

No. 688,657.

Patented Dec. 10, 1901.

F. LEU.
EGG BEATER.

(Application filed May 2, 1901.)

(No Model.)

Fig. 1.

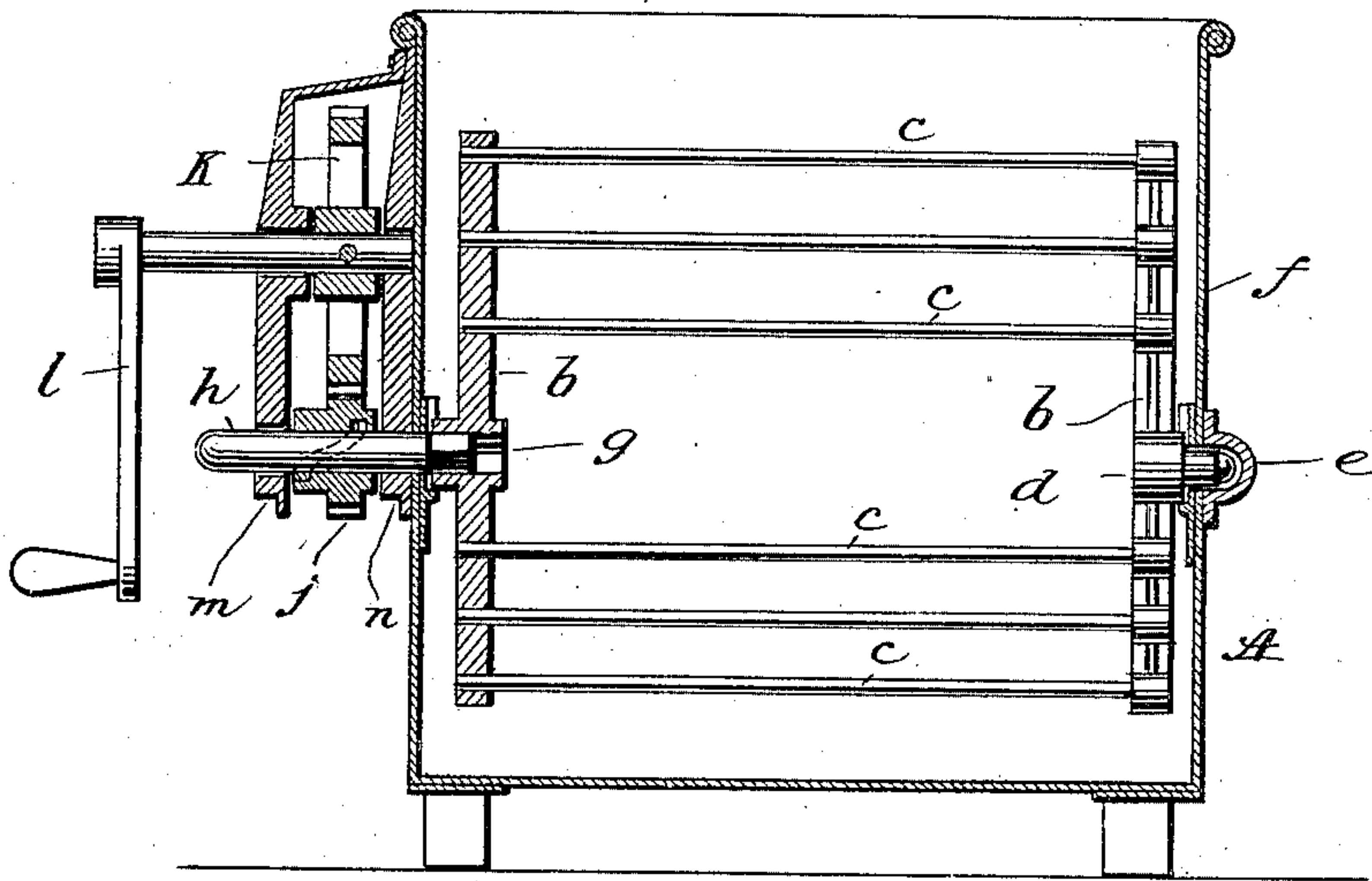


Fig. 2.

