

R. MAROT.
 APPARATUS FOR REMOVING FIBER FROM COCOANUTS OR THE LIKE.
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983,631.

Patented Feb. 7, 1911.

Fig. 3

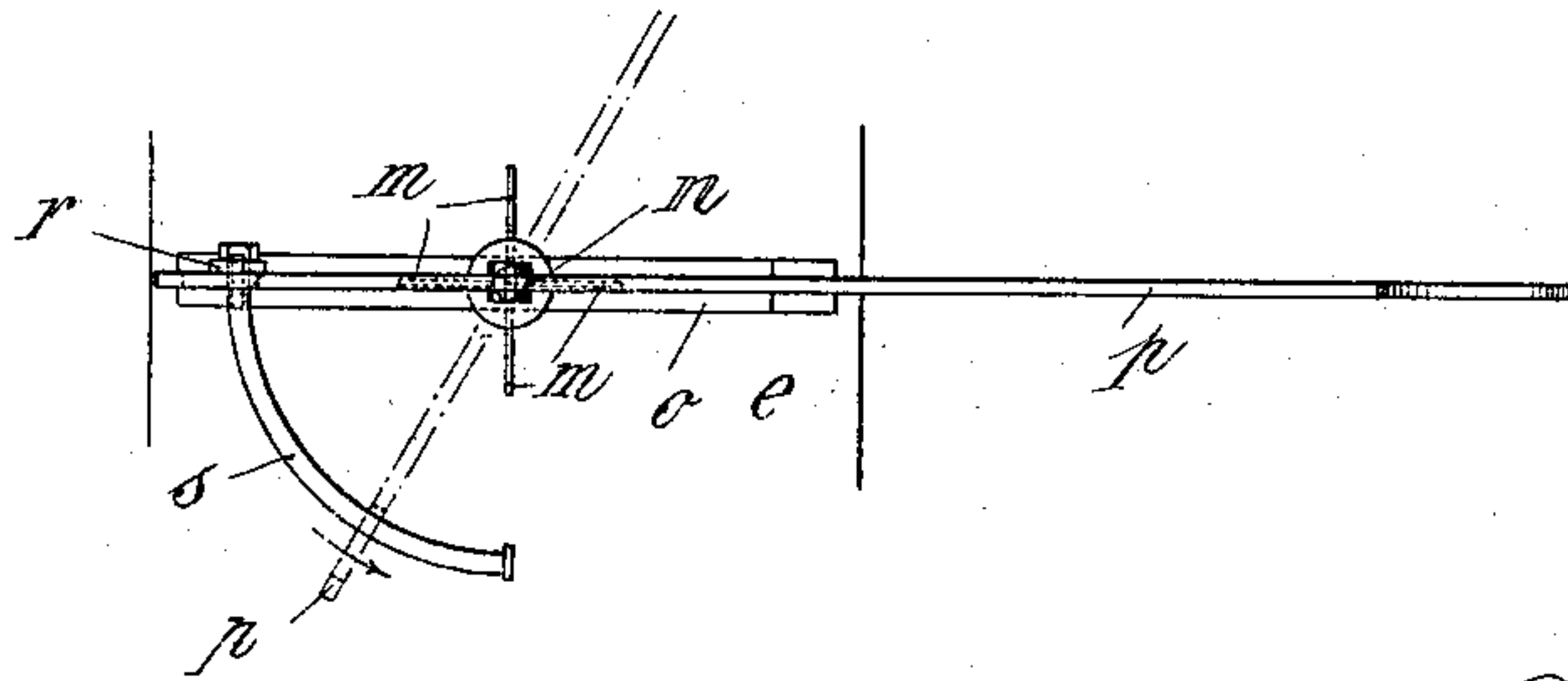


Fig. 1

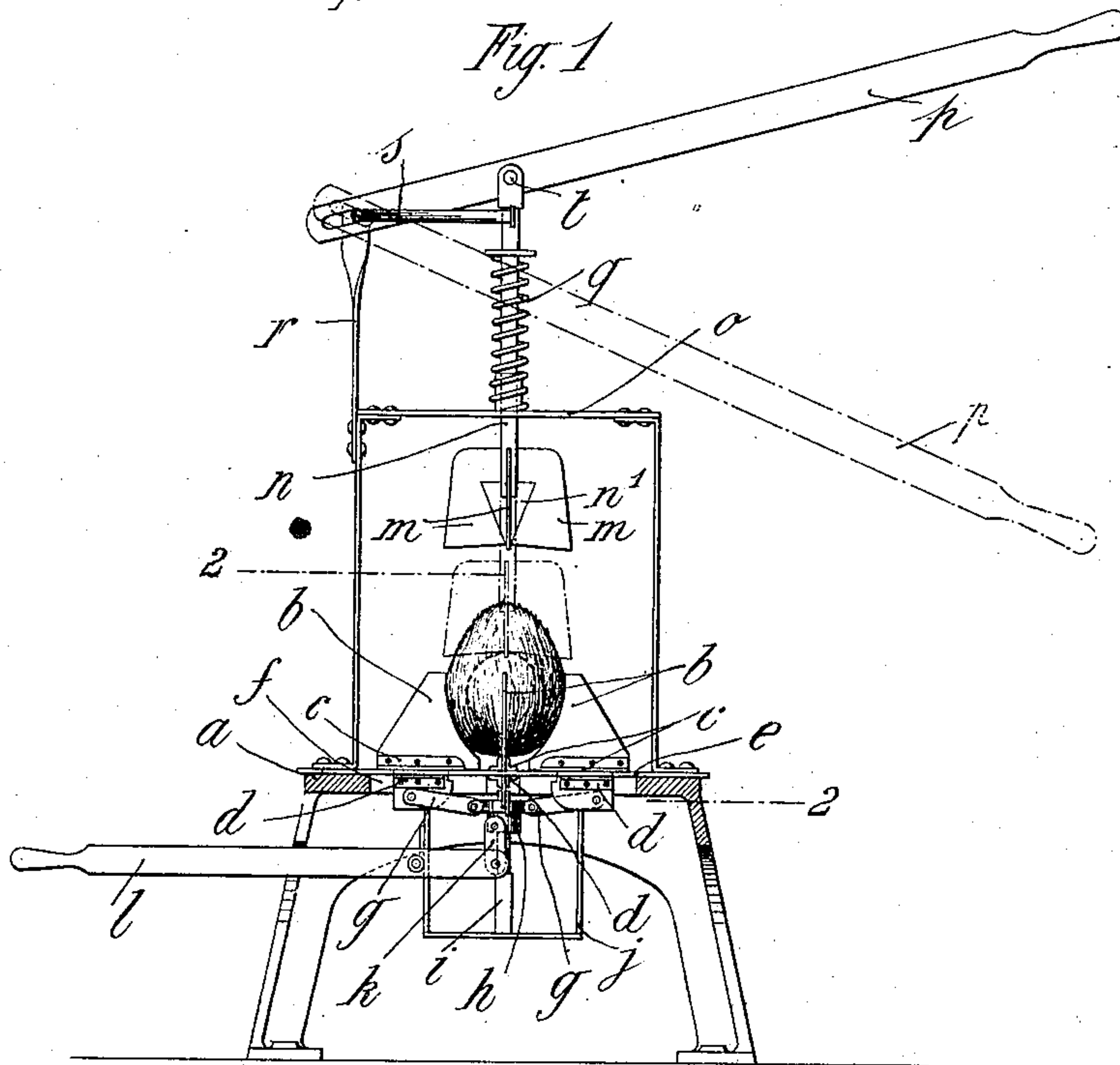
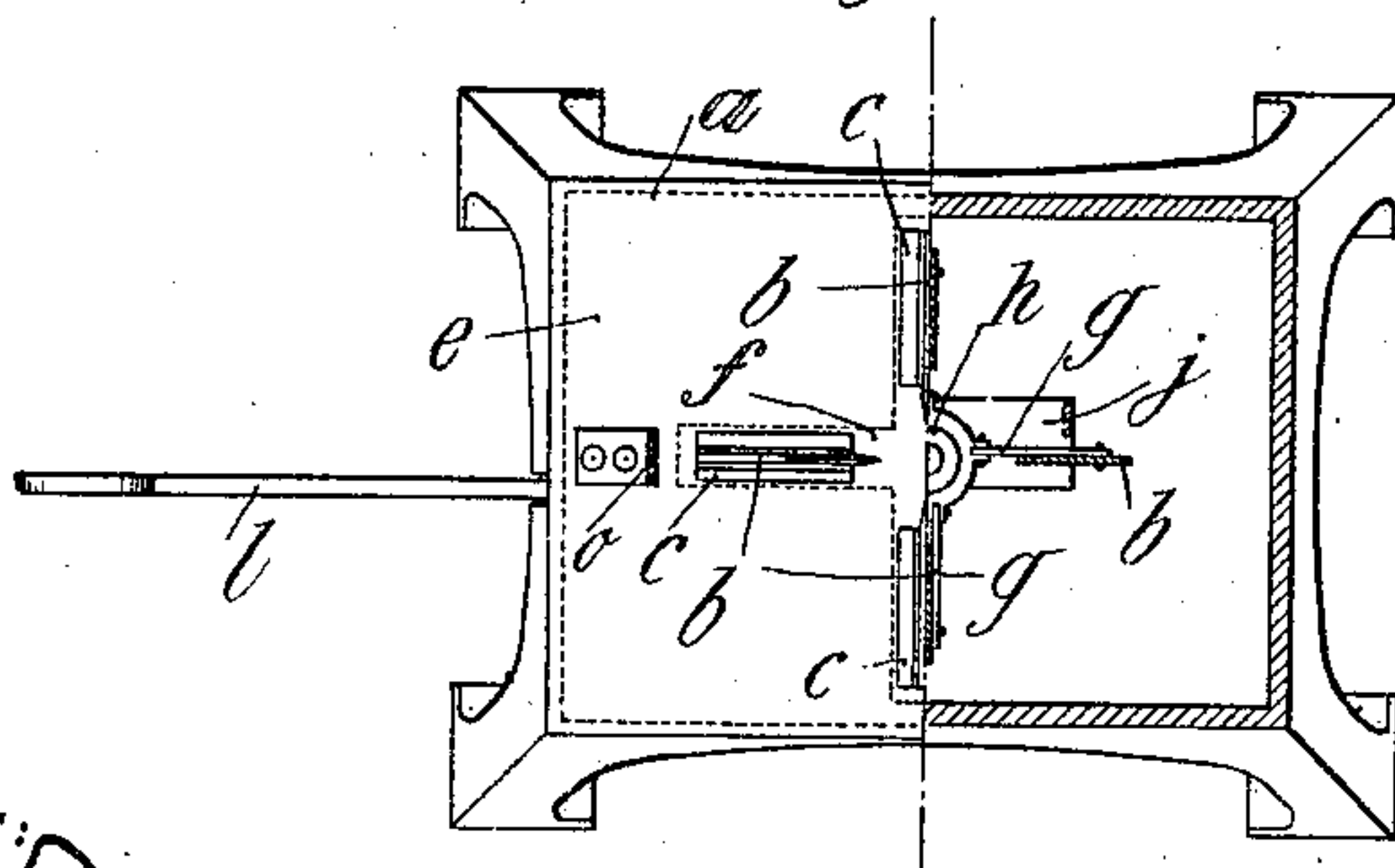


