

(No Model.)

W. B. WHEELER.
MIXING MACHINE.

No. 472,092.

Patented Apr. 5, 1892.

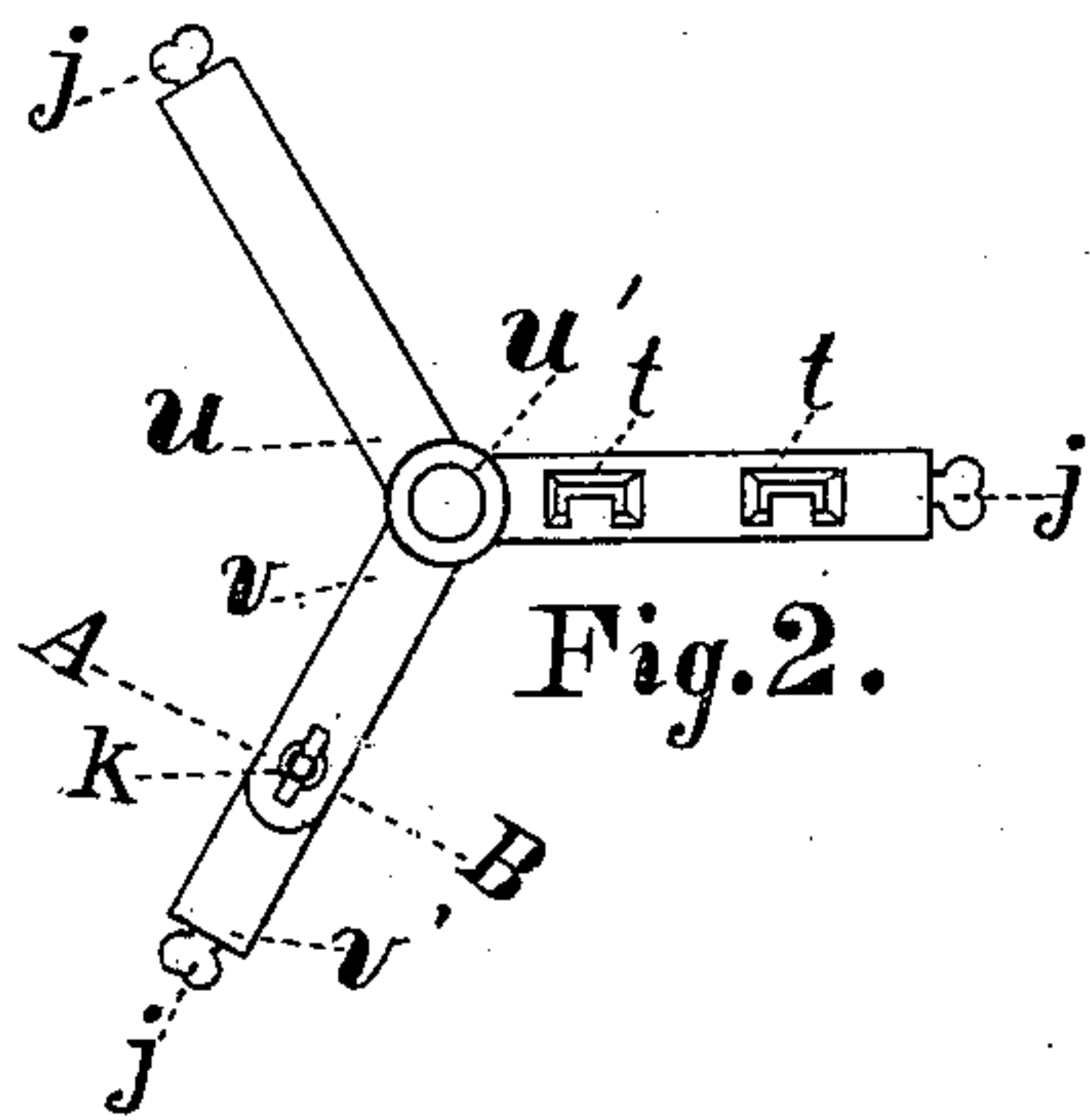


Fig. 2.

