Sept. 6, 1949. R. E. BROCK 2,481,073

BENCH-TYPE POTTERYWARE JIGGERING DEVICE

Filed Jan. 30, 1948

Fig. 1.

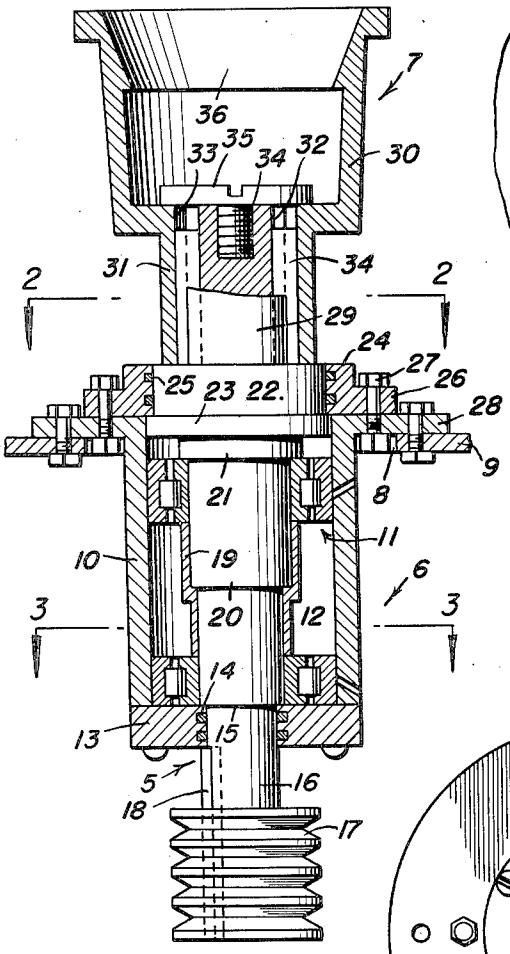


Fig. 2.

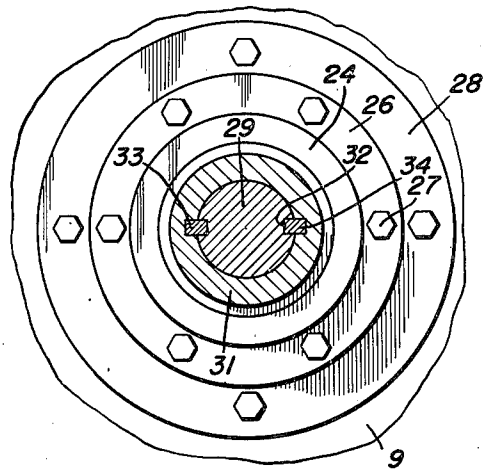


Fig. 3.

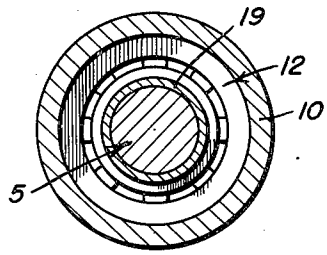
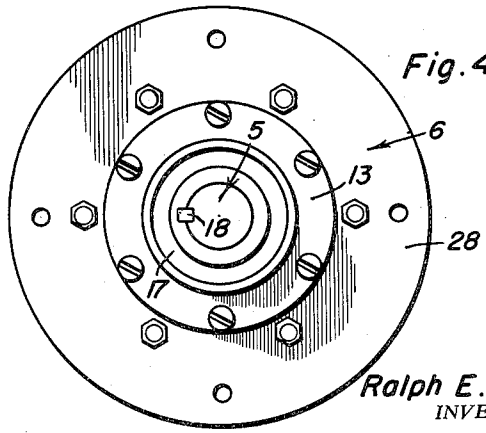


Fig. 4.



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BENCH-TYPE POTTERY WARE JIGGERING DEVICE

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3 Claims. (Cl. 25—24)

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The present invention relates to certain new and useful improvements in apparatus and devices employed for jiggering potteryware, a procedure or step followed in molding and forming dinnerware such as dishes, cups, saucers and the like.

One object of the invention is to provide a motor driven spindle whose upper end is expressly made to accommodate readily applicable and removable heads, the latter being fashioned to accommodate molds which are utilized to transform the clay or other plastic material, through the aid of forming blades or the like, into desired articles of dinnerware.

