

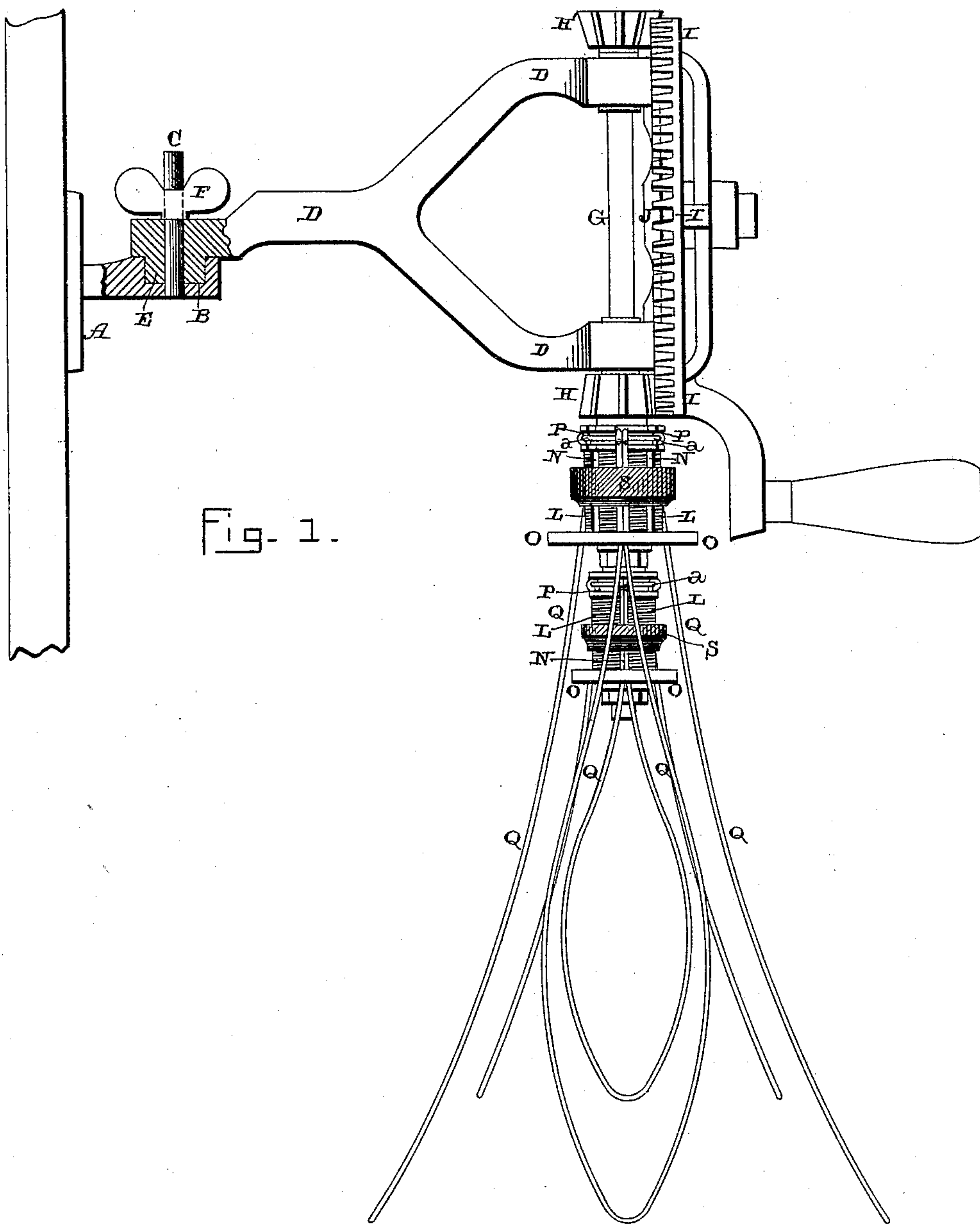
(Model.)

2 Sheets—Sheet 1.

J. RICHARDSON.
EGG BEATER.

No. 409,616.

Patented Aug. 20, 1889.



Witnesses:

E. P. Ellis,
L. L. Burkett.

Inventor:

Jno. Richardson,
per
J. A. Lehmann,
att'y.

