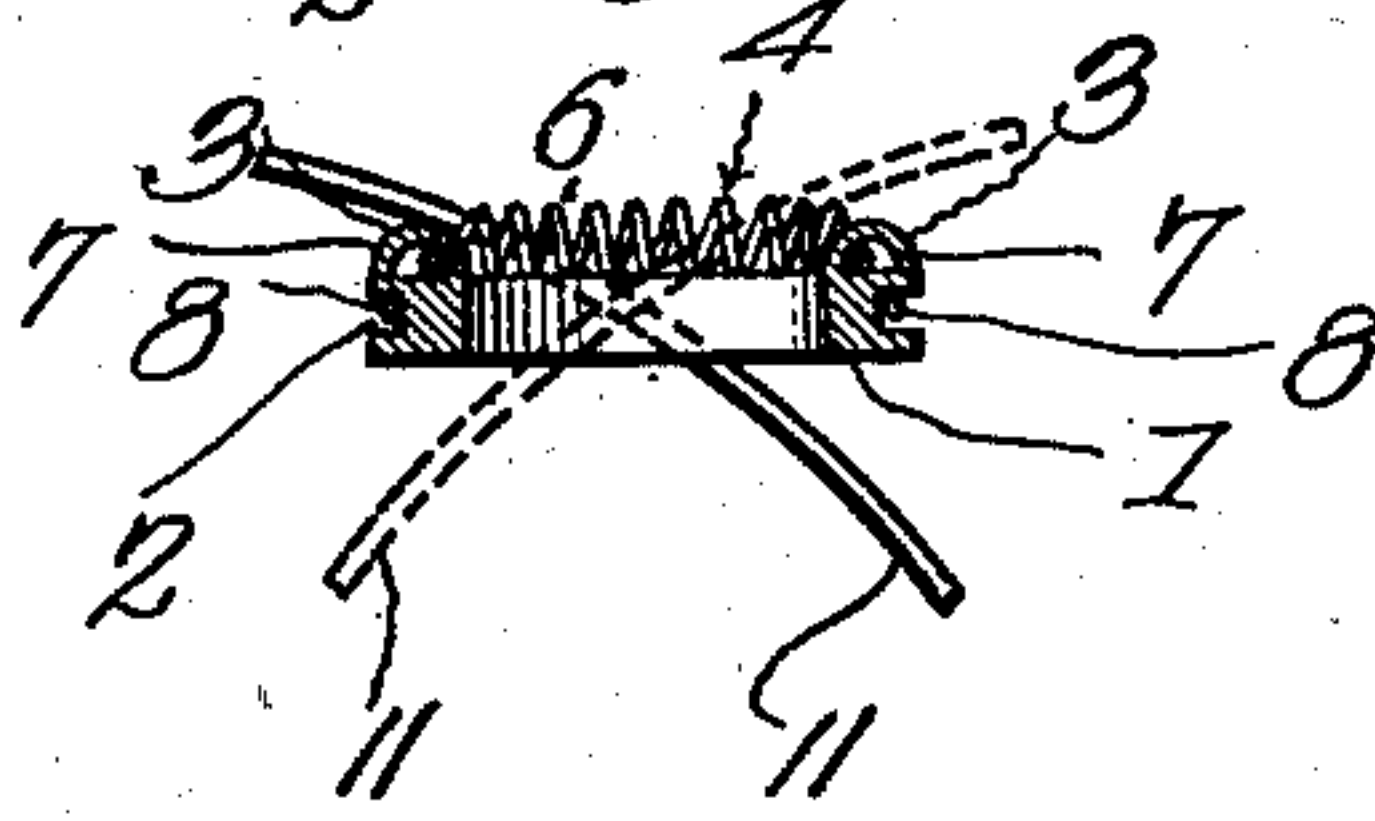
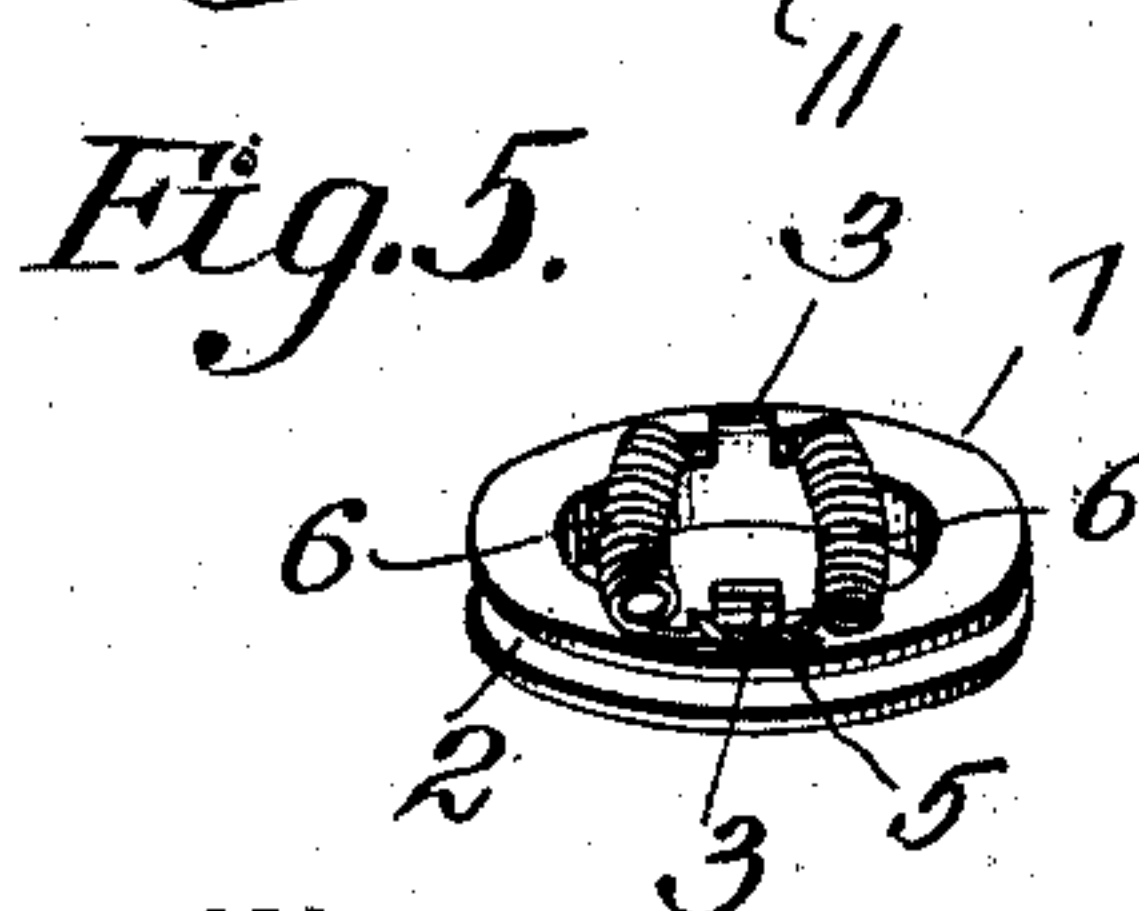
