

Pat. #3

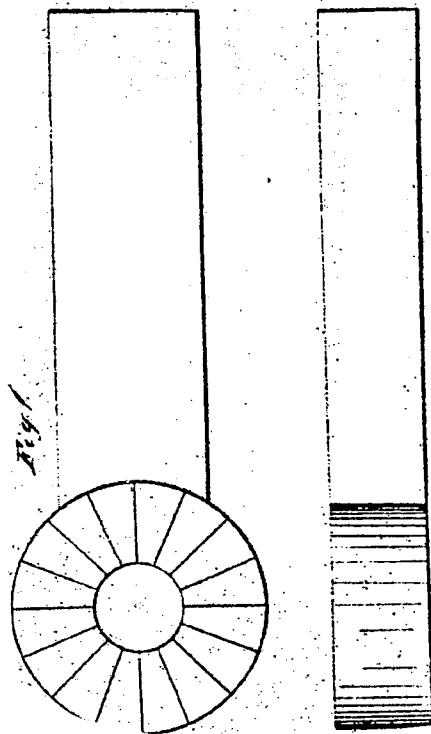
Letters Patent No. 3, dated August 1, 1836.

2 Sheets Sheet 1.

*T. Blanchard,*

*Making Wooden Pins.*

*Patented Aug. 1, 1836.*



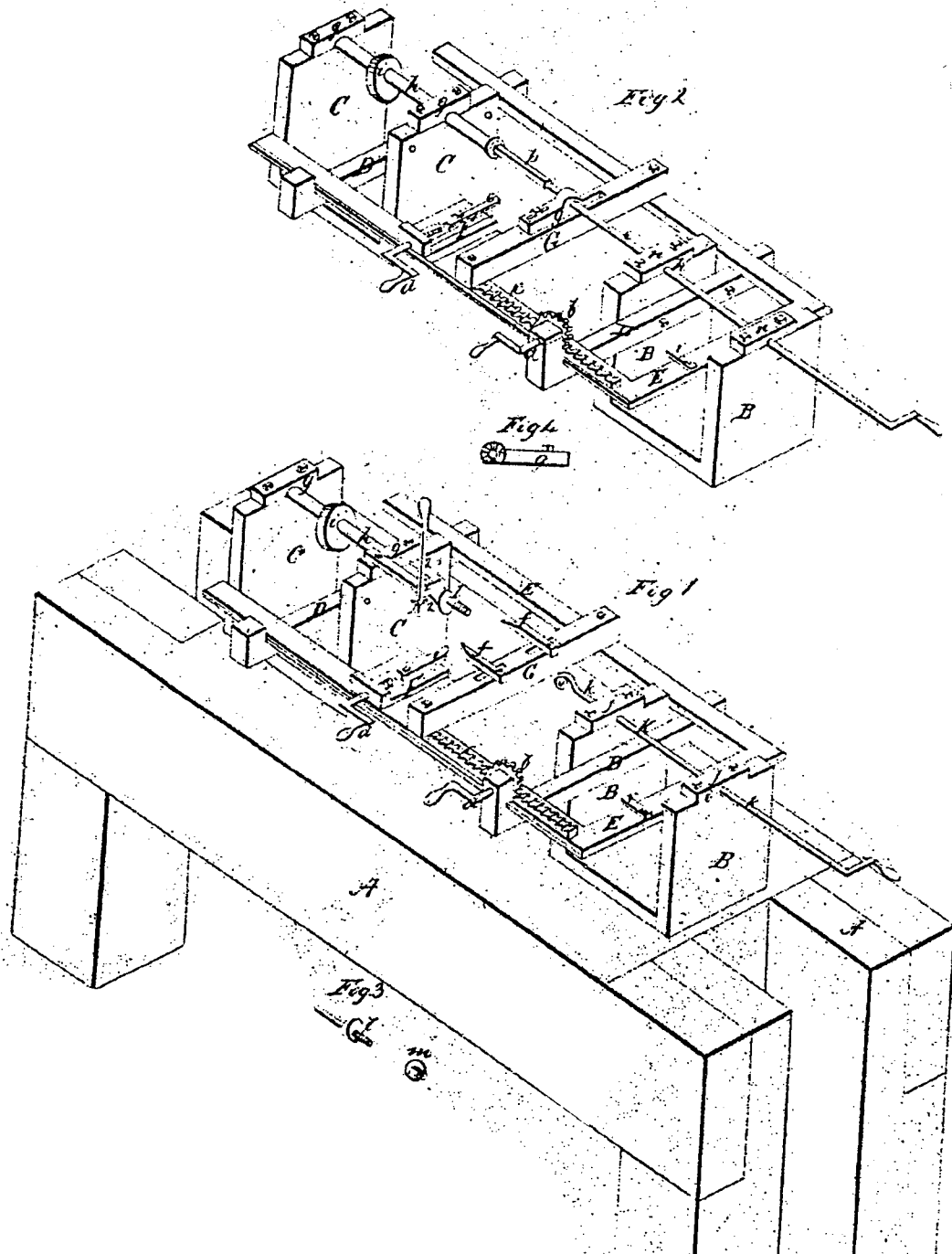
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2 Sheets. Sheet 2.

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# UNITED STATES PATENT OFFICE.

THOMAS BLANCHARD, OF NEW YORK, N. Y.

MACHINE FOR TURNING, &c., WOODEN SHEAVES AND PINS FOR SHIPS' TACKLE  
BLOCKS AND PULLEYS.

Specification of Letters Patent No. 3, dated August 1, 1836.

