

Nov. 30, 1943.

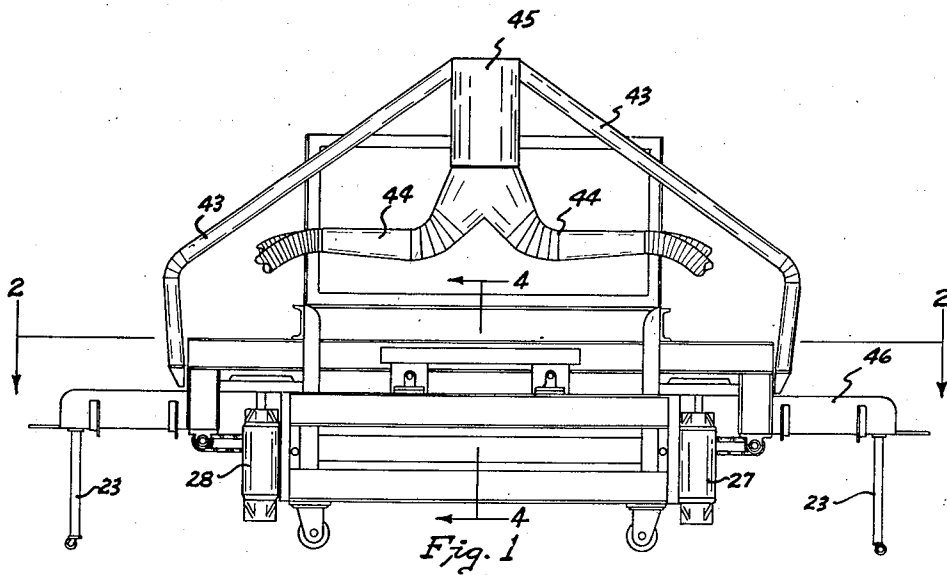
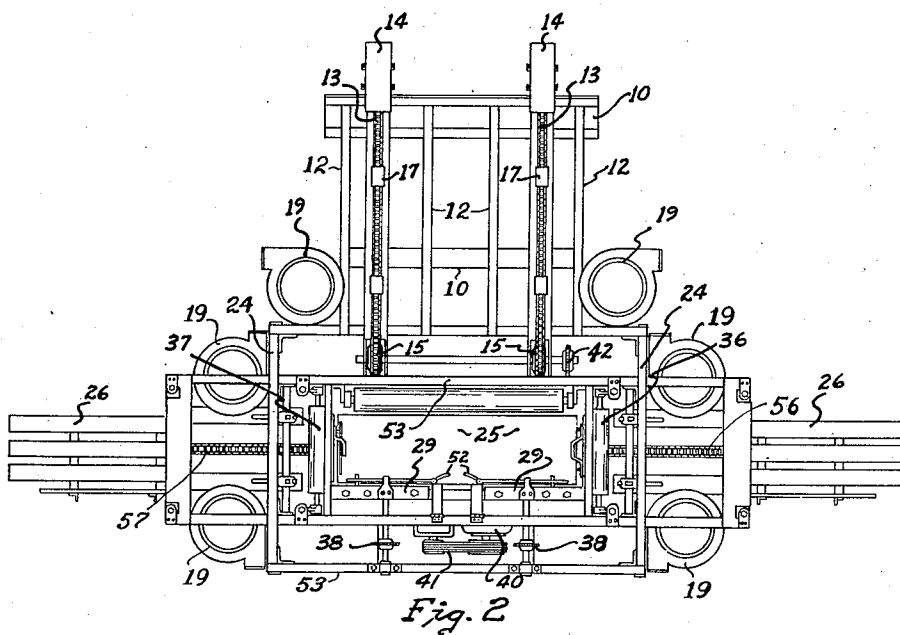
P. H. KINPORTS

2,335,768

SHIPLAPPING MACHINE

Filed June 17, 1942

2 Sheets-Sheet 1



Nov. 30, 1943.