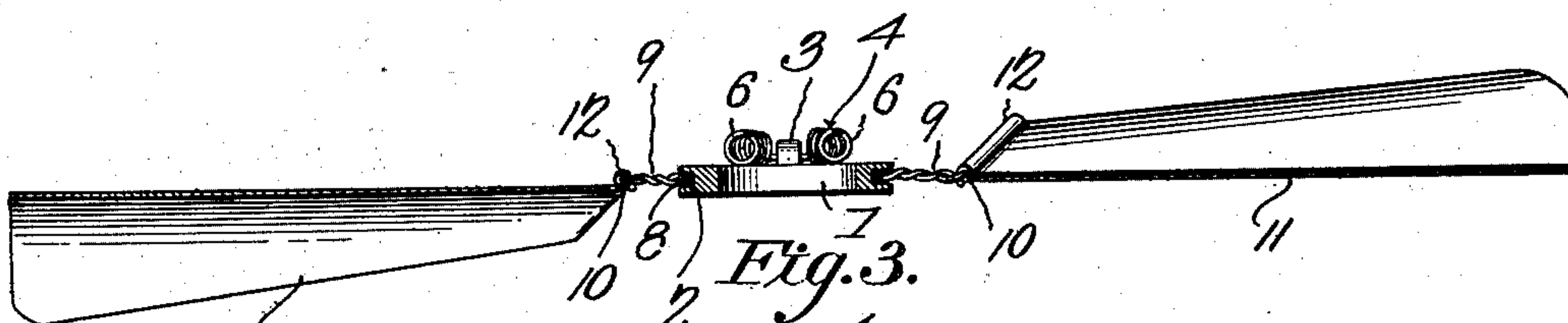
