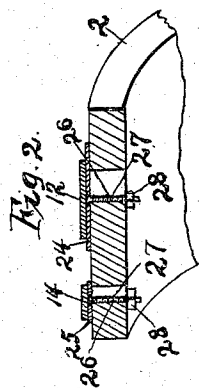
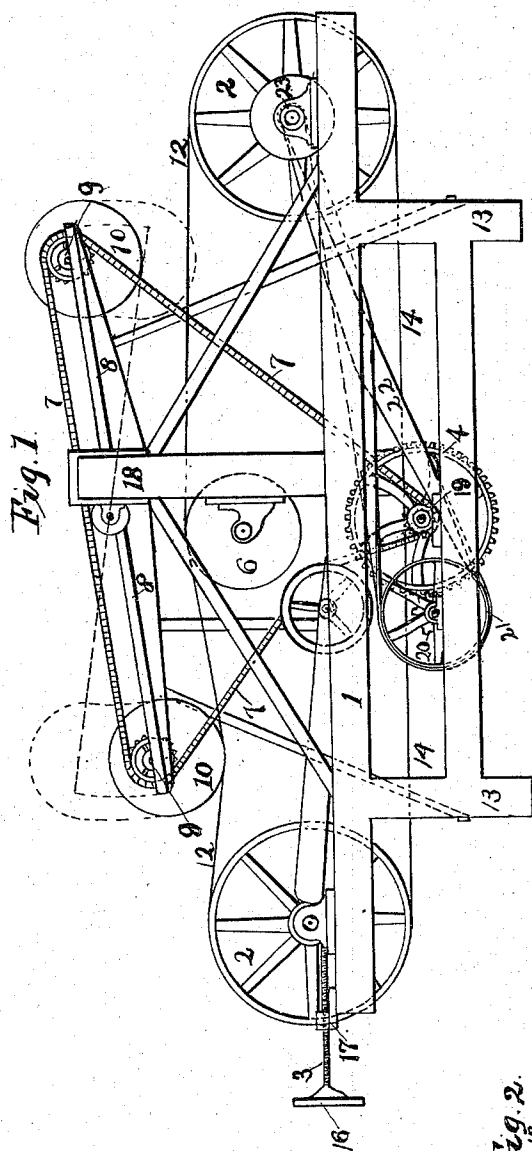


(No Model.)

C. D. AMES.
MACHINE FOR SANDING BUTTER TUBS.

No. 573,846.

Patented Dec. 29, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES D. AMES, OF PORTLAND, INDIANA, ASSIGNOR TO THE CREAMERY PACKAGE MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS.

MACHINE FOR SANDING BUTTER-TUBS.

SPECIFICATION forming part of Letters Patent No. 573,846, dated December 29, 1896.

Application filed August 5, 1896. Serial No. 601,734. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. AMES, a citizen of the United States, residing at Portland, in the county of Jay and State of Indiana, have invented certain new and useful Improvements in Machines for Sanding Butter-Tubs and other Casks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention has reference to machines for smoothing the exterior of butter-tubs, pails, barrels, and other casks; and it consists in certain novel mechanism for presenting the sand-belt to the exterior of the tub, mechanism for rotating the tub meanwhile in the opposite direction from the movement of the sand-belt, sand-belts of peculiar construction, and mechanism for varying the position of said sand-belts on the carrying-pulleys to adapt such belts to tubs of various sizes.

I attain the above results by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective of that portion of the machine embodying my invention. Fig. 2 is a detail in cross-section of the pulleys which carry the sand-belt.

Similar numerals refer to similar parts in each view.

The frame 1 of the machine is suitably supported a proper distance from the floor by means of the legs 13. Parallel belt-pulleys 2 2 are suitably journaled in line and the proper distance apart on the frame 1 and adapted to carry and in their rotation to advance the sand-belts 12 and 14. A tension device 3, consisting of a threaded shaft adapted to be rotated by the hand-wheel 16 and seated in a threaded box 17, suitably attached at its inner end to the boxes of one of the pulleys 2, serves to keep the belts 12 and 14 at the proper degree of tightness. This is further accomplished by the idle-pulley 6, seated on the frame of the machine under the upper half of the belts 12 and 14 and adapted to hold said belts up against the lower surface of the tub being operated upon thereby.

The tub-chucks 10 10 are respectively suitably journaled transversely in each end of the beam 8, which beam is pivoted about centrally to the vertical standard 18, formed on frame 1. The chucks 10 10 are adapted in the usual mode for the reception of the butter-tubs in position to project over the upper surface of the upper portion of the sand-belts 12 and 14. The sprocket-wheels 9 9 are seated on the axles of the chucks 10 10, respectively, and are adapted to be driven in a direction opposite to the movement of the adjacent side of said sand-belts by the sprocket-chain 7, which passes around both of the sprocket-wheels 9 and a lower sprocket-wheel 19, seated rigidly on the face of the gear 4, suitably journaled on the lower portion of the frame 1. Rotation is imparted to the gear 4 by the engagement therewith of a pinion 20, seated on the face of the belt-wheel 21, the latter being driven by the crossed belt 22 from the small pulley 23 on the shaft of one of the sand-belt pulleys 2.