P. H. KINFORTS

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2 Sheets-Sheet 2

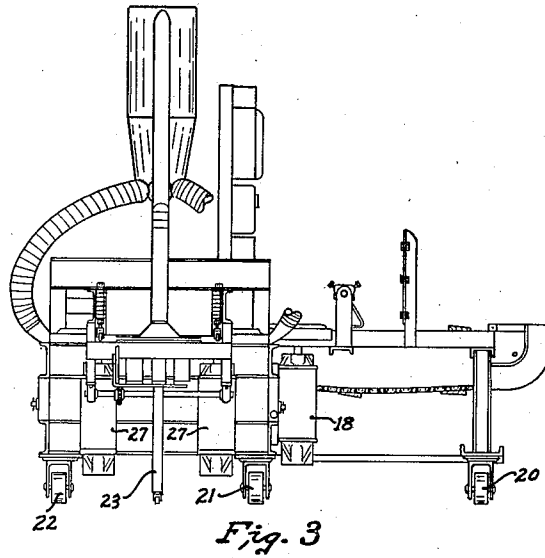


Fig. 3

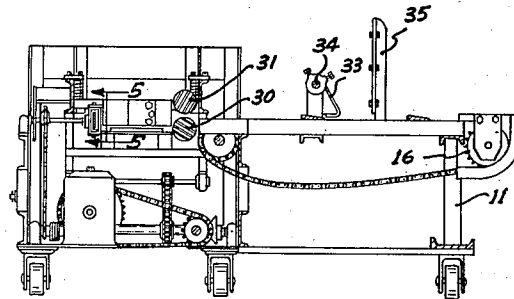


Fig. 4

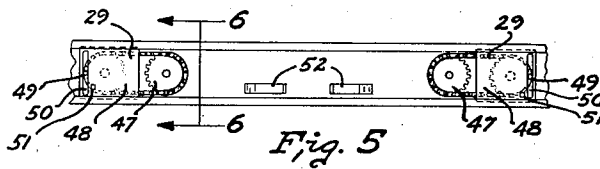


Fig. 5

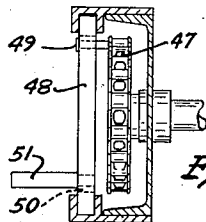


Fig. 6

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2,335,768

SHIPLAPPING MACHINE

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Application June 17, 1942, Serial No. 447,347

4 Claims. (Cl. 144—90)

This invention relates to the art of grooving and rabbeting apparatus and more particularly aims at means for providing grooves in composition boards to enable their assembly in lap-joint arrangement.

An important object of the invention is to provide means whereby boards, which have been previously cut to required rectangular dimensions, may be simultaneously provided with the usual rabbets by means of which the assembly of composition board for wall and the like covering is used.

It is also an object to provide certain features of construction and arrangement tending to enhance the utility and efficiency of a machine of the character described.

With these and other equally important objects in view, which will become apparent from a perusal of the invention, the latter comprises the means described in the following specification, particularly pointed out in the claims forming a part hereof, and illustrated in the accompanying drawings, in which:

Figure 1 is a front elevational view of the new rabbeting and grooving apparatus;

Figure 2 is a plan view of the same;

Figure 3 is a side elevational view of the same;

Figure 4 is a view taken on lines 4—4 of Figure 1;

Figure 5 is a view of the board discharge means from the board receiving of the second table;

Figure 6 is a view taken on line 6—6 of Figure 5.

Referring to the drawings in detail there is shown a table or frame with means for moving board longitudinally thereof and means positioned along the path of travel for rabbeting boards along their ends, and a second table or frame in alignment with the first table which receives board from the first table. Mounted on the second table are means for feeding board toward either end thereof and means positioned in the path of travel of the board on the second table for rabbeting the board on the sides.

The first table comprises cross members 10 generally in the form of channel irons, longitudinal members 12 which are spaced apart and suitably secured to the cross members 10, and upright members 11. Mounted at one end of the first table is a shaft which carries sprocket wheel 42, adapted to drive from a suitable source of power, and on the same shaft are sprocket wheels 15. At the other end of the table is mounted sprocket wheels 16. Carried by sprocket wheels 15 and 16 are chain or other suitable endless con-

veyors 13 which are adapted to carry board across the first table. Members 14 are secured to the table and serve as covers for sprocket wheel 16 and conveyors at the receiving end of the table. Removably secured to the conveyors 13 are pusher members 17 for causing the board to move along with the conveyor in fixed relation to the conveyor.

Motors 18 are provided for driving cutters, for example, saws or knives, for rabbeting or grooving boards on their ends as they are conveyed across the first table. In rabbeting board more or less dust is produced and such dust is gathered by members 19 and carried away by conduits 44 and 45.

The boards are carried by the conveyors 13 until they reach the wringer rolls 30 and 31 which advance and discharge the board into bin or work-receiving means 25 on the second table. The boards discharged by rolls 30 and 31 strike levers 52 which are mounted on slide plates 48. These levers force the boards back against the middle of the roll 30 as a straight edge thus aiding in properly aligning of the board for receiving the rabbets along their edges.

The boards in bin 25 are started on their discharge path by means of a pin 51 which is mounted on slide plate 48. As shown in Figure 5 the pin 51 mounted in one of the slide plates is positioned closer to the lower edge of the plate than the other pin 51 which is positioned in the other plate 48. The lowest positioned pin 51 lays behind the end edge of the bottom board and the other pin 51 lays behind the end edge of the next board. One pin 51 starts one board from the bin toward one end while the other pin 51 starts another board from the bin 25 toward the other end of the second table.