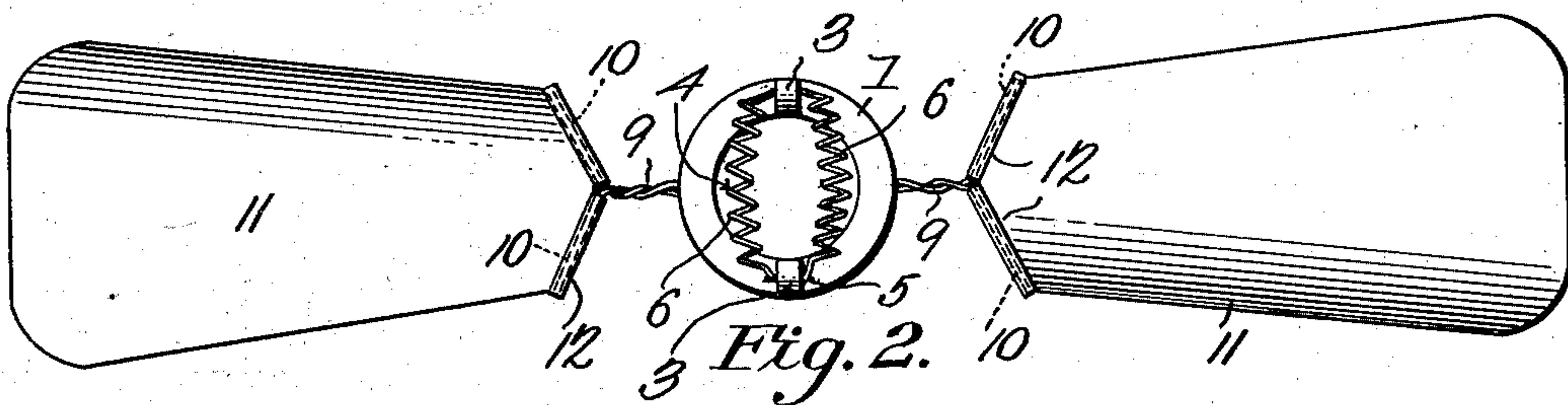
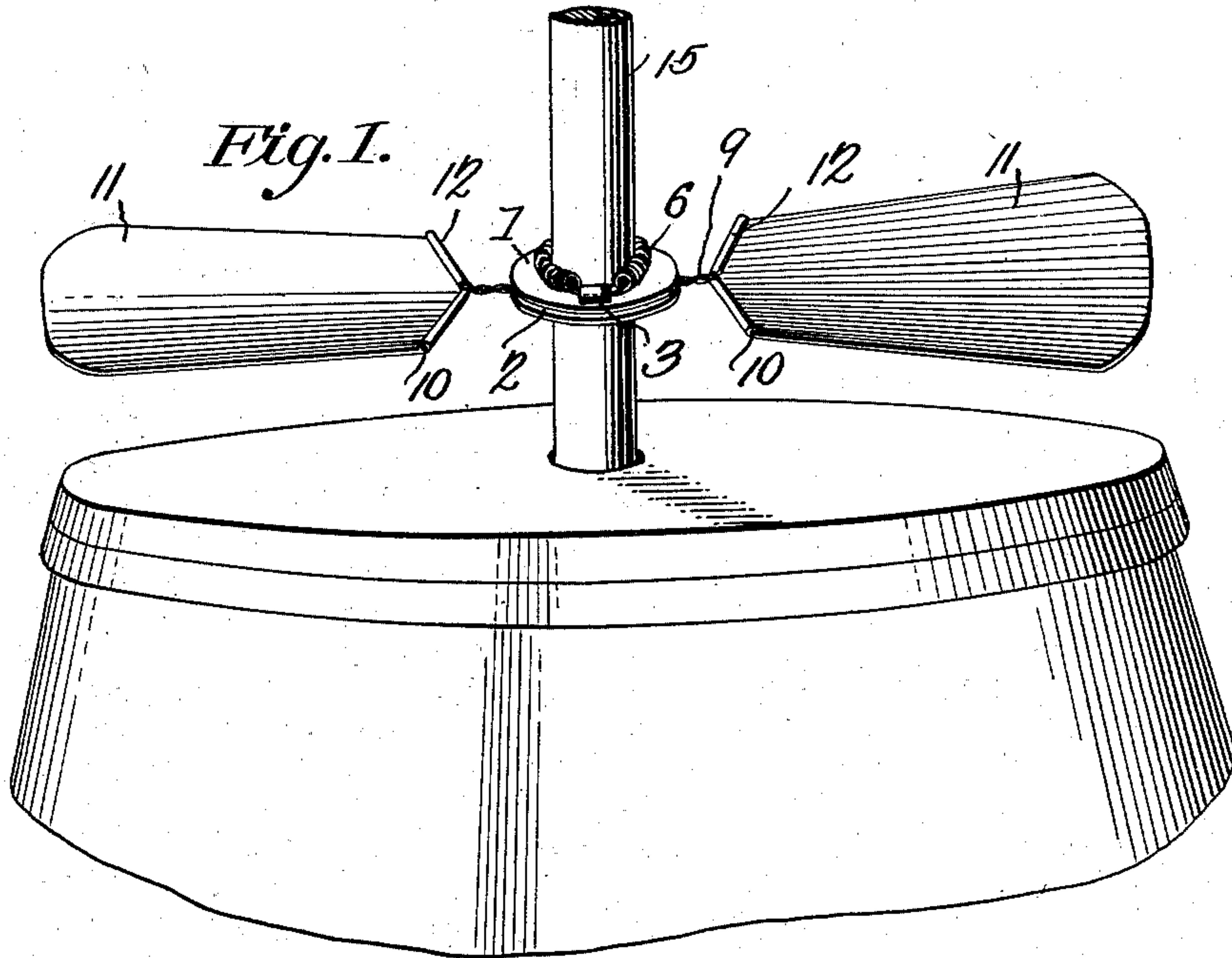