The draw of the sprocket-chain 7 tends to normally hold down upon the belts 12 and 14 the chuck 10 at the left in Fig. 1, and while the chuck at the opposite end of the beam 8 is in operation the chuck 10 thereon is held down by the operator by means of a foot-treadle, hand-lever, handle, or other suitable device. While the tub upon one of the chucks 10 is in contact with the sand-belts 12 and 14, the opposite chuck 10 is elevated above and out of contact with said belts, and the finished tub thereon removed and another unfinished one placed upon said chuck, which is then depressed into contact with said belt either by direct pressure by the operator or by the draw of said chain 7, as the case may be, and the tub upon the opposite chuck removed and a new unfinished one placed thereon. In this mode each end of the beam 8 is depressed and elevated alternately with the opposite end, and during the depressed intervals the exterior of the tub carried upon the depressed chuck is brought in contact with the sand-belts 12 and 14 and such exterior finished by said contact, while in the elevated intervals of the chucks 10 the finished tub is removed therefrom and an unfinished one substituted therefor.

Suitable rotation is imparted to either one

of the belt-pulleys 2 by any of the well-known modes. I employ a small belt-pulley rigidly seated on the shaft of one of the pulleys 2 and driven from the line-shaft in the factory 5 by means of a short belt.

On the exterior of the butter-tub, when placed on the chuck 10 for the finishing of its exterior, as aforesaid, there are two narrow rings or truss-hoops, one at the bottom of the 10 tub and the other a short distance downward from the top of the tub. The presence of this upper ring necessitates the use of two belts. The broad belt 12 occupies and operates upon the interval between said hoops, 15 while the narrow belt 14 operates upon that portion of the exterior of the tub 3 which extends above the upper ring or truss-hoop. By this means all of the exterior of the tub is finished except the narrow belts occupied 20 by the aforesaid rings or truss-hoops; but when the tub is finished all of the exterior of the tub which is exposed to view has a finished appearance.

As tubs are constructed of different heights, 25 the spaces between the aforesaid rings and the upper ring necessarily vary in width. Therefore some provision must be made for the use of sand-belts of proportionate widths and means provided for holding said belts in 30 proper position relative to the area of the tub upon which the said pulleys are to operate. To that end I provide two two-and-one-half-inch iron bands 24 and 25, placed around the periphery of the pulleys 2 parallel with each 35 other and held in place by a suitable number of bolts 26, the heads of which are counter-sunk in the iron bands 24 and 25, and the stems of which pass through the rim of the pulley 2 in openings 27, which latter may be 40 either transverse slots or a transverse series of bolt-seats, and are rigidly held in place by nuts 28 on the inner end of said bolts. By this means the iron bands or bushings 24 and 25 may be shifted at will transversely on the 45 periphery of the pulleys 2 to serve as seats and guides for the sand-belts 12 and 14, operating upon the belts like a crowning pulley.

The belts 12 and 14 are constructed of leather, having a preparation of glue and sand 50 on their outer surfaces to operate against the exterior of the cask, as aforesaid.

Any other material may be used for the belts, but leather is found to be preferable.

If preferred, the machine may be used with 55 but one of the chucks 10.

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

1. In combination with suitable mechanism 60 for presenting the exterior of casks to the exterior of a moving sand-belt, the sand-belts 12 and 14, suitably carried on rotating pulleys, and on their outer surfaces provided with a coating of glue and sand and duplicate 65 means for presenting an article to the belts, substantially as shown and for the purpose described.

2. The combination of the sand-belts 12 and 14, suitably carried on the rotating pulleys, and provided on their exterior with a cutting- 70 surface of glue and sand, oscillating beam 8, provided with a tub-chuck at each end, adapted to be alternately presented to said belt, and means substantially as shown for rotating 75 said chucks meanwhile in an opposite direction to the movement of said sand-belts, for the purpose specified.

3. The combination of continuously-rotating belts 12 and 14, provided on their exteriors with an abrading-surface an oscillating beam 80 8 substantially parallel with said belt chucks 10 seated on the ends of said beam, sprockets 9 seated on the shafts of said chucks, a suitably-driven sprocket-wheel 19, and a sprocket-chain 7, inclosing and rotating the said 85 sprocket-wheels 9, substantially as shown and for the purpose described.

4. The combination of moving endless sand-belts 12 and 14, provided on their exteriors with an abrading-surface an oscillating beam 90 8, provided at each end with tub-chucks 10, 10, and means, substantially as shown, for rotating said chucks in a direction contrary to the movement of said sand-belts thereunder, for the purpose specified. 95

5. The combination of the pulleys 2, and iron bands or bushings 24 and 25, adjustable laterally on the peripheries of said pulleys, substantially as shown and for the purpose 100 described.

6. The combination of the sand-belt-carrying pulleys 2, and sand-belts 12 and 14 provided on their exterior with an abrading-surface, means for laterally shifting said sand- 105 belts on said pulleys, and means for intermittently presenting to the outside of said sand-belts, the exterior of reversely-rotating butter-tubs or other casks, substantially as shown and for the purpose specified.

7. The combination, of carrying-pulleys, 2, 110 2, the periphery of each of which is provided with circumferential series of transverse slots, an iron band around the pulley at each series of slots, bolts secured to the bands and projecting through the slots and provided 115 with means for securing them in their adjusted positions, endless belts upon the wheels, and means for presenting hooped articles to the belt in such manner that the hoops will lie between the belts, substantially as set forth. 120

8. The combination, with a frame, of a supporting-pulley at each end and an upright intermediate the ends, a pulley and an oscillating beam upon the upright, endless belts upon the pulleys, and means at each end of 125 the beam for presenting articles to the belt, substantially as set forth.

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

CHARLES D. AMES.

Witnesses:

M. GEO. ARCHER,
M. U. STEPHENSON.