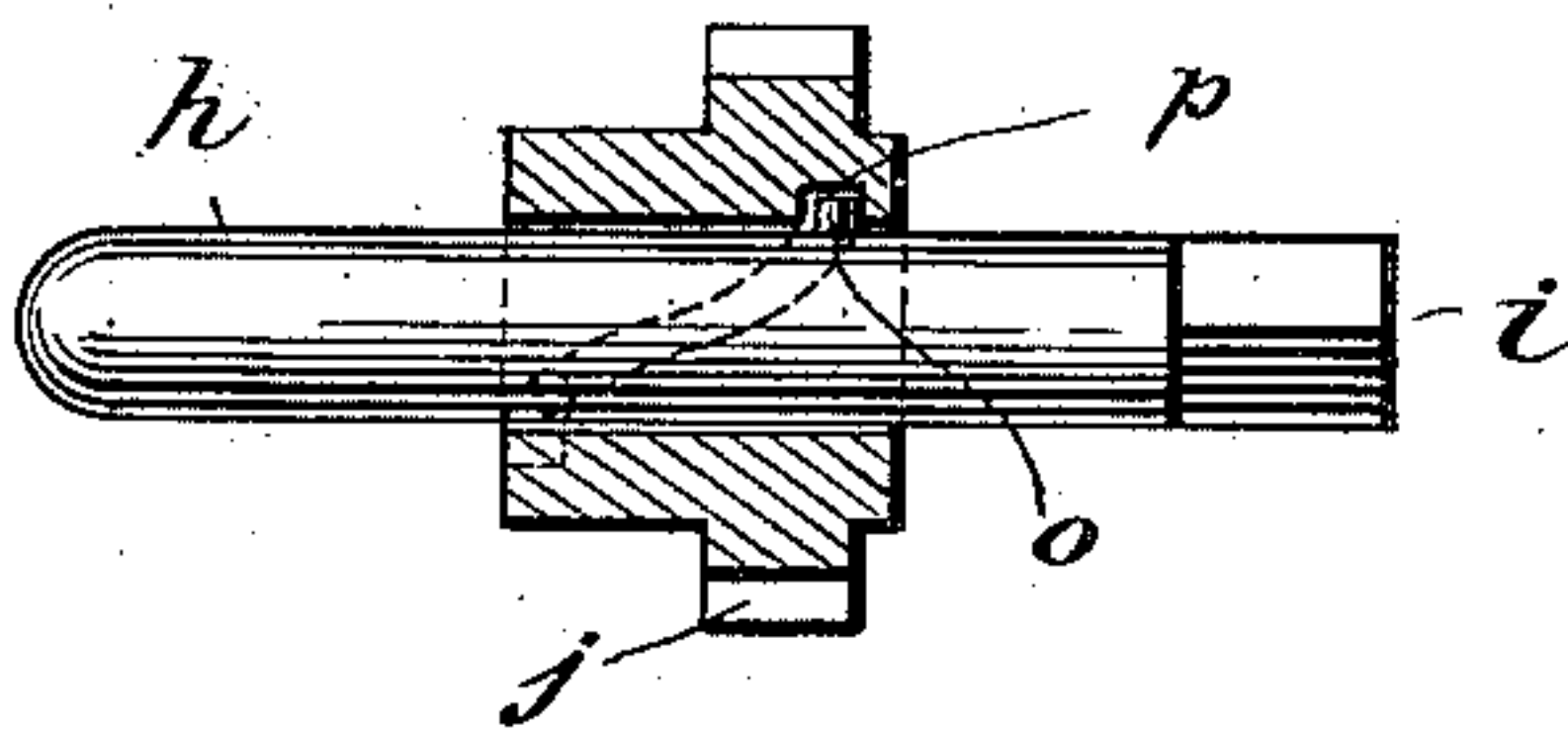


Fig. 3.