To be sure, various styles and types of jiggering structures are known to those skilled in the art to which the invention relates and many varieties are known to me. Generally speaking, prior art devices referred to are in the automatic category and are fairly elaborate and rather complicated and expensive and usable in large pottery making plants. What I have in mind in the instant development is a comparatively simple, practical, efficient and economical structural device which may be attached to a work bench or table in a relatively small pottery and used with or without hand forming and shaping devices to turn out potteryware of high-grade character.

Briefly, the preferred embodiment of the invention is characterized by a perpendicular shaft forming a spindle, the lower portion thereof being mounted for effective rotation in a bearing unit that is suspended from the bench, the lower end of the shaft having a pulley which is adapted to be driven by motor and the upper end of the shaft being formed into an adapter stud to accommodate a readily attachable and detachable jiggering head.

In addition, novelty is predicated on a spindle or shaft with means for rotatably supporting same for operation on a bench or table, the upper end of the shaft being fashioned to provide a stud-like adapter and said adapter serving to accommodate the attaching neck of a readily applicable and removable jiggering head.

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings:

Figure 1 is a view partly in section and partly in elevation disclosing a potteryware jiggering device constructed in accordance with the principles of the present invention and illustrating

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the manner in which the same is mounted on a table, bench or the like;

Figures 2 and 3 are horizontal sections on the lines 2—2 and 3—3 respectively of Figure 1, looking in the direction of the arrows;

Figure 4 is a bottom plan view which serves to bring out the pulley equipped end of the shaft.

Referring now to the drawings by distinguishing reference numerals, the numeral 5 designates the rotatable spindle or shaft unit and 6 denotes the bearing equipped supporting unit therefor. The head means, as a unitary part, is denoted by the numeral 7.

Starting with the basic supporting unit 6, this is adapted to be bolted or otherwise removably mounted in a hole 8 provided therefor in a work bench or other relatively fixed support 9. An essential element of the unit 6 is a cylindrical housing 10 for upper and lower roller bearing assemblies 11 and 12 respectively. The lower bearing assembly 12 is maintained in the cylindrical housing by way of a bottom plate 13 having a central apertured portion with packing rings 14 to accommodate the lowermost shouldered portion 15 of the shaft. That portion of the shaft which projects through and beyond the plate constitutes what may be designated as the spindle 16 and this is provided with a multiple V-grooved pulley 17 which is keyed in place as at 18. A spacing sleeve 19 is arranged in the cylindrical housing and interposed between the bearings and is shaped to accommodate an intermediate shoulder 20. The shaft has another shoulder 21 which engages the bearing assembly 11 and above the shoulder 21 the shaft is formed with a cylindrical hub portion 22 and a shoulder forming and assembling flange 23. A collar 24, having packing rings 25, surrounds and provides a suitable bearing for the hub, and has abutting relation with the shoulder forming flange 23. In fact, said collar has a flange itself 26 which is bolted as at 27 to an attaching flange 28 which is in turn bolted to the bench or table 9. Thus, the flange 28 supports the housing 6 in the table and is situated beneath the table and provides bearing and supporting means for the shaft and places the pulley in a position where it may be driven from a belt operated by an electric motor (not shown) supported beneath the table. The arrangement illustrated embodying the bearing and closure forming collar 24 and bottom plate 13 provides an adequate support which may be amply lubricated to insure free running of the shaft.

The upper end portion of the shaft, the part

which extends beyond the hub, functions to provide an adapter stud **29** for the head unit **7**. The head comprises a cup **30** with an assembling and attaching neck **31**, said neck having diametrically opposite grooves lined up with similar grooves **32** in the shaft, the first-named grooves being denoted by the numerals **33**. The grooves form keyways for keying members **33** and the grooved neck is held on the keys **34** by way of a screw **34** which is threaded into the stud and which is provided with a large head **35** which rests upon the bottom of the cup and serves to reliably maintain the neck and cup in place. The upper end of the cup part of the head is bevelled to provide an annular surface **35** which serves to accommodate the mold (not shown) and which is utilized to accommodate the clay or other plastic substance, to give shape to one side thereof and to spin it so that with a separate forming tool, such as a rotating profile, the required shape may be imparted to the work, saucer, plate or whatever else is being, at the time, turned out.