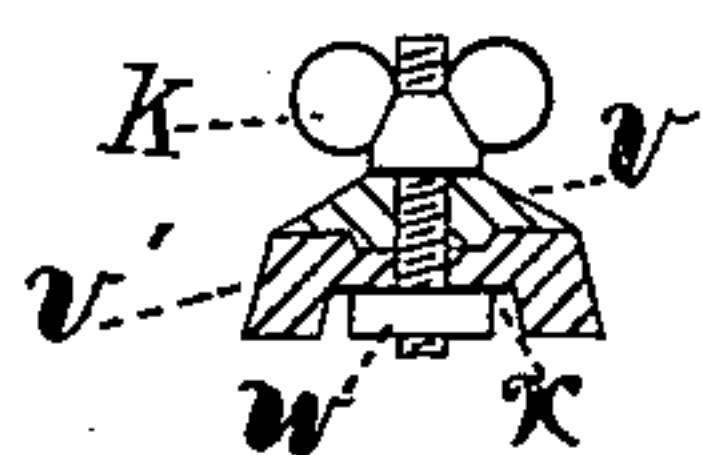


Fig. 6.



Fig. 4.

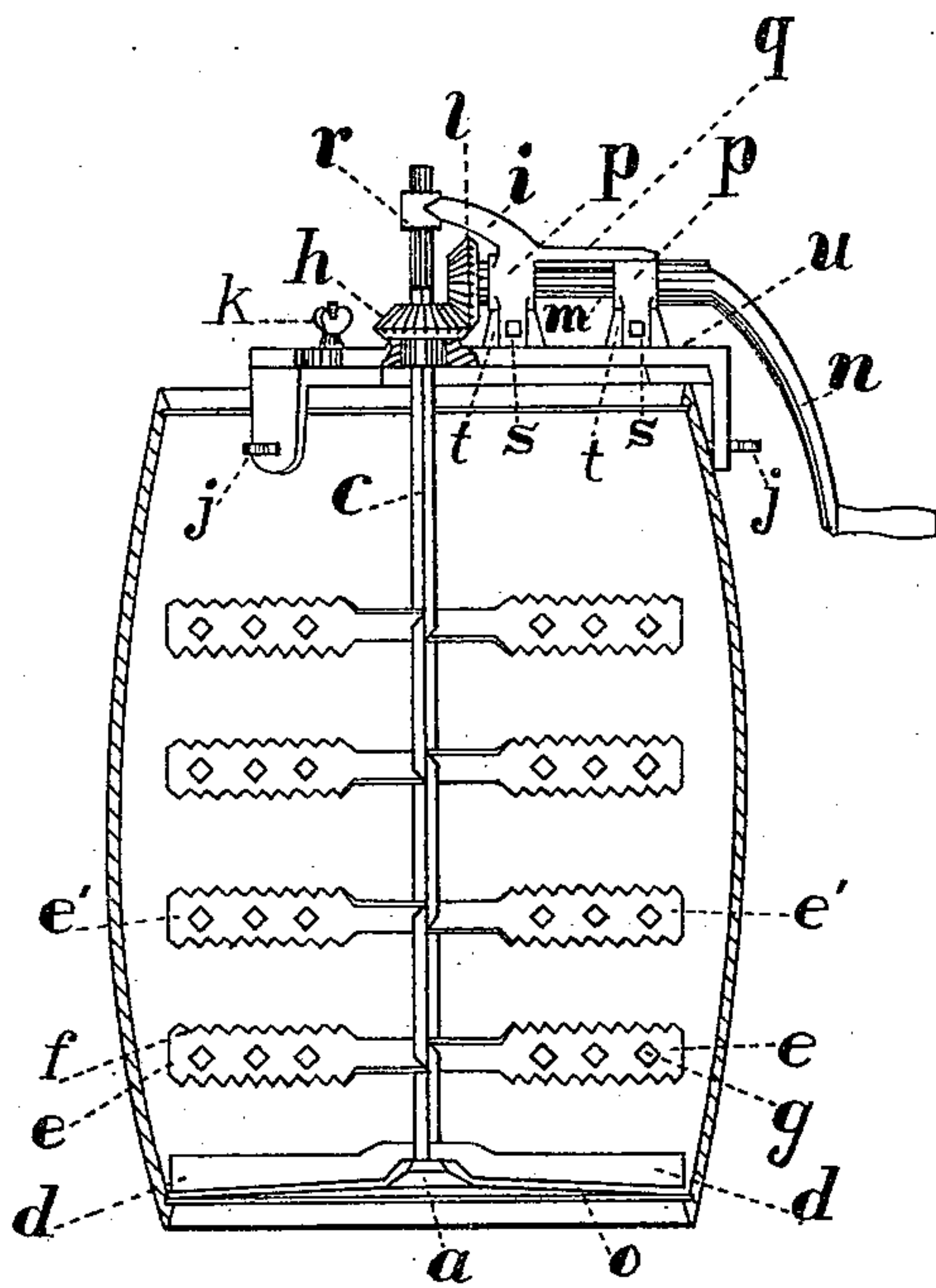


Fig. 1.

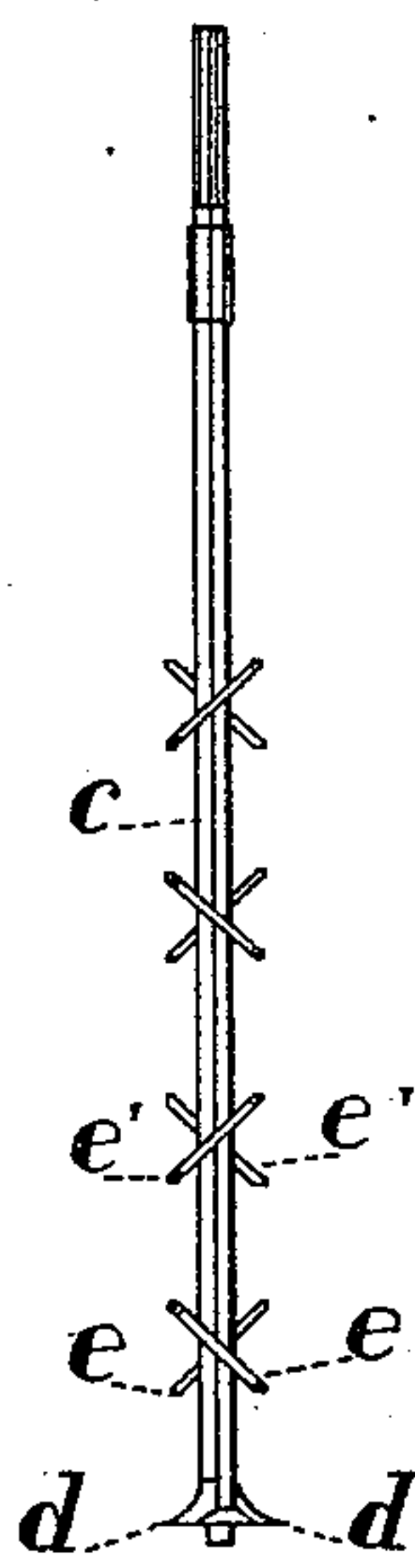


Fig. 3.

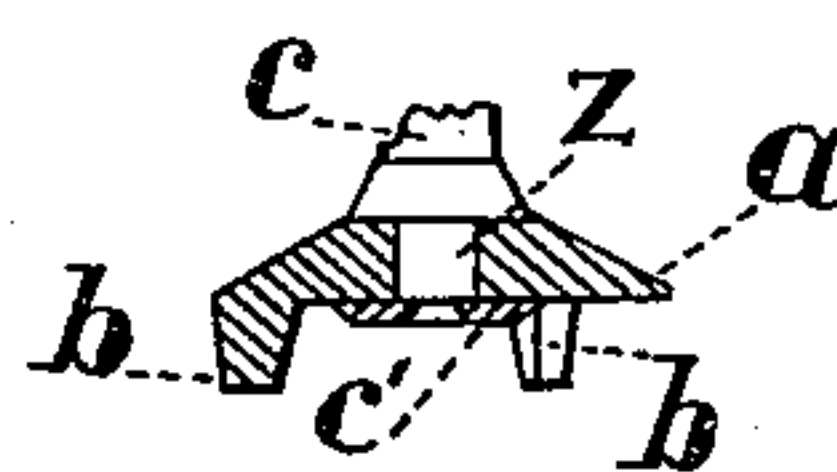


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM BRUMMEL WHEELER, OF MADISON, WISCONSIN.

MIXING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 472,092, dated April 5, 1892.