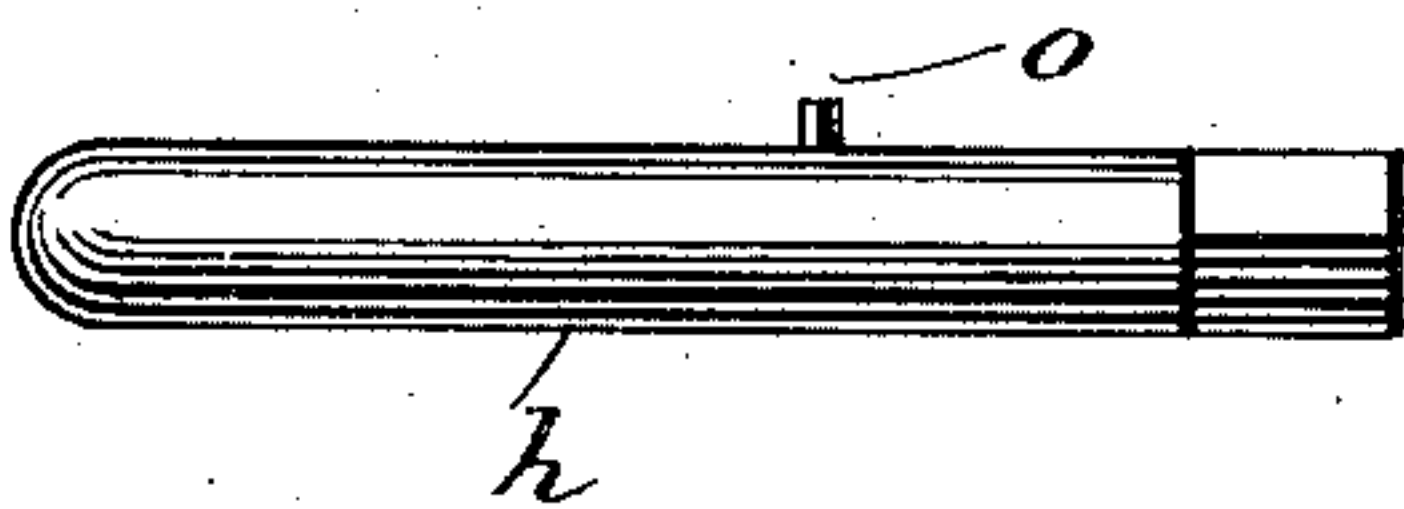


Fig. 4.