The type of jigger head now most commonly utilized in the trade is screw-threaded and screwed onto the hub structure from which it receives rotation and they ordinarily employ so-called jigger rings. With my head it will be observed that there are no rings to be used and that the head takes the place of the rings. Time and material is saved from this alone and will more than pay for the newer type heads. Also, it is possible to change from one head to another in approximately seven minutes whereas with other types of heads and rings it ordinarily takes several hours to true the head up and get it ready for accurate operational purposes.

Novelty is predicated on the bearing equipped unit 6 detachably mounted on a table or bench and rotatably supporting a shaft with the lower end of the shaft protruding beyond the unit and having a pulley and providing spindle means. The upper end protrudes and provides adapter means for the readily attachable and detachable as well as novel jiggering head **7**.

The device shown and described is an instrumentality which is such that the elements and parts are accurately designed for intimate coacting relation, the parts being precision made and susceptible of expeditious assembling, disassembling and therefore providing for ready repairs.

A careful consideration of the foregoing description in conjunction with the invention as illustrated in the drawings will enable the reader to obtain a clear understanding and impression of the alleged features of merit and novelty sufficient to clarify the construction of the invention as hereinafter claimed.

Minor changes in shape, size, materials and rearrangement of parts may be resorted to in actual practice so long as no departure is made from the invention as claimed.

Having described the invention, what is claimed as new is:

1. In a construction of the class described, in combination, a bench having an opening, a housing for bearings comprising a cylinder fitting removably down through said opening and provided with an attaching flange secured to the bench and around the marginal edges of the opening, bearing assemblies fitted removably in said cylinder, an annular plate closing the bottom of the cylinder, a longitudinally shouldered shaft mounted for rotation in said cylinder and having a shouldered lower end portion extending through and beyond the plate and provided with a pulley, the intermediate portion of the shaft being formed into a flanged hub, a bearing collar surrounding the hub and engaging the latter flange, said bearing collar being itself provided with a flange and said flange being removably bolted to the first-named bench flange, the end portion of the shaft, beyond said hub, being fashioned to provide a stud-like adapter for a readily applicable and removable jiggering head.

2. A bench-type potteryware jiggering device of the class shown and described comprising, in combination, a bench provided with a circular opening of prescribed diameter, a housing of cylindrical form passing downwardly through said opening, said housing being provided at its bottom with a spindle opening and being provided at its open top with an outstanding flange removably fastened on said bench, a shaft, a hub member formed integral with the intermediate portion of the shaft, said hub member being provided on its underside with a shoulder, said hub member being provided with a peripherally arranged outstanding shoulder forming an assembling flange, said flange being of an external diameter equivalent to the internal diameter of said housing and fitting in the upper flanged end portion of said housing, said flange being substantially flush with the flange on said housing, that portion of the shaft depending below said hub member constituting a spindle and having a stop shoulder bearing against the spindle supporting bottom of said housing, bearings in said housing in which the coacting portion of the spindle rotates, a flanged collar forming a bearing for the hub member, the flange on said collar resting on and being detachably secured to the flange on said housing, said collar having an internal diameter less than that of the external diameter of the flange on the hub member and engaging said flange in serving to thus assemble the shaft for operation in the housing.

3. A bench-type potteryware jiggering device of the class shown and described comprising, in combination, a bench provided with a circular opening of prescribed diameter, a housing of cylindrical form passing downwardly through said opening, said housing being provided at its bottom with a spindle opening and being provided at its open top with an outstanding flange removably fastened on said bench, a shaft, a hub member formed integral with the intermediate portion of the shaft, said hub member being provided on its underside with a shoulder, said hub member being provided with a peripherally arranged outstanding shoulder forming an assembling flange, said flange being of an external diameter equivalent to the internal diameter of said housing and fitting in the upper flanged end portion of said housing, said flange being substantially flush with the flange on said housing, that portion of the shaft depending below said hub member constituting a spindle and having a stop shoulder bearing against the spindle supporting bottom of said housing, bearings in said housing in which the coacting portion of the spindle rotates, a flanged collar forming a bearing for the hub member, the flange on said collar resting on and being detachably secured to the flange on said housing, said collar having an internal diameter less than that of the external diameter of the flange on the hub member and engaging said flange in serving to thus assemble the shaft for operation in the housing, that portion of the shaft projecting above the hub member being fashioned into a

stud-like adapter, a jiggering head removably mounted on said adapter and seated against said hub member, the lower end of said spindle terminating just beyond the bottom of said housing and being provided with a pulley.

RALPH E. BROCK.

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