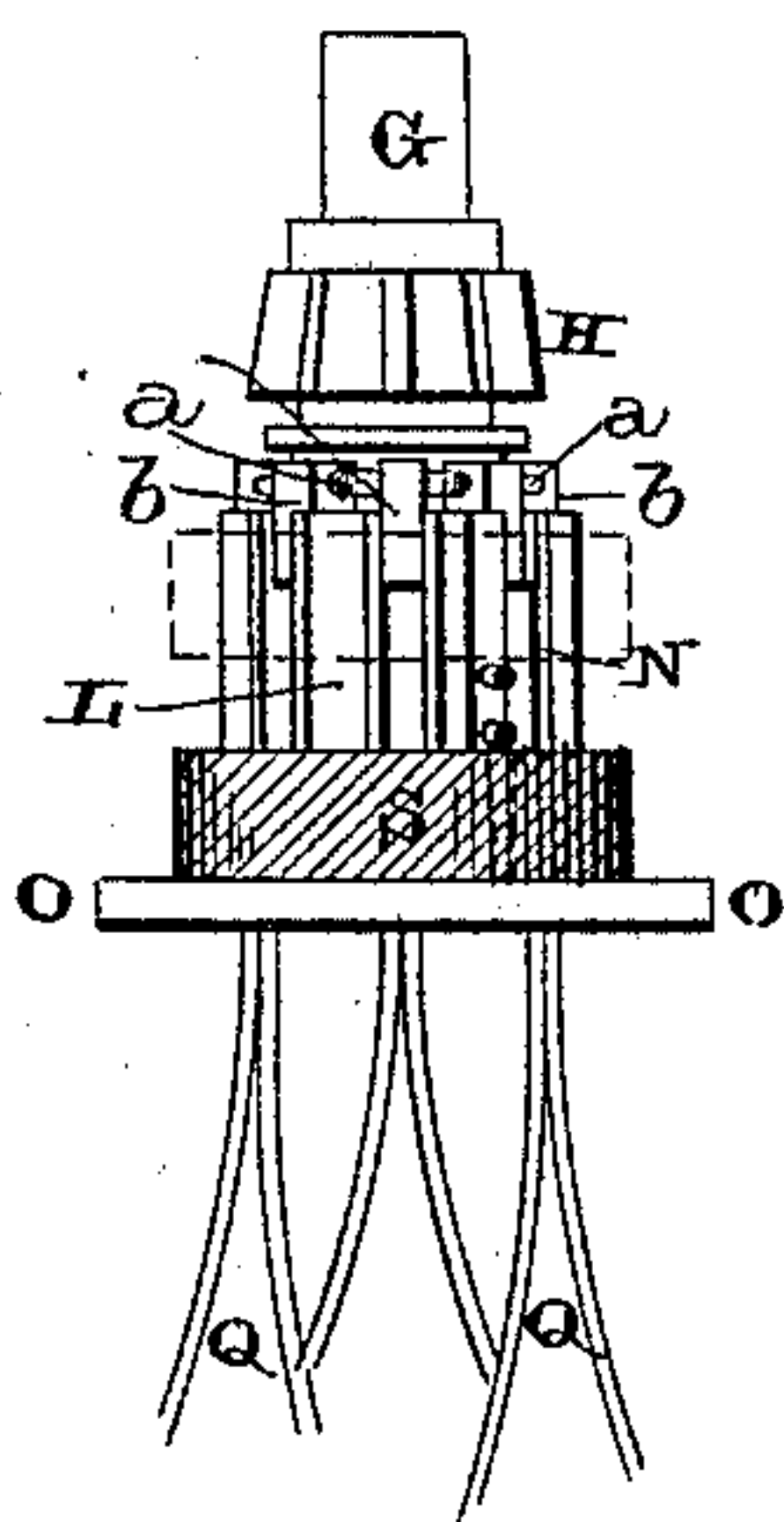
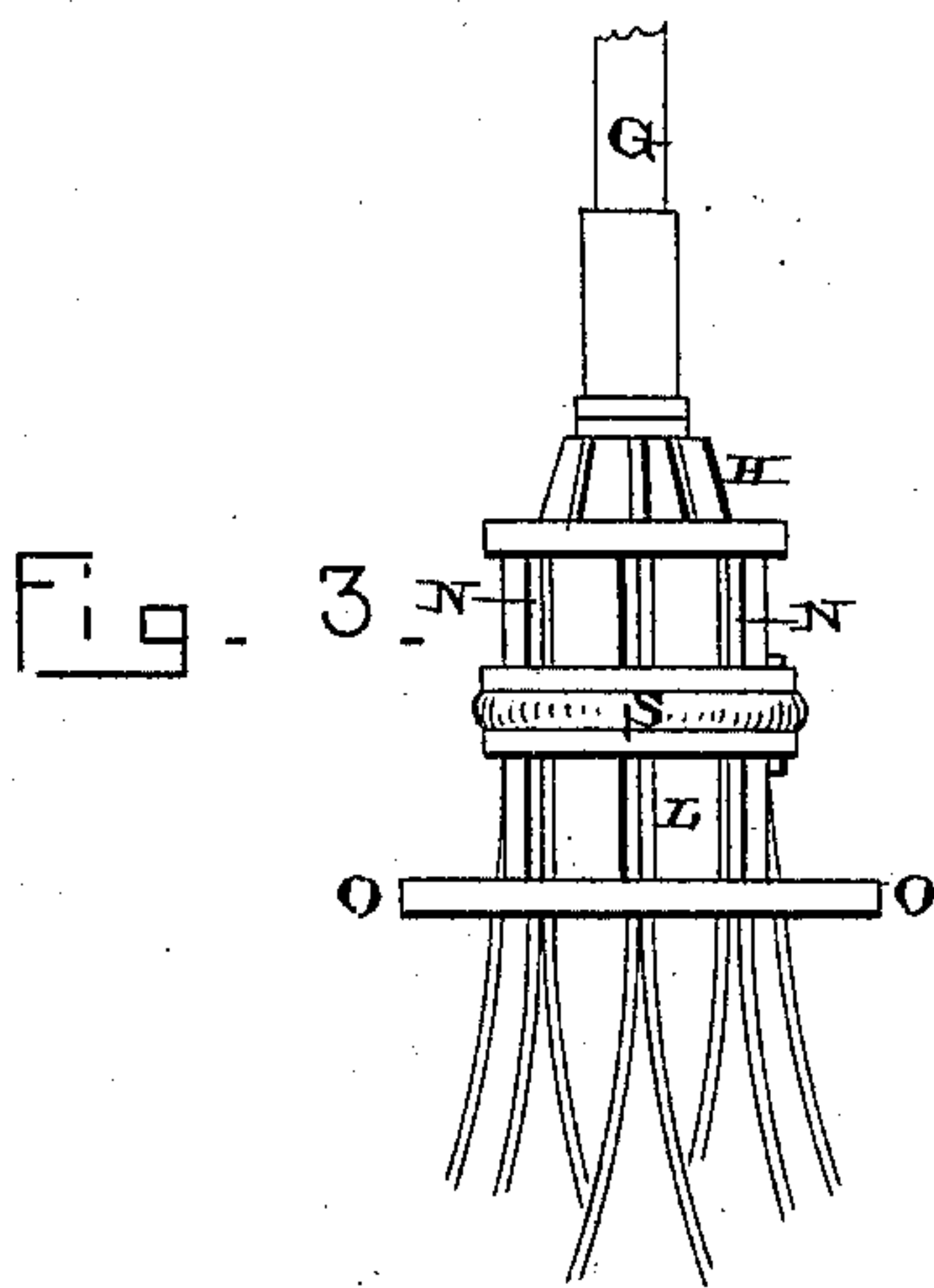