*To all whom it may concern:*

Be it known that I, THOMAS BLANCHARD, late of Springfield, in the county of Hampden and State of Massachusetts, but now of the city, county and State of New York, have invented, made, and applied to use certain new and useful Improvements in Methods of Turning and Finishing Wooden Sheaves, and Pins for Ships' Tackle Blocks and Pulleys, and that the said improvements and the machinery by which the same are effected are correctly set forth in the following description, which refers to the drawings hereunto annexed and making a part of this specification, in which said drawings the sheet No. 1, exhibits an orthographical perspective plan of the principal machine as invented and used by me, and of certain detached or shifting and changeable parts, the uses of all such parts being respectively and consecutively hereinafter set forth, and the same letters and figures refer to the similar parts in the drawings so far as they are alike in their forms and uses.

A, A, Figure 1, are the standard frames. Frames or beds, and posts shown as of wood, but may be of iron, on which the machinery is fixed.

B, B, are two fixed metal heads, or rests toward one end of the machine.

C, C, are two other fixed metal heads or nests toward the opposite end of the machine. Upon the outside of the middle of each of these pair of rests is one each of two cross bars D, D, having on each end a slide piece fitted with a bird beak rebate in which the slide frame E, E, travels. The right hand bar D, being made of a sufficient size at one end to receive the arbor, and crank handle a, to which is fitted the pinion C, that gears into the toothed rack c, fitted on the slide frame E, and thus gives and regulates the motion of the slide frame. On the same side of the slide frame is fixed the transverse slide rest, F, to which motion is given by the crank handle, and screw d, connected to the slide and gage e. Across the slide frame E, is fixed the cutter bar G, fitted to receive the cutters f, f, so as they may be brought nearer to, or extended farther from each other by screws and nuts working through slot holes in the bar G. These cutters may be further advanced, or drawn back by sliding them on the bolts by the slots in the cutter stocks. On the left

hand inner rest C, is fitted a tool carriage made of a piece of metal bent to a flanch to the flat part lying on, and screwed to the upper part of the rest and adjusted to the required position by the screw working in a slot. The vertical part has fitted on to it the back, or hooked cutter No. 2, which is made in form of a metal lever jointed on to the flanged tool carriage having a point turned so as to present a pointed cutter to the contrary side of the sheave to that operated on by either or both of the cutters f, f. In the rests C, C, on the left hand are two bearings, and caps g, g, in which is fixed the mandril h, which is made with a female screw or socket at the working end to receive any required form or size of center chuck to the mandril. On the mandril h, is a pulley, or drum i, to be connected by a belt to any prime moving power, and thus give motion to the mandril center, and sheave when the sheave is being turned, as hereafter described. In the rests B, B, on the right hand are two bearings, and caps j, j, retaining and guiding the wrench bar K, made with a bend at one end, and the extremity turned up so as to form a square ended socket wrench whose center is in a line with the center of the mandril h, the bars being worked by a crank handle at the other end. When the machine as thus far described is to be used for turning sheaves a central chuck l, shown detached in Fig. 3, and having a nose the size of the pin hole in the sheave is fixed in the hollow end of the mandril h, and the rough sheave having been bored for the pin is put on the nose, and secured by the nut M, having a square head, and rebated flanches shown also in the detached Fig. 3. This nut is screwed tightly on by the square ended socket wrench bar K, and the mandril being driven by power communicated through the drum i. The workman by the crank handle a, brings the slide frame E, with the center bar G, and cutters f, f, up to the sheave—the cutters being accurately adjusted to strip the sheave to the required diameter on one side, and the hooked cutter 2, on the inner left hand rest c, operates by the workman's left hand on the opposite side of the sheave, and by being adjusted to the same diameter of cut as the cutters f, f, finishes the edges of the sheave square and clean thereby removing the superfluous material on the edge of the

rough sheave, and when this operation is completed the transverse slide rests F, having been properly adjusted by the gage stop 2, at one of the frame E, will be exactly central with the thickness of the sheave, and the working line of the gage being below the level of the cutters f, f, the workman advances the gage to the sheave by the slide screw d, and cuts the groove in the sheave for the rope to lie in. The sheave is then completed so far, then removed by reversing the operation of the bar K, and another rough sheave is put in to undergo the same operation, and by proper adjustments sheaves of all sizes may be thus turned, and finished so far. When it is required to form pins for sheaves the cutters f, f, and 2, are removed, and also the center wrench K, and the nuts n, n, are placed in the outside rests B, B, having the long puppet center bar O, through them as shown in the detached Fig. 2, sheet 1, the inner end of which bar centers in one end of the square pin p, the other end of the pin being retained to the mandril nose by the pressure given by the workman screwing in the puppet bar O, the pin is taken at the other end by two or more spurs in a chuck which is formed for the purpose, and is now placed on the mandril nose, and the pin turns on the center point at the end of the puppet bar O, when motion is given to the mandril as before described. The

puppet bar goes through a mill tool q shown detached in Fig. 4, sheet 1, and in full size Fig. 1, sheet 2, whose hole is the required size of the pin, and the mill tool adjusted by screw on the cutter bar G. The workman moves the frame E, and mill tool toward and along the pin by the crank handle a, the teeth of the mill tool will now strip off the angles of the pin p, and finish it round and polished exactly to the required size. The pin is then removed, and others placed successively to go through the same preparation, and by proper tools and adjustments wooden pins of any required size or length, or for any other purpose may be thus made and completed for use.

I do not claim any of the parts of said machine as my invention separately, and unconnected with said machine; but

I do claim as my invention, and improvement—the above described parts of the aforesaid machine so adapted to each other and combined in manner aforesaid so as to produce the above results in the manner above described, or any other substantially the same.

In testimony whereof I have hereunto set my hand, August 11th, 1935.

THOS. BLANCHARD.

Witnesses:

JOHN N. TAYLOR,  
JAMES H. SANFORD.