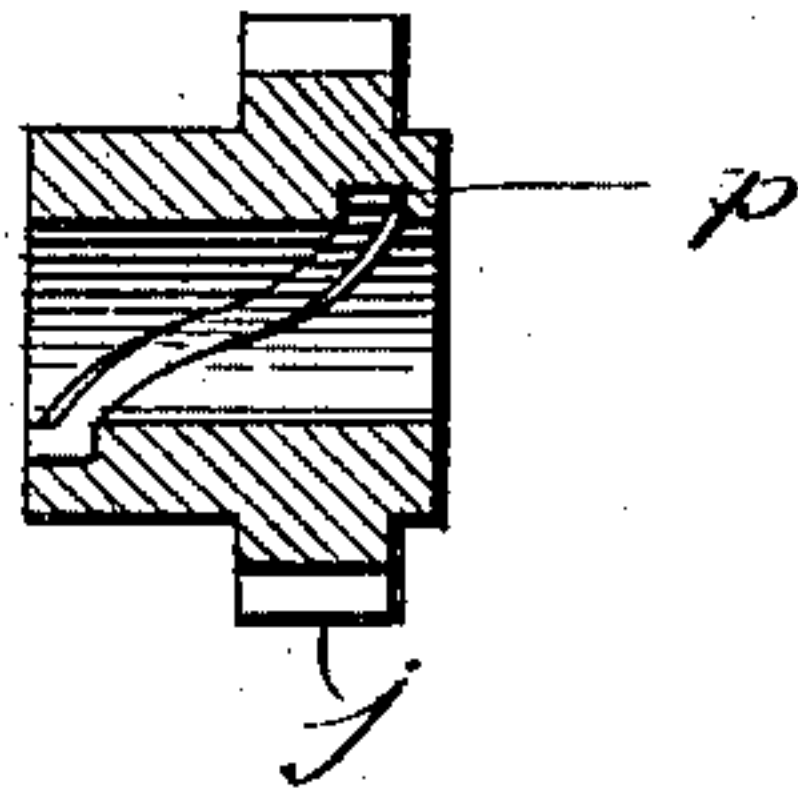
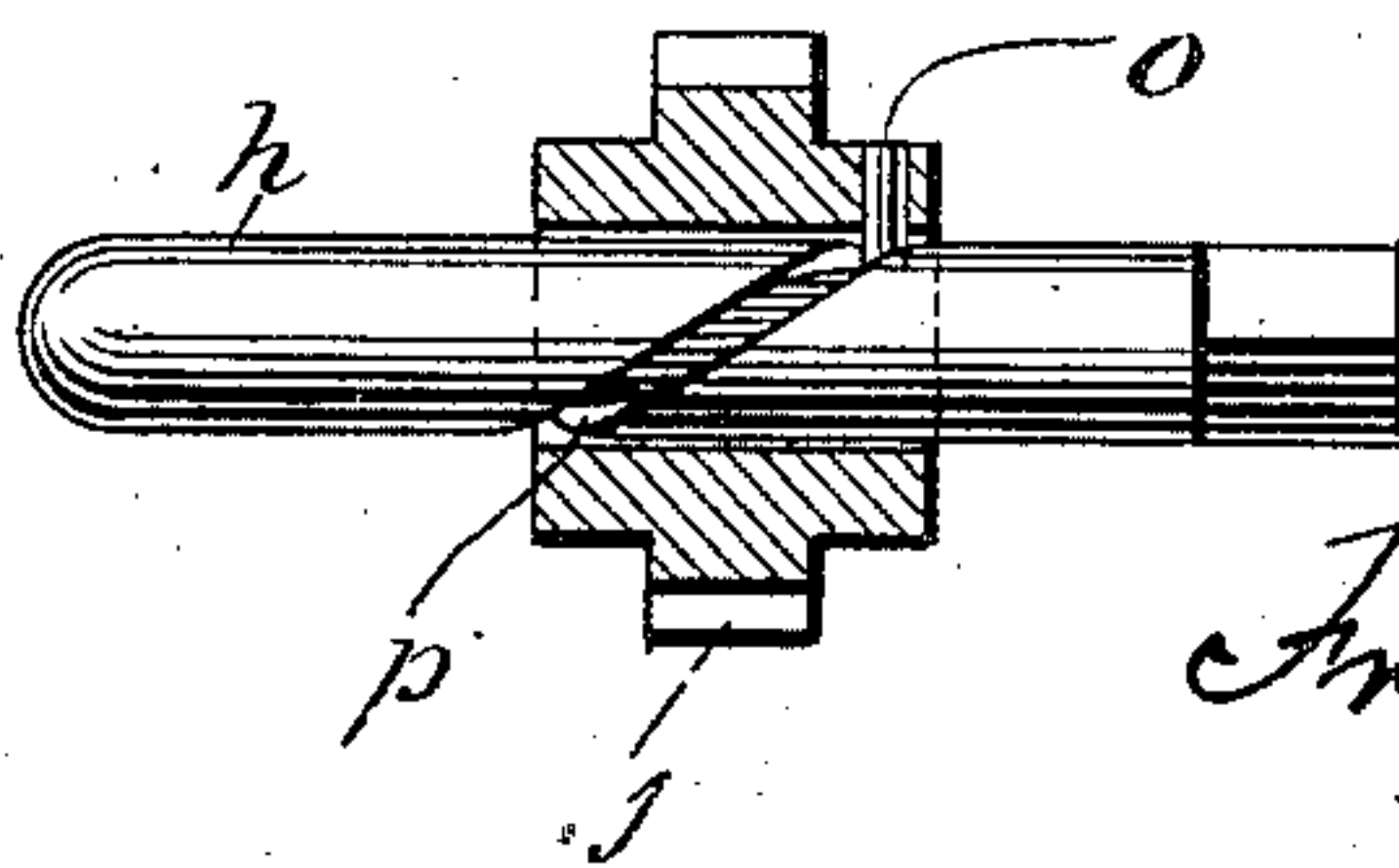


