June 4, 1929. C. PADILLA 1,716,080

SHINGLE BUNDLING MACHINE

Filed May 4, 1927

Fig. 1.

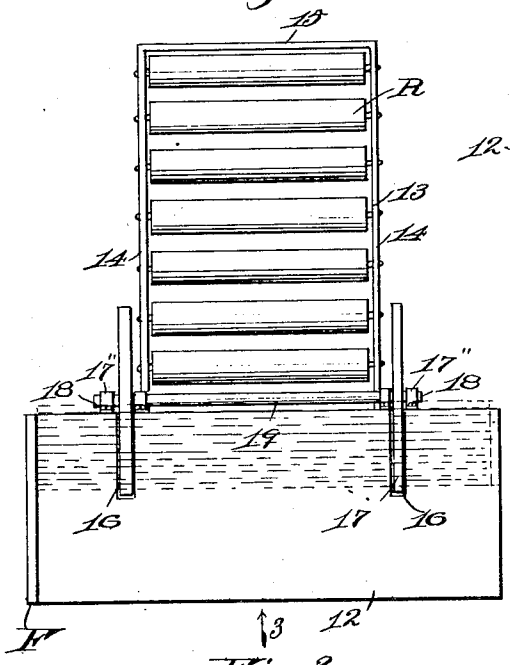


Fig. 2.

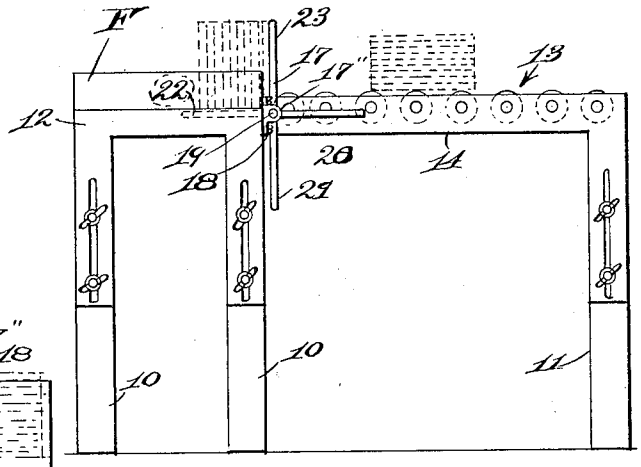


Fig. 3.

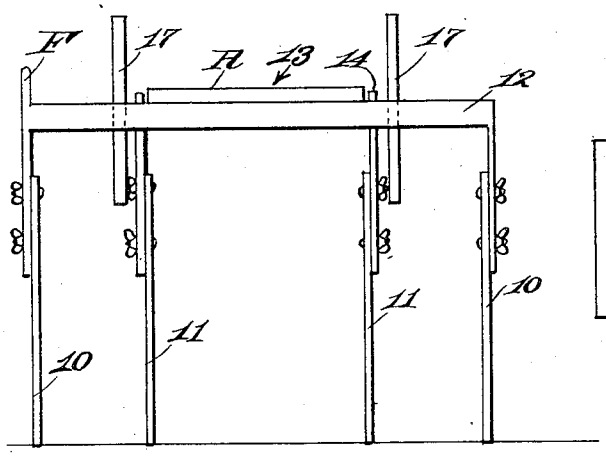


Fig. 4.

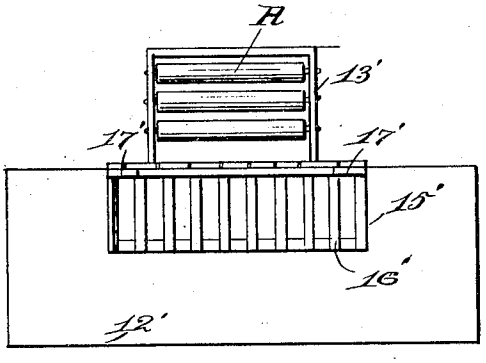
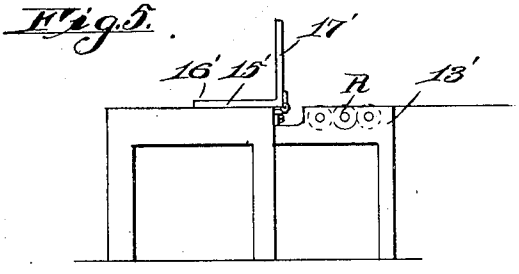


Fig. 5.



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Patented June 4, 1929. 1,716,080

UNITED STATES PATENT OFFICE.

CONCEPTION PADILLA, OF LOS ANGELES, CALIFORNIA.

SHINGLE BUNDLING MACHINE.

Application filed May 4, 1927. Serial No. 188,787.

This invention relates to shingle bundling machines, and more particularly to a stacking device that will effectively stack shingles and transmit them to a point where they may be tied together.

A further object of this invention is to provide a device of this nature which will minimize the amount of manual labor expended in placing the shingles in such a position that they may be conveniently tied.

A still further object of this invention is to provide a machine which is inexpensive to manufacture, contains relatively few moving parts, is unlikely to get out of order, and is well adapted to perform the services required of the same.

With these and many other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts, which will hereinafter be more fully described, illustrated, and claimed.

The essential features of the invention involved in the carrying out of the objects indicated are susceptible to modifications; but a preferred embodiment of the invention is shown in the accompanying drawings, in which:

Figure 1 is a top plan view of a preferred form of my invention.