No. 748,203.

PATENTED DEC. 29, 1903.

A. F. MOODY.
FAN ATTACHMENT FOR CHURN DASHERS.
APPLICATION FILED JUNE 30, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

AMOS FRANKLIN MOODY, OF HILLSBORO, TEXAS.

FAN ATTACHMENT FOR CHURN-DASHERS.

SPECIFICATION forming part of Letters Patent No. 748,203, dated December 29, 1903.

Application filed June 30, 1903. Serial No. 163,762. (No model.)

To all whom it may concern:

Be it known that I, AMOS FRANKLIN MOODY, a citizen of the United States, residing at Hillsboro, in the county of Hill and State of Texas, have invented a new and useful Fan Attachment for Churn-Dashers, of which the following is a specification.

This invention relates to fan attachments for churns, and especially for that class of churns which are provided with a vertically-reciprocating dasher, the object of the invention being to furnish a simple, inexpensive, and easily-applied fan attachment which shall be operated automatically by the vertical reciprocatory motion of the dasher-staff and which shall serve to keep off the flies which usually gather in large quantities around the opening in the churn-cover, whence they are frequently driven through said opening and into the cream.

By my present invention I provide a device which may in a moment's time be applied to any dasher-staff, the said attachment comprising a rotary fan having propeller-shaped blades, which by the up-and-down motion of the dasher-staff will be automatically rotated, thereby keeping flies and other insects away.

My invention consists in the improved construction, arrangement, and combination of parts, having for their object to provide a device of the class described which shall possess superior advantages in point of simplicity, durability, and general efficiency, as will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved fan attachment, showing the same applied in operative position upon the dasher of an ordinary churn. Fig. 2 is a plan view of the attachment removed from the dasher-staff. Fig. 3 is a longitudinal sectional view. Fig. 4 is a transverse sectional view. Fig. 5 is a perspective detail view illustrating certain structural details.

Corresponding parts in the several figures are indicated by similar numerals of reference.

1 designates a flat ring or annulus having an exterior circumferential groove 2. Said ring or annulus is provided at its inner edge with diametrically opposite upwardly-extend-

ing hooks 3 3, which are bent outwardly, as shown, and which preferably are cast or otherwise formed integral with the ring or annulus. The interior diameter of the latter should be sufficient to enable it to be fitted upon a churn dasher-staff of the largest diameter ordinarily used.