As shown in Figure 6 the members 29 are provided with channels in which plates 48 are adapted to slide starting board from the bin 25. The plates 48 have a vertically extending opening 50 near one end and extending through these openings are pins 49. Pins 49 are carried by sprocket chains 54 and 55 and upon the movement of the chains 54 and 55 cause the plates to reciprocate. The sprocket chains 54 and 55 are mounted on idler sprockets and on driven sprockets 47. The driven sprockets 47 receive their movement through an arrangement which includes sprocket wheels 38, chains 39, drive belts 41 and motor 40.

Mounted at one end of the bin 25 is a pair of wringer rolls 37 and at the other end of the bin is mounted pair of wringer rolls 36. The second table or frame includes cross members 24 and

longitudinally extending members 53. Positioned at the opposite ends of the second table are work-receiving means comprising bed members 26, back board 46 and upright members 23.

The boards started from bin 25 in one direction are advanced by rolls 36 and conveyor 56 past cutters driven by motor 27. The cutters rabbet the side edges of the board as they are being advanced. At the same time another board from bin 25 is being advanced by rolls 37 and conveyor 59 past rabbeting means driven by motor 28.

Any dust produced by rabbeting means along the edges of the board is collected by dust collector members 19 and carried away by conduits 43 and 45.

In operation a supply of board is placed on the first table against backing board 35, the pusher blocks 17 on the conveyors 13 take the bottom board from the supply of board and carry the board across the table. The boards as they travel across the table are held down by spring members 35 mounted on shaft 34 which extends across the table. The conveyors 13 carry the board past cutting means which rabbet the board on their ends. The wringer rolls 30 and 31 continue to advance the board and discharge it into bin 25. The conveyors 13 and wringer rolls 30 and 31 travel at substantially the same speed which is substantially two times the speed of wringer rolls 36 and 37 and conveyors 56 and 57.

The first board discharged into the bin 25 rests upon the bin bottom and one of board starting pins 51 is behind the end of this bottom board. The next board discharged into the bin rests upon the first board in the bin and the other board starting pin 51 is behind the end of the second board. Two boards are discharged from the bin at the same time, one from each end thereof.

As the two boards are being discharged from the bin, two more boards are received from the wringer rolls 30 and 31. The board received in the bin 25 while the two boards are being discharged do not take the position where pins 51 can start them on the discharge path until the first two boards have been discharged by the wringer rolls 36 and 37.

The entire apparatus is mounted on suitable rollers such as 20, 21 and 22, so that it can readily be moved from place to place as the need arises.

What I claim is:

1. A rabbeting apparatus including a table, means for causing boards to travel longitudinally of said table and wringer rolls for discharging the board at one end of said table, means positioned along the path of travel of the board for rabbeting the ends thereof; a second table arranged transversely of the discharge end of said first table, a bin-like member on said second table located centrally thereof and in alignment with said first table for receiving boards therefrom, wringer rolls positioned at the opposite ends of said bin for feeding board toward either end of said second table, means for projecting boards

from said bin into said last-mentioned wringer rolls, means for carrying the board away from the wringer rolls, and means positioned along each end of said second table to engage the board as they travel therealong for rabbeting the boards on the sides.

2. A rabbeting apparatus including a table, conveyors for moving the board longitudinally of said table, and rolls for discharging the boards at one end of said table, means positioned along the path of travel of the board for rabbeting the ends thereof, a second table arranged transversely of the discharge end of said first table, a bin-like member on said second table located centrally thereof and in alignment with said first table for receiving boards therefrom, a pair of rolls positioned at opposite ends of said bin for feeding board toward either end of said second table, movable pins for projecting boards from said bin into the last-mentioned rolls, means for carrying the boards away from the wringer rolls, and means positioned along each end of said second table to engage the board as they travel therealong for rabbeting the board on the sides.

3. A rabbeting apparatus including a table means for causing boards to travel longitudinally of said table and wringer rolls for discharging the boards at one end of said table, means positioned along the path of travel of the board for rabbeting the end thereof, a second table arranged transversely of the discharge end of said first table, a bin-like member on said second table located in alignment with said first table for receiving boards therefrom, a pair of rolls positioned at opposite ends of said bin for feeding boards toward either end of second table, movable means for projecting boards from said bin into the last-mentioned rolls, and conveyors for carrying boards away from the wringer rolls, and cutting means positioned along each end of said second table to engage the boards as they travel therealong for rabbeting the board on the sides.

4. A rabbeting apparatus including a table, means for causing boards to travel longitudinally of the table, means positioned along the path of travel of the board across the table for rabbeting the ends of the board, a pair of rolls for discharging board at one side of the table, a second table arranged transversely of the discharge end of the first table, a work-receiving means on said second table in alignment with the discharge end of the first table, reciprocating plates mounted on the work-receiving means, pins mounted in the plates for projecting board from work-receiving means, wringer rolls positioned at opposite ends of the work-receiving means for feeding boards toward the ends of the second table, means for carrying boards away from the last-mentioned wringer rolls, and means positioned along the second table for engaging the boards as they travel therealong for rabbeting the board on the sides.

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