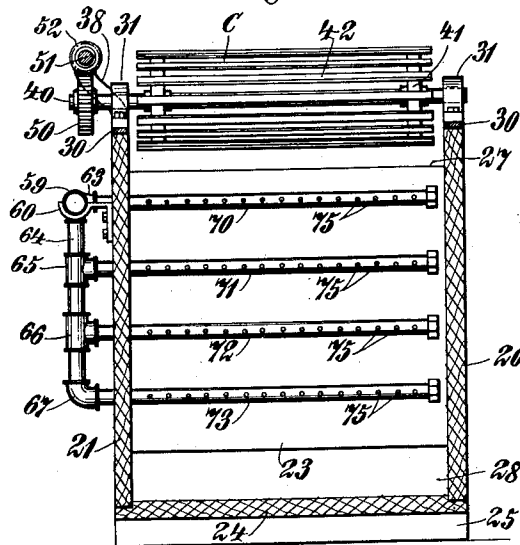
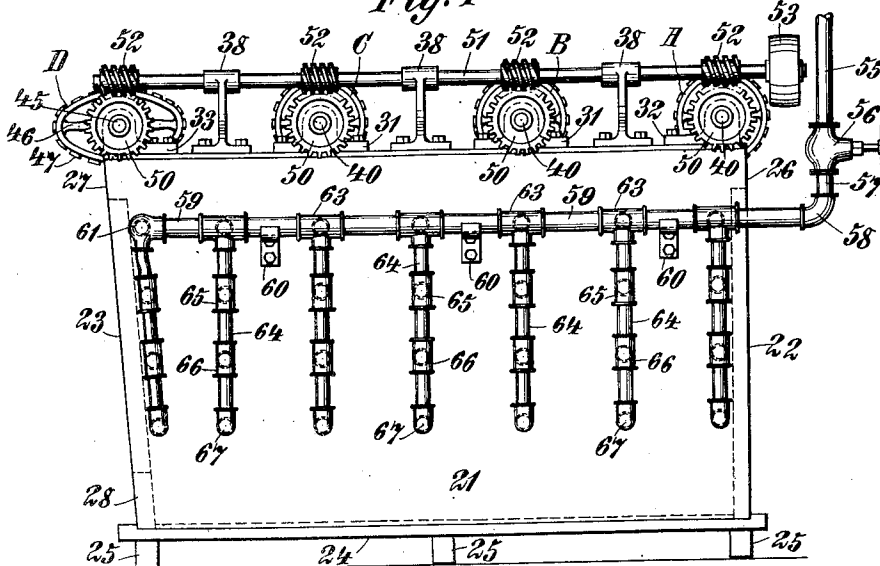


Fig. 4



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Patented July 12, 1927.

1,635,245

UNITED STATES PATENT OFFICE.

OSCAR BRÄNDLI, OF PHILADELPHIA, PENNSYLVANIA.

WASHING MACHINE.

Application filed October 7, 1924. Serial No. 742,133.

This invention relates to a washing machine.

Its object is the production of a washing machine, which is specially adapted to wash bands or strips of cloth or other material, after being dyed. The second object of the invention is the production of a machine in which a band of material is suspended and conveyed in a serpentine path, free at its bottom suspended portions and simultaneously sprayed with a cleaning fluid. A third object of the invention comprises means to deliver a band of material at intermittent varying speeds, after being washed, to fold it in equal portions one over the other.

In the accompanying drawings Fig. 1 represents a section as on the line 1, 1, of Fig. 2, of an exemplification of the improved washing machine; Fig. 2 shows a top plan view of Fig. 1; Fig. 3 is a section on the line 3, 3 and Fig. 4 indicates a left hand side view of Fig. 3.

A casing preferably of wood is represented with the front wall 20, the rear wall 21, the side walls 22 and 23, and the bottom wall 24 supported upon the cross girders 25. The upper ends of the side walls 22 and 23 are below the upper ends of the walls 20 and 21 to form the inlet opening 26 and the outlet opening 27, of the material operated upon. A second outlet opening 28 is formed in the side wall 23 adjacent to the bottom wall 24 for the discharge of the cleaning fluid used in the machine.