Fig. 5.



WITNESSES:

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FREDERICK LEU, OF COLLEGEPOINT, NEW YORK.

EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 688,657, dated December 10, 1901.

Application filed May 2, 1901. Serial No. 58,462. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK LEU, a citizen of the United States of America, and a resident of Collegepoint, borough of Queens, city and State of New York, have invented certain new and useful Improvements in Egg-Beaters, of which the following is a specification.

My invention relates to egg-beaters and other like machines in which a rotatory beater on a horizontal axis is used; and it consists of improved detachable devices connecting the beater with the driving-gear, whereby the frequently-required connection and disconnection for enabling the beater to be removed for cleaning it and the vessel in which it works is facilitated, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a central vertical longitudinal section of an egg-beater constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the beater-driving pinion and side view of the detachably-connecting beater-axle detached from the rest of the machine and drawn to a larger scale. Fig. 3 is a side view of the axle detached from the pinion. Fig. 4 is a vertical longitudinal section of the pinion detached from all the other parts. Fig. 5 is a view, same as that of Fig. 2, showing a slight modification.

A represents the case in which the beating is to be effected, *b* the heads, and *c* the rods or bars carried in the heads for whipping and beating the eggs and other things to be beaten. One head has a fixedly-attached pivot *d*, for which a suitable bearing *e* is provided in the end *f* of the case. The other head *b* has a central socket *g* of angular cross-section, with which a short axle *h* connects for rotating the beater, said axle having a part *i* of angular cross-section adapted for coupling with the socket *g* for rotating the beater, the axle being turned by a pinion *j*, with which a master-wheel *k*, to be operated by a crank *l*, 45 gears.

The axle is to be shifted lengthwise for coupling and uncoupling the beater accord-

ing as the beater is to be coupled with the driving-gear and operated or uncoupled and removed. As this is of frequent occurrence 50 it is important that the contrivance of the apparatus be of the most simple character and adapted for the most rapid changes, the coupling being effected by shifting the axle forward when the beater is placed in position 55 so as to enter the socket and by being withdrawn therefrom when the beater is to be released, but not removed from its position in the bearings *m* and *n*. My improved device for this purpose consists of a radially-pro- 60 jecting stud *o*, either in the axle, as in Figs. 2 and 3, and a spiral groove *p*, either in the bore of the hub of the pinion, as in Figs. 1, 2, and 4, or vice versa, as in Fig. 5, so arranged as to the direction of the spiral course of the 65 groove that turning the crank in the preferred direction for operating the beater will shift the axle into connection with the beater and turning it in the opposite direction or holding it still, so that continuous rotation 70 of the beater by its inertia will force the axle out and disconnect it, thus being practically self-operating in both directions and saving the necessity of shifting the axle by hand, which is the necessary operation in machines 75 of this character now in use.

What I claim as my invention is—

In an egg-beater in which the sliding and detachably-coupling beater-axle is employed for connecting the beater and the driving- 80 pinion, said pinion and axle connected by a stud in one and a spiral groove in the other whereby turning the driving-crank in one direction will automatically couple the axle and beater, and turning said crank in the 85 other direction will automatically uncouple them.

Signed at New York city this 24th day of April, 1901.

FREDERICK LEU.

Witnesses:

C. SEDGWICK,
J. M. HOWARD.