

J. F. SCHÖNING.
APPARATUS FOR FEEDING BEES.
APPLICATION FILED MAR. 5, 1904.

FIG 1

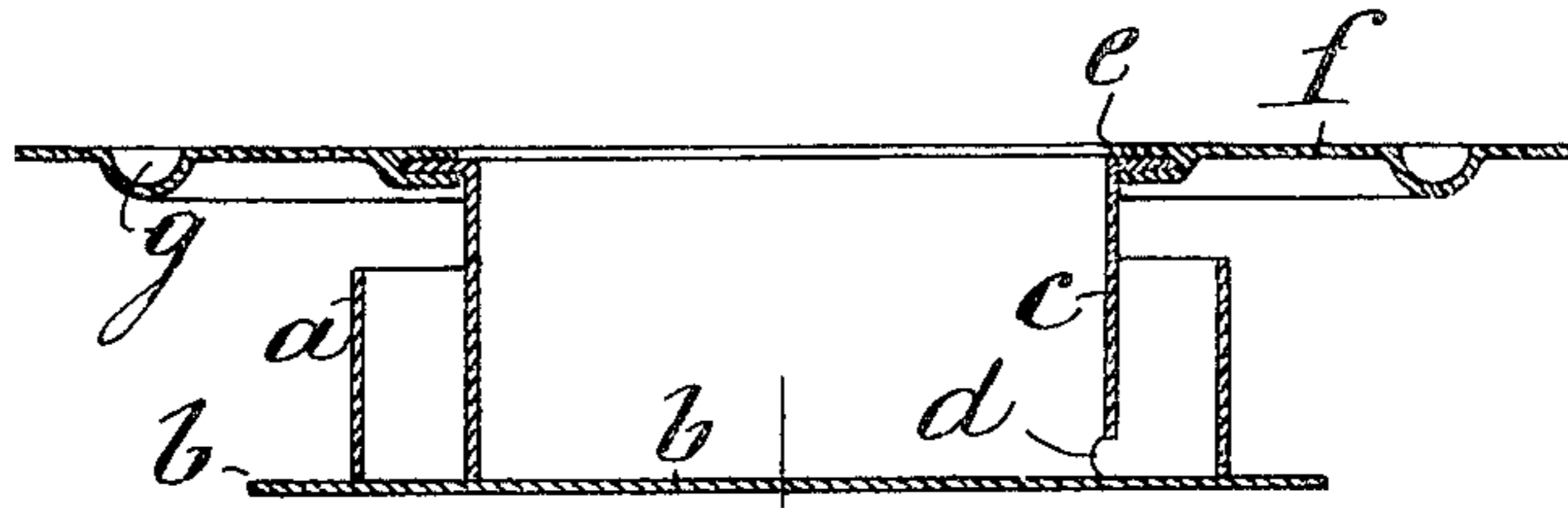


FIG 2