Fig. 2 is a side elevation of the shingle bundling machine showing the same in operative assembled relationship.

Fig. 3 is an end view of the device as shown in Figure 1, looking in the direction of the arrow 3 in that figure.

Fig. 4 is a plan view of a slightly modified form of the invention, and

Fig. 5 is a side view of the discharge shown in Figure 4.

Referring to the accompanying drawings in which similar reference characters designate similar parts thoughout, the device involves in its general organization, a plurality of adjustable supports 10 and 11. The supports 10 are four in number and serve to support a table 12, while the supports 11 are two in number and serve to support a conveyor, which conveyor is designated at 13 and consists of side bars 14, and an end bar 15. These side bars 14 are attached to one side of the table and extend outwardly therefrom in a plane with the table. The table has a pair of transverse recesses 16 formed therein, and a plurality of brackets 17″ held in place by bolts 18, form journal bearings for a rotatable shaft 19, which shaft has mounted thereon and keyed thereto, a pair of shingle turning members designated as an entirety at 17. Each of these members comprises four outwardly extending arms 20, 21, 22 and 23 respectively. Each of these arms extends outwardly from the shaft at an angle of 90° from its adjacent arm, and thus the arms 20 and 22, and the arms 21 and 23 are in alignment. These arms may be formed integral, and both shingle turning members have their corresponding parts lying in the same plane so that the arms 20, 20; 21, 21; 22, 22; and 23, 23; lie in the same planes respectively. The shaft is free to turn in the journals provided for it. Pivoted for rotation between the side bars 14 are a plurality of rollers R which rollers are adapted to convey the stacked shingles to a point where they may be tied. The exact number of these rollers R is immaterial, and in this instance I have shown six, but the number may be increased or decreased at will. On one end of the table there is provided an upstanding flange designated at F, which flange may be used as a guide to align the shingles as they are placed on the table.

The parts thus described in essence constitute my entire invention, and I will now proceed with the description of the operation of the device. An operator stands at the forward end of the table 12 and places the shingles uniformly on the table as clearly shown in Figure 1. When a sufficient number of shingles have been stacked in this manner, by grasping the upwardly extending arms and causing them to pass rearwardly and downwardly, the shingles are lifted by the arm beneath them as this arm passes through the slot 16, and they are laid upon the rollers R in a horizontal position where they may travel to the end of the frame and be tied by another operator. In this position, the shingles turning members 17 are ready to receive another stack of shingles on the table side of the device.

In Figures 4 and 5 I have shown a slightly modified form of the invention, and in this modification it is not necessary to cut the groove 16 in the table. A rack 15′ consisting of a plurality of parallel bars 16′ is adapted to rest upon the table. Pivoted to this rack are a pair of arms 17′ extending perpendicular to the bars 16′. These arms lie just outside the frame 13′, and the shingles are stacked upon the rack 15′. When a sufficient

number of shingles are in position, the rack, which is pivoted to the table is swung rearwardly, and the shingles are deposited upon the rollers R.

What I claim by this invention and desire to secure by Letters Patent, is:

1. A device of the character described comprising a table, a conveyor adjacent said table, a shaft mounted for rotation on one edge of said table transversely of said conveyor, shingle turning members on said shaft, said shingle turning members having arms adapted to underlie a stack of shingles, said shingle turning members being located on each side of said conveyor, and recesses cut in said table to permit said arms to underlie a stack of shingles, and means on said table for aligning shingles in said stack.

2. In a shingle bundling machine, a table adapted to receive and stack vertically disposed shingles, a conveyor extending from said table, a shaft revolubly mounted adjacent an edge of the table transversely of said conveyor, the axis of rotation of said shaft being below the tops of said table and said conveyor, and a shingle-turning member carried by said shaft at each side of said conveyor, each of said members comprising arms spaced about said shaft, said arms being adapted to pass through apertures in said table when the shaft is rotated.

3. In a shingle bundling machine, a table adapted to receive shingles, a guide on said table for aligning said shingles into a stack, a conveyor extending from said table, a shaft revolubly mounted adjacent an edge of the table transversely of said conveyor, the axis of rotation of said shaft being below the tops of the table and the conveyor, and a shingle-turning member carried by said shaft at each side of said conveyor, each of said members comprising arms spaced about said shaft, said arms being adapted to pass through apertures in said table when the shaft is rotated to engage the bottom of said stack rotated through ninety degrees, and deposit it upon said conveyor.

4. In a shingle bundling machine, a table adapted to successively receive an unbound stack of vertically disposed shingles, a conveyor extending from said table, and means associated with said table for lifting said stack of shingles from said table, turning it through ninety degrees, and depositing it in stacked relationship upon said conveyor.

5. In a shingle bundling machine, a table adapted to successively receive a plurality of shingles, a guide on said table for aligning said shingles into a stack, a conveyor extending from said table, and means associated with said table for lifting said stack from said table, turning it through ninety degrees, and depositing it upon said conveyor.

6. In a shingle bundling machine, a table adapted to successively receive a plurality of shingles, a guide on said table for aligning said shingles into a stack wherein the shingles are standing on edge, a conveyor extending from the table, and means associated with said table for lifting said stack from said table, turning it and depositing it upon its side upon said conveyor.

In testimony whereof I have signed my name to this specification.

CONCEPTION PADILLA.