4 designates a coiled helical spring the ends of which are connected, as shown at 5, in any suitable manner. This spring is connected with the diametrically opposite hooks 3 3, thus converting it into two independent spring-sections 6 6, which are disposed alongside each other across the ring or annulus 1. It is obvious that in order to connect the spring with the said hooks the coils of the spring at the points where said connection is made must be slightly flattened; but this will not interfere with the operation of the device. To secure the spring against displacement, the ends of the hooks may be bent, as shown at 7. I wish it to be understood that when desired two separate springs may be employed, the ends of said springs being suitably connected with the hooks 3.

8 8 designate two pieces of wire which are placed in the groove 2 of the annulus 1, the ends of said wires being twisted together, as shown at 9 9, on diametrically opposite sides. The two wires 8 8 thus cooperate to form a ring which is revolutely mounted in the groove 2. The projecting ends 10 of the wires 9 are connected with the inner ends of the fan-blades 11, said inner ends of the fan-blades being provided with seams 12, folded over the wire ends 10, thus securely connecting the fan-blades with the revoluble ring formed by the wire sections 8 at diametrically opposite sides.

The fan-blades 11 may be formed of any suitable material, such as thin sheet metal, aluminium being preferred on account of its lightness and non-corrodible qualities. These fan-blades are bent to concavo-convex shape in cross-section, and the opposite blades are set at any desired angle to the annulus 1, by which they are supported in the manner described. It is to be observed that the concave sides of the blades are to be lowermost, inasmuch as it is on the downstroke of the device that they are desired to exercise especial activity.

15 designates a dasher-staff upon which the device is mounted by simply slipping the ring or annulus over the end thereof, when the springs or spring-sections 6 6 will grip opposite sides of said staff, and thus retain the device in position thereon at any desired adjustment. The device is preferably placed upon the dasher-staff a few inches above the churn-cover when the dasher-staff is at the lower end of its stroke. When the dasher-staff is raised, the fan attachment will be caused by the atmospheric pressure on the upper convex sides of its blades to rotate slowly in one direction. On the downstroke, which is usually more forcible, the atmospheric pressure against the under concave sides of the blades will cause the fan attachment to rotate at a considerable rate of speed, which is amply sufficient to attain the intended object of the device.

I have herein described a simple and preferred construction of my invention; but I desire it to be understood that I do not limit myself to the structural details herein set forth, but reserve the right to any changes, alterations, and modifications which may be resorted to within the scope of my invention and without departing from the spirit or sacrificing the utility of the same.

Having thus described my invention, I claim—

1. In a device of the class described, a detachably-mounted annulus having securing means and a ring revolubly connected therewith and carrying fan-blades.

2. In a device of the class described, an annulus, spring clamping means connected with the same, and a fan attachment connected with said annulus to rotate thereon.

3. In a device of the class described, an annulus having diametrically opposite hooks, spring clamping means connected with said hooks and extending across the annulus, and a fan attachment connected with said annulus to rotate thereon.

4. In a device of the class described, an annulus having diametrically opposite hooks, and an exterior annular groove, in combination with spring clamping means connected with said hooks, and a fan-carrying ring mounted rotatably in said groove.

5. In a device of the class described, an exteriorly-grooved annulus, in combination with means for securing said annulus in operative position, revoluble fan-carrying means seated in said groove, and propeller-shaped blades associated with said revoluble supporting means.

6. In a device of the class described, an exteriorly-grooved annulus, a pair of wires seated in the groove and twisted together at diametrically opposite sides, and fan-blades associated with the ends of said wires.

7. In a device of the class described, a circumferentially-grooved annulus, a pair of wires seated in the grooves and twisted together at diametrically opposite sides, and fan-blades provided at their inner ends with seams folded over the projecting ends of said wires and thus associated therewith.

8. In a device of the class described, a circumferentially-grooved annulus, a revoluble member associated therewith and having wire ends extending at diametrically opposite sides, and propeller-shaped fan-blades provided with seams folded over said wire ends.

9. A device of the class described comprising a circumferentially-grooved annulus, means for securing the same in position adjustably upon a dasher-staff, and a fan revolubly associated with said annulus, said fan comprising blades connected with a ring revolubly connected with the annulus.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

AMOS FRANKLIN MOODY.

Witnesses:

L. F. MALONE,

L. M. MALONE.