Bars 30 preferably of metal are supported upon the top ends of the walls 20 and 21. Similar pairs of journal brackets 31 are supported upon the said bars 30, intermediate their ends. Similar pairs of journal brackets 32 and 33 are supported upon and at the ends of the bars 30. Journal brackets 38 are also supported upon the bar 30 over the rear wall 21.

Cylindrical transmission reels for the washing machine are respectively designated in their entirety by the letters A, B and C. Each of said reels comprises the shaft 40, to which is fastened the pair of wheels 41. Strips 42 preferably of wood are fastened to the outer circumferential surfaces of each pair of said wheels. The shafts 40 are journaled in the pairs of journal brackets 31 and 32.

An elliptical transmission and folding reel is designated in its entirety by the letter D, and comprises the shaft 45, to which is fas-

tened the pair of elliptical wheels 46. Strips 47, preferably of wood, are fastened to the elliptical outer surfaces of the latter wheels. The perimeters of the reels A, B, C and D are equal to one another.

On each of the shafts 40 and 45 is fastened a worm wheel 50. A shaft 51 is journaled in the journal brackets 38 and has fastened thereto the worms 52, which latter mesh with the worm wheels 50. A pulley 53 is fastened to one end of the shaft 51.

Water or other cleaning fluid supply piping comprises, the supply pipe 55, the valve 56, the nipple 57, the elbow 58 and the horizontal piping 59. Brackets 60 extend from the rear wall 21 and support the piping 59. To the piping 59 are connected the elbow 61 and the plurality of T's 63, each with three threaded openings. From the elbow 61 and the T's 63 depend the vertical pipes 64 with the T's 65 and 66 similar to 63. At the lower end of each of the pipes 64 is connected an elbow 67. Horizontal spray pipes 70, 71, 72 and 73 having the outlet openings 75 extend respectively from the T's 63, 65, 66 and the elbows 61 and 67, into the casing of the machine.

To operate the washing machine the bands of cloth E or other material to be cleaned are located upon the reels A, B, C and D and suspended into the casing of the machine, to hang in a serpentine path, free at its bottom suspended portions, with the vertical members of the band between the rows of pipes 70 to 73. The valve 56 is next opened and the pulley 53 on the shaft 51 is turned, by a belt not shown. By this means rotation is transmitted to each of the reels A, B, C and D, and the band E is conveyed between the spray pipes 70, 71, 72 and 73 in a serpentine path. Thereby both sides of the said band are sprayed by the streams of fluid discharged from the outlet openings 75 of said spray pipes. When the cloth is discharged from the elliptical transmission reel D, it drops therefrom with different speeds, so that it can be easily folded on the receiving table G.

Various modifications may be made in the invention and the present exemplification is to be taken as illustrative and not limitative thereof.

Having described my invention, what I desire to secure by Letters Patent and claim is:

1. In a washing machine the combination

of a casing, a plurality of reels journaled over the casing to suspend and convey a band of material to be cleaned, in a serpentine path free at its lower portions, through said casing and means to spray both sides of the band with a cleaning fluid while being conveyed through the casing.

2. In a washing machine the combination of a casing comprising, a front wall, a rear wall, side walls and a bottom wall, one of said side walls having an outlet opening adjacent to its lower end, to discharge a cleaning fluid from the casing, pairs of journal brackets extending up from the top end of said front and rear walls, a plurality of cylindrical transmission reels, shafts for said reels journaled in said pairs of journal brackets, said reels suspending a material operated upon in a serpentine path free at its lower

portions in said casing, a worm wheel fastened to each of the shafts of the reels, other pairs of journal brackets extending up from the top end of the rear wall of the casing, a shaft journaled in the latter journal brackets, worms for said shafts meshing with said worm wheels, means to turn the shaft and thereby turn said reels, piping for a cleaning fluid connected to said casing and rows of horizontal spray pipes leading from said piping into the casing, said spray pipe having outlets for the discharge of the cleaning fluid therein, to project streams thereof to both sides of the material operated upon as it travels through the casing.

Signed at Philadelphia in the county of Philadelphia and State of Pennsylvania this 13th day of September, A. D. 1924.

OSCAR BRÄNDLI.