Application filed April 8, 1891. Serial No. 388,160½. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BRUMMEL WHEELER, a citizen of the United States, residing at the city of Madison, in the county of Dane and State of Wisconsin, have invented a new and useful Paint or Liquid Agitating or Mixing Machine, of which the following is a specification.

My invention relates to improvements in paint or liquid agitating or mixing machines, in which vertical rotating shafts journaled at the top and bottom ends are provided with horizontally-projecting arms or paddles; and the objects of my improvement are, first, to scrape any hard substance or sediment from the bottom of a barrel or tank and by a continuous action of currents and counter-currents to thoroughly mix it with a liquid; second, to agitate a liquid so as to facilitate its mixing with another substance, and, third, to be able to readily change the machine from one barrel or cask to another. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a left side view of the entire machine fitted to a barrel which is shown in section; Fig. 2, a plan of spider or upper frame of machine; Fig. 3, a side view of vertical shaft, showing ends of paddles; Fig. 4, a plan of gear *h*, showing square hole in center; Fig. 5, a vertical section of step and lower end of vertical shaft; Fig. 6, a section through line A B, Fig. 2.

Similar letters refer to similar parts throughout the several views.

a is a socket or step provided with three or more downwardly-projecting points *b*, which are to be driven into the bottom of barrel or tank *o*, to which my machine is applied and which forms the lower bearing for vertical shaft *c*, directly above which bearing on vertical shaft are two concave double-edged scrapers or horizontally-projecting arms *d*, that by their lower edges, which are also their front edges, rotating in either direction, passing near the floor or bottom of barrel *o*, remove and give an upward motion to any sediment or hard substance that may collect thereon. A little distance above the scrapers *d* is a pair of paddles *e*, whose upper and lower edges are cut into notches *f*, and along their horizontal center line is a number of square

holes *g*, (three in this instance.) This pair of paddles is set at such an angle that by the rotating of vertical shaft *c* the upward current caused by the scrapers *d* will be reversed, excepting what material may pass through the holes *g* and otherwise escape their action. Next above paddles *e* is a pair of paddles *e'* similar to or may be identically the same in construction, but which are set on vertical shaft at an angle opposite, so as to reverse the current formed by paddles *e*, and by this arrangement of a sufficient number of paddles I am able to thoroughly agitate and mix the material desired.

Some distance above the upper or last pair of paddles the vertical shaft *c* is made square, so as to engage the gear *h* by passing through the square hole *h'* in its center, as before described. The top of shaft *c* is round and fitted to a bearing or box *r* in bracket *i*. Said bracket *i* is provided with two bearings *p p*, connected by a rib *q*, and directly under bearings *p p* are lugs *s s*, which are bolted to corresponding lugs *t t*, which are a part of spider *u*. Through and fitted to the bearings *p p* passes a shaft *m*, to the front or inner end of which is fastened a gear *l*, which engages gear *h*, and upon its outer end is a crank or handle *n*, (in this instance,) but to which may be fastened any device for the purpose of conducting or transmitting power thereto.

The spider *u* has a central hub *u'*, having a hole passing vertically through it, forming a bearing for the hub on lower side of gear *h*, and having three horizontal arms spaced equidistant passing to and a little beyond the edge of barrel or tank to which it is intended to be fastened. Said arms are turned down a sufficient distance to admit of passing a set-screw *j* through them near their points for the purpose of fastening them securely to barrel. One of these arms *v* is adjustable in regard to length by means of the thumb-screw *k*, which passes through the arm *v* and engages with a nut *w* in slot *x* in lower arm *v'*.

The step *a* is fastened to lower end of vertical shaft *c* by a washer *c'* being riveted to shaft, as shown in Fig. 5, so that the machine may be applied to a barrel of mixed paint by first putting vertical shaft *c*, with step *a* attached, into barrel and by blows on top of shaft seating or driving points *b* into bottom,

then placing spider *u*, with its attachments, in position on top of barrel, and turning up set-screws *j*.

I am aware that prior to my invention paint
5 and liquid agitating or mixing machines have been made, and therefore do not claim such a machine, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

The combination, in a paint-mixing machine, of a vertical shaft *c*, journaled at top and bottom ends and carrying at lower end two double-edged concave scrapers *d*, as described, and for purposes set forth.

WILLIAM BRUMMEL WHEELER.

Witnesses:

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