Fig. 2



Witnesses:
 Henry S. Thwing.
 Otto M. Holmgren.

Inventor:
 René Marot
 Brown, Leonard
 Attorney
 by E. J. Jackson & Leonard

UNITED STATES PATENT OFFICE.

RENÉ MAROT, OF PARIS, FRANCE.

APPARATUS FOR REMOVING FIBER FROM COCOANUTS OR THE LIKE.

983,631.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed November 12, 1910. Serial No. 592,089.

To all whom it may concern:

Be it known that I, RENÉ MAROT, citizen of the Republic of France, engineer, and resident of 18 Rue Matignon, Paris, in the said Republic, have invented a new and useful Apparatus for Removing Fiber from Cocoanuts or the Like, of which the following is a specification.

It is known that the common cocoanut, as well as the fruits of other varieties of the cocoanut tribe, is enveloped by a pericarp composed of an epidermal layer and of a fibrous parenchyma.

This invention relates to a machine designed for detaching this pericarp from the nut easily and without breaking the fibers.

The machine consists essentially of a table on which are mounted knives arranged in vertical planes radiating from the center of the table and movable in guides so that they can be all brought toward each other or moved away from each other simultaneously. Above these knives there are others similarly radiating and fixed at the end of a rod whereby they can be raised and lowered, the rod being also adapted to be moved on its axis through a certain angle.

The machine is used as follows:—The fruit from which the fiber is to be removed having been placed on the support formed by the assembled lower knives, the cutting edges of which are curved as shown in Figure 1, these knives are brought together by moving a lever sufficiently to cause them to penetrate into the pericarp as far as the nut without cutting this; by then operating another lever the upper knives are made to penetrate downward into the pericarp as far as the nut (as indicated in dotted lines in Fig. 2) and these knives are given a rotational movement through about 90°. The traction thus exerted on the upper half of the fibrous layer detaches the latter throughout its height. The upper knives may be caused to descend lower, care being then taken that they are suitably curved and that they do not descend in a plane in which the lower knives are situated, but in planes to one side of these; they can then be turned through the distance between two blades. This operation having been performed, the knives are returned to their original position and the nut which has remained intact and the pericarp the fibers of which have not been broken, can be removed separately from the machine.

A machine constructed according to this invention is shown in the accompanying drawing in vertical section in Fig. 1, in horizontal section in Fig. 2 on line 2—2 of Fig. 1 and in part plan in Fig. 3.

a is the table covered by a plate *e* having four slots in the form of a cross in which travel four knives *b*. On each knife are fixed angle irons *c* which bear against the upper surface of the plate *e* and angle irons *d* which bear against the lower surface of the plate; the knife is thus kept in a vertical plane. The lower angle irons *d* are guided in slots *f* in the table *a*.

For the purpose of moving the knives *b* the latter are connected at their lower parts by links *g* with a sleeve *h* adapted to slide on a vertical rod *i* fixed to the table and to a stirrup support *j*. The sleeve *h* is raised or depressed by a hand lever *l* connected therewith by a link *k*. By the links *g* this upward or downward movement of the sleeve is converted into a forward or backward movement of the knives.

The upper knives *m* are fixed to the lower part of a rod *n* terminating at its lower end in a core *n'* which strengthens the knives. This rod extends through a perforation in the frame *o* carried by the table and is pivoted at its upper part to an operating lever *p*; the spring *q* tends to keep the rod and the knives in their raised position.

Since the lever *p* is to be capable of turning the rod *n* on its axis the lever is not articulated directly on the upright *r* fixed to the frame *o* but is simply provided with a slot in which engages an arc-shaped rod *s* fixed to the upright and having a stop at its free end. When the lever *p* is depressed into the position indicated in dotted lines in Fig. 1 the operator can turn it laterally in order to turn the rod *n* and the upper knives in the manner already described for the purpose of detaching the fibers of the nut.

According to the size of the fruit from which the fiber is to be removed, the dimensions of the upper knives should be varied. There are therefore provided for each machine three rods *n* having different knives and before beginning to cut a batch of fruit requiring knives of other dimensions than those last used, the rod *n* is disconnected from the lever *p* by withdrawing the pin *t* and for it is substituted the rod carrying knives suitable for the new work.

It is to be understood that the details of construction of the machine described above may be modified without thereby altering its essential characteristics.

5 Having thus described the nature of this invention and the best means I know of carrying the same into practical effect, I claim:—

10 1. A machine for removing the fiber from cocoanuts or similar fruits comprising a table, vertical knives arranged radially on said table, means for moving said knives toward each other and away from each other, a vertical rod situated above said knives, a
15 second series of knives radially arranged and fixed to the lower part of the said rod and means for raising and lowering said rod and for turning it.

20 2. A machine for removing the fiber from cocoanuts or similar fruits, comprising a table, radiating slots in the said table, vertical knives arranged radially on the table, angle
25 irons carrying the said knives and sliding in the said slots, a vertical rod fixed below the said table, a sleeve sliding on the said rod, links connecting the said sleeve with

the said angle irons and a lever connected with the said sleeve and adapted to raise or depress it.

3. A machine for removing the fiber from 30 cocoanuts or similar fruits comprising a table, vertical knives arranged radially on the said table, a rod situated above the said knives, a second series of vertical knives radially attached to the said rod, an operating lever 35 articulated at a point in its length to the upper part of the said rod and slotted at one of its ends, a support, a horizontal arc-shaped bar fixed to the said support and engaging in the slotted end of the said lever, 40 and a spring adapted to return the said rod and its operating lever to their highest position.

In testimony, that I claim the foregoing as my invention, I have signed my name in 45 presence of two witnesses, this second day of November 1910.

RENÉ MAROT.

Witnesses:

H. C. COXE,
ALCIDE FABE.