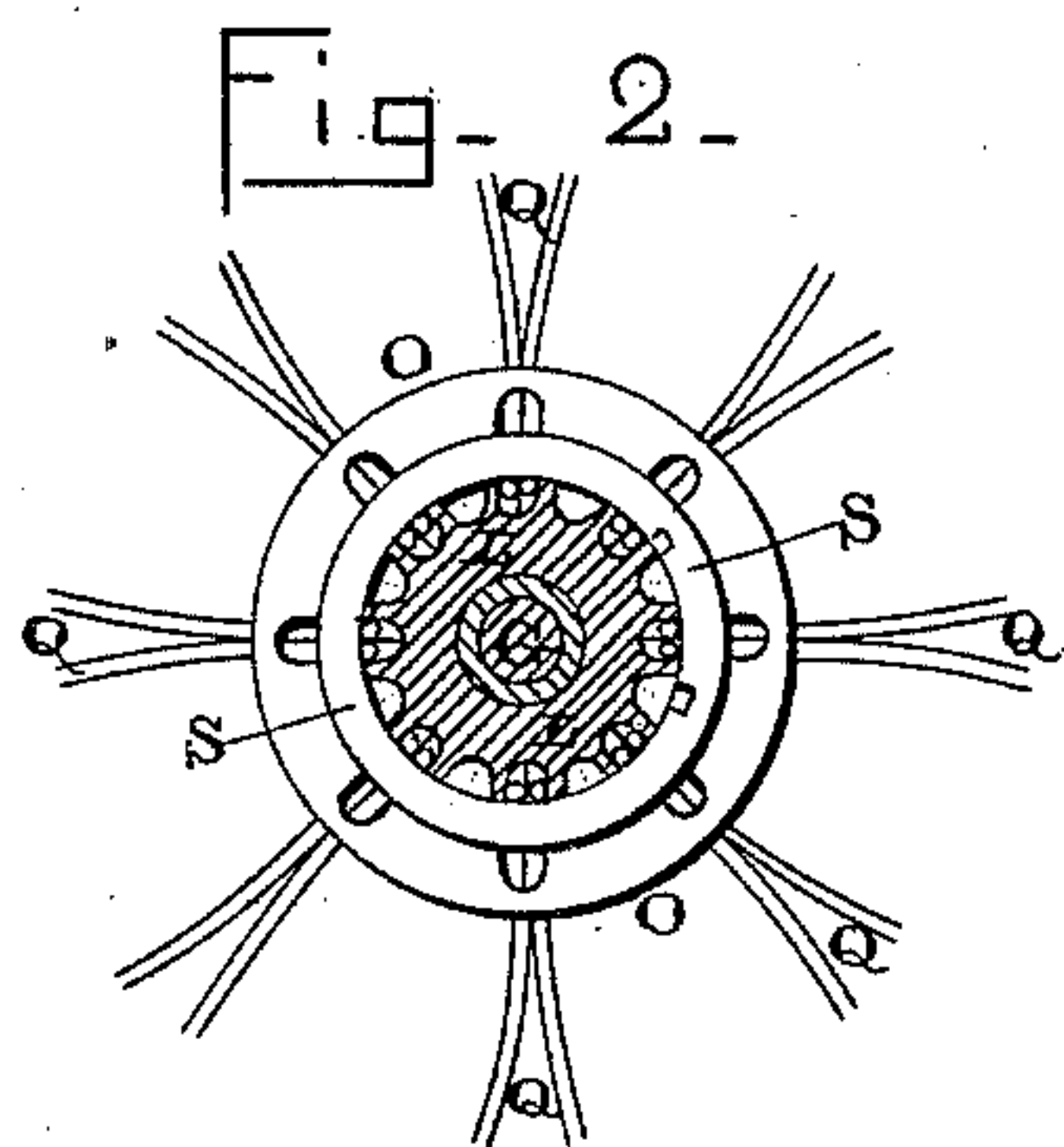
(Model.)

2 Sheets—Sheet 2.

J. RICHARDSON.
EGG BEATER.

No. 409,616.

Patented Aug. 20, 1889.



Witnesses:

E. P. Ellis,
L. L. Burkett.

Inventor:

Jno. Richardson,
per
J. W. Lehmann,
att'y

UNITED STATES PATENT OFFICE.

JOHN RICHARDSON, OF NEW YORK, N. Y.

EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 409,616, dated August 20, 1889.

Application filed March 28, 1889. Serial No. 305,122. (Model.)

To all whom it may concern:

Be it known that I, JOHN RICHARDSON, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Egg-Beaters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in egg-beaters; and the objects of my invention are to produce an egg-beater in which the outward movement of the wires from centrifugal force while in operation can be regulated to the size of the vessel in which the eggs are being beaten, and to make the frame in which the egg-beating attachment is journaled in two parts, and to make these parts adjustable in relation to each other, so as to regulate the angle at which the egg-beaters shall operate.

Figure 1 is a side elevation of an egg-beater which embodies my invention complete. Fig. 2 is a horizontal section taken through the head, looking down upon the slotted flange. Fig. 3 is a detached view of the head, showing only one set of wires and slotted collar and the wire slightly contracted by the movable collar. Fig. 4 is a similar view showing the collar moved down and the wires contracted to the greatest extent.

A represents the support or frame, which is to be rigidly secured to a table or other object, and which has an angular socket B formed in its outer end. Projecting from this head at right angles to the socket is a headed rod or bolt C, of any suitable length, which passes through the frame D, which has an opening through its end, and an angular tenon E to fit in the socket B, and thus hold the arm D and the parts secured thereto at any suitable angle. By this construction and arrangement of parts the part D and all of its attachments can be loosened from the frame A at any moment simply by removing the thumb-nut F from the bolt C and changing the parts so as to stand at any desired angle.

In the outer end of the arms D, which are branched or bifurcated, as shown, is journaled the shaft G, which is provided with a pinion

H, to mesh with the wheel I, which is journaled upon the cross-bar J, which connects the two ends of the arms D. When the wheel I is made to revolve by means of its handle, a rotary motion is communicated to the shaft G in the usual manner. Secured to the shaft G is a revolving head L, provided with longitudinal grooves N and the slotted flange O upon its lower end. Either formed as a part of this head or secured thereto is the tenon H, with which the wheel I engages for the purpose of imparting to the head and the shaft a rotary motion. In the upper end of the head is formed a horizontal groove P, and in this groove P is placed the wire *a*, upon which the beater-wires Q are pivoted. These beater-wires are doubled, so that their lower or central portions can be given any desired shape, and are loosely attached to the wire *a*, so that they can move outward through the slots in the slotted flange upon the lower end of the head from centrifugal force as the head is made to revolve.

I do not limit myself to the groove and the wire for fastening the upper ends of the beater-wires in position, because these may be varied at will without departing from the spirit of my invention. Any device desired may be used for fastening the upper ends of the wires, as this is a mere matter of choice. Where it is desired to have two of these heads and their beater-wires revolve in opposite directions, the shaft has a pinion H' secured to its upper end, and which pinion also is made to engage with the operating-wheel I. To the lower end of the shaft will then be secured a smaller head and a shorter set of beater-wires, as shown. It is a mere matter of choice as to whether one or two heads are employed. Placed upon each of the revolving heads is an endwise-movable collar S, which as it is moved from the upper toward the lower end of the head contracts the beater-wires by forcing them inwardly in the slots N at their upper ends and preventing them from expanding to such a great extent in the slots in the flange as they would otherwise do, and thus adapt the wires to be used in smaller vessels, where the collar is moved upward upon the head, so as not to contract the wires. At their upper ends these wires spring outward

in the slots from centrifugal force, and thus
spring or move widely apart at their lower
ends. The more rapidly the head is made to
revolve by the wheel I the more the wires are
5 made to spring outward at their lower ends.
These collars may be made adjustable either
by screw-threads on the head or freely slide
upon the head and be held in any desired po-
sition by means of projections. The manner
10 of adjusting this collar is immaterial, for it
may be done in different ways.

Should it be desired, the wires may be fast-
ened to the head and the heads pivoted
upon the wire which passes horizontally
15 around the upper end of the head. I do not
limit myself to any mere details of construc-
tion. The wires may be fastened together at
their lower ends by means of solder, or they
may be left entirely separate from each other,
20 as may be preferred. My main object is to
attach the wires to the heads at their upper
ends and provide the heads with slotted
flanges, through which these wires can expand
from centrifugal force, and the amount of
25 expansion to be controlled by a collar placed
upon the head for this purpose. The slotted
flanges upon the lower end of the head serve
as a guide-plate to the wires in their outward
movement. If it is not desired to limit the
30 amount of expansion that the wires shall
have, then the slide-ring may be dispensed
with and only the head provided with the
slotted flange to be used in connection with
the wires.

Having thus described my invention, I 35
claim—

1. In an egg-beater, the combination of a
revolving head, provided with a slotted flange
at its lower end, with the beater-wires which
are attached to the head and passed through 40
the slots, substantially as shown.

2. The combination of the revolving head
provided with a slotted flange and longitudinal
grooves, the beater-wires located in the
grooves and passed through the slots and hav- 45
ing their upper ends secured to the head, and
an endwise-moving collar placed upon the
head outside of the wires for limiting the
outer movement of the wires, substantially as
described. 50

3. In an egg-beater, the combination of the
frame A, rigidly secured to a support having
a socket in its outer end and provided with a
screw-threaded rod C, a thumb-nut thereon,
and the arm D, having a tenon E at its inner 55
end and journals at its outer end, with the re-
volving head carrying wires, whereby the
beater can be moved around at any desired
angle, substantially as specified.

In testimony whereof I affix my signature in 60
presence of two witnesses.

JOHN RICHARDSON.

Witnesses:

GUSTAVUS W. SMITH,
WILLIAM H. DUSENBERRY.