J. F. & E. P. MONROE.

Egg-Beaters.

No. 154,411. Patented Aug, 25, 1874.

Fig: 1.

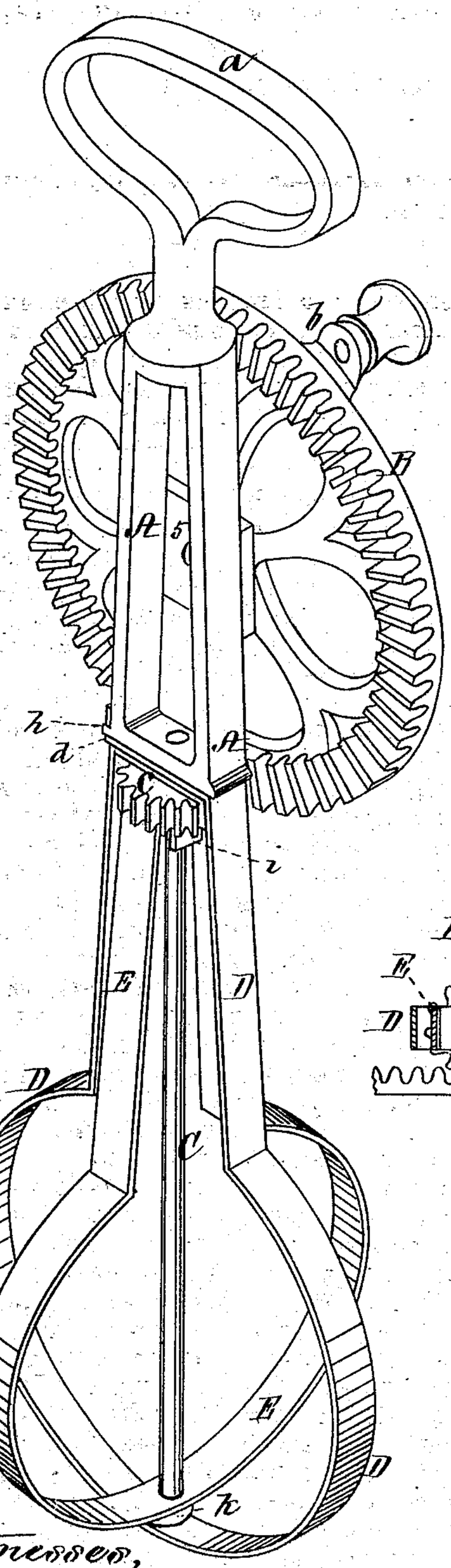


Fig: 3.

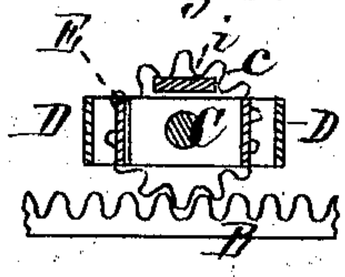
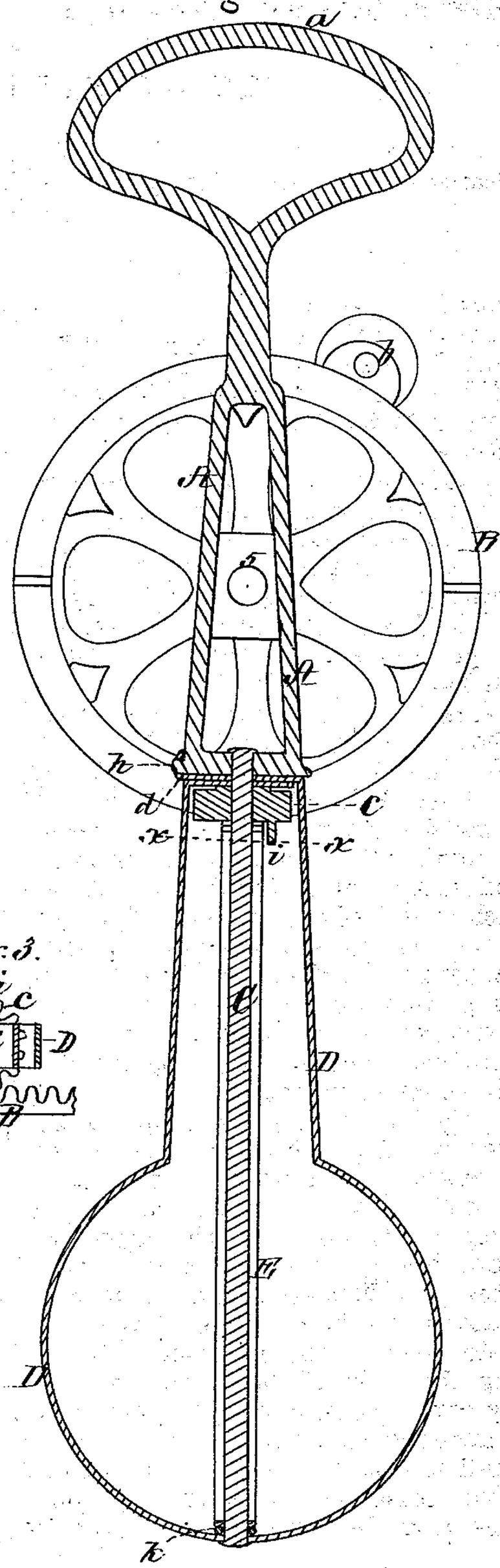


Fig. 2.



Witnesses,
W. J. Cambridge
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Inventors,
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Per their Attorneys
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UNITED STATES PATENT OFFICE.

JAMES F. MONROE AND EDWIN P. MONROE, OF FITCHBURG, MASS.

IMPROVEMENT IN EGG-BEATERS.

Specification forming part of Letters Patent No. **154,411**, dated August 25, 1874; application filed February 10, 1873.

To all whom it may concern:

Be it known that we, JAMES F. MONROE and EDWIN P. MONROE, of Fitchburg, in the county of Worcester and State of Massachusetts, have invented certain Improvements in Egg-Beaters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of an egg-beater having our improvements applied thereto. Fig. 2 is a longitudinal vertical section through the center of the same; Fig. 3, section on the line *x x* of Fig. 2.

In egg-beaters constructed of round wire, as described in Letters Patent of the United States, No. 23,694, granted to us April 19, 1859, the upper ends of the wires were cast into type-metal hubs, that of the outer beater being provided with a pin, which entered a hole bored in the pinion placed above it, and from which it derived its motion. This construction was somewhat complicated, and necessarily expensive. Where the beaters were composed of flattened wire, their tops have been directly riveted to the pinion or to projections thereon, which was also objectionable for the above-stated reasons.

To simplify the construction, and thereby reduce the cost of manufacture, is the object of our invention, which consists in a pinion provided with a projection, and revolving on a stationary rod, around which the upper ends of the inner beater also revolve, the projection on the pinion bearing against the ends of the beater, and thus communicating its motion thereto, whereby the necessity of rigidly connecting the ends of the beater with the pinion by rivets or otherwise, as heretofore, and the expense incident thereto, are avoided. Our invention also consists in a simple and inexpensive method of connecting the upper ends of the outer beater with the frame or handle.

To enable others skilled in the art to understand and use our invention, we will proceed to describe the manner in which we have carried it out.

In the said drawings, A is a light metal frame, the top of which terminates in a loop, *a*, which serves as a handle. B is a bevel-wheel, which is provided with a crank, *b*, and revolves on a short stud or pin, 5, riveted to the frame A. This wheel B drives a pinion, *c*, which fits loosely upon and revolves around the upper end of a stationary central rod, C, secured rigidly to the frame by driving it tightly into a hole at its lower end. D is the outer stationary beater, formed of flattened wire, the upper ends of which are bent and lapped over each other, and are provided with openings to allow of their being slipped over the stationary rod C close up to the bottom of the frame. One of the ends *d* is provided with a hole, and is of sufficient length to admit of its being bent up and caught over a projection, *h*, cast upon the side of the frame. This method of fastening is exceedingly simple and inexpensive, and serves to hold the outer beater securely in place, and prevent it from turning upon the rod and coming in contact with the teeth of the wheel. E is the inner beater, also of flattened wire, which revolves on the stationary rod C within the stationary beater D. The upper ends of the inner beater, E, are bent and lapped over each other, and are slipped over the rod C to their place against the under side of the pinion *c*, on which is cast a projection, *i*, which bears against the bent ends of the inner beater, E, and imparts the motion of the pinion thereto. We thus avoid the necessity of riveting or otherwise rigidly securing the ends of the beater to the pinion, and consequently reduce the cost of manufacture. The lower portion of each beater is nearly of circular form, as shown; but it may be of other suitable form, if preferred, and a washer, *k*, around the rod C, is interposed between the two beaters to keep them separated from each other. The bottom of the stationary rod C projects through the under side of the outer beater, and is riveted thereto, the machine being thereby supported immovably in position upon the bottom of the dish or receptacle containing the eggs to be beaten when the inner beater is in motion, whereas, were a beater employed having a revolving rod, the machine, when in operation, would move irregularly from one side of the receptacle to the other if the rod were to rest on the bottom thereof, and, were such a beater held by the hand of the operator up from con-

tact with the bottom of the receptacle, it would be found inconvenient and tiresome.

In operating our improved egg-beater, the frame A is held in an upright position by grasping the handle *a*, and the wheel B is turned by means of the crank *b*, which revolves the pinion *c* and inner beater, E, which agitates the eggs, and throws them forcibly against the stationary outer beater, D, the effect of which is to rapidly break the globules, and cause the eggs to be perfectly and thoroughly beaten, as desired.

It will be seen from the foregoing that an egg-beater constructed in accordance with our invention is extremely simple, and consequently inexpensive, besides which it is strong and durable, and we believe it can be operated with greater ease than other egg-beaters now in use.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The pinion *c*, provided with a projection, *i*, and fitting loosely upon and revolving around a stationary rod, C, in combination with a beater revolved around the rod by the said projection *i*, in the manner and for the purpose described.

2. The combination of the stationary beater D, the frame A, provided with the projection *h*, and the stationary rod C, all constructed and operating substantially as and for the purpose set forth.

Witness our hands this 7th day of February, A. D. 1873.

JAMES F. MONROE.

EDWIN P. MONROE.

In presence of—

H. A. WILLIS,

WILLIAM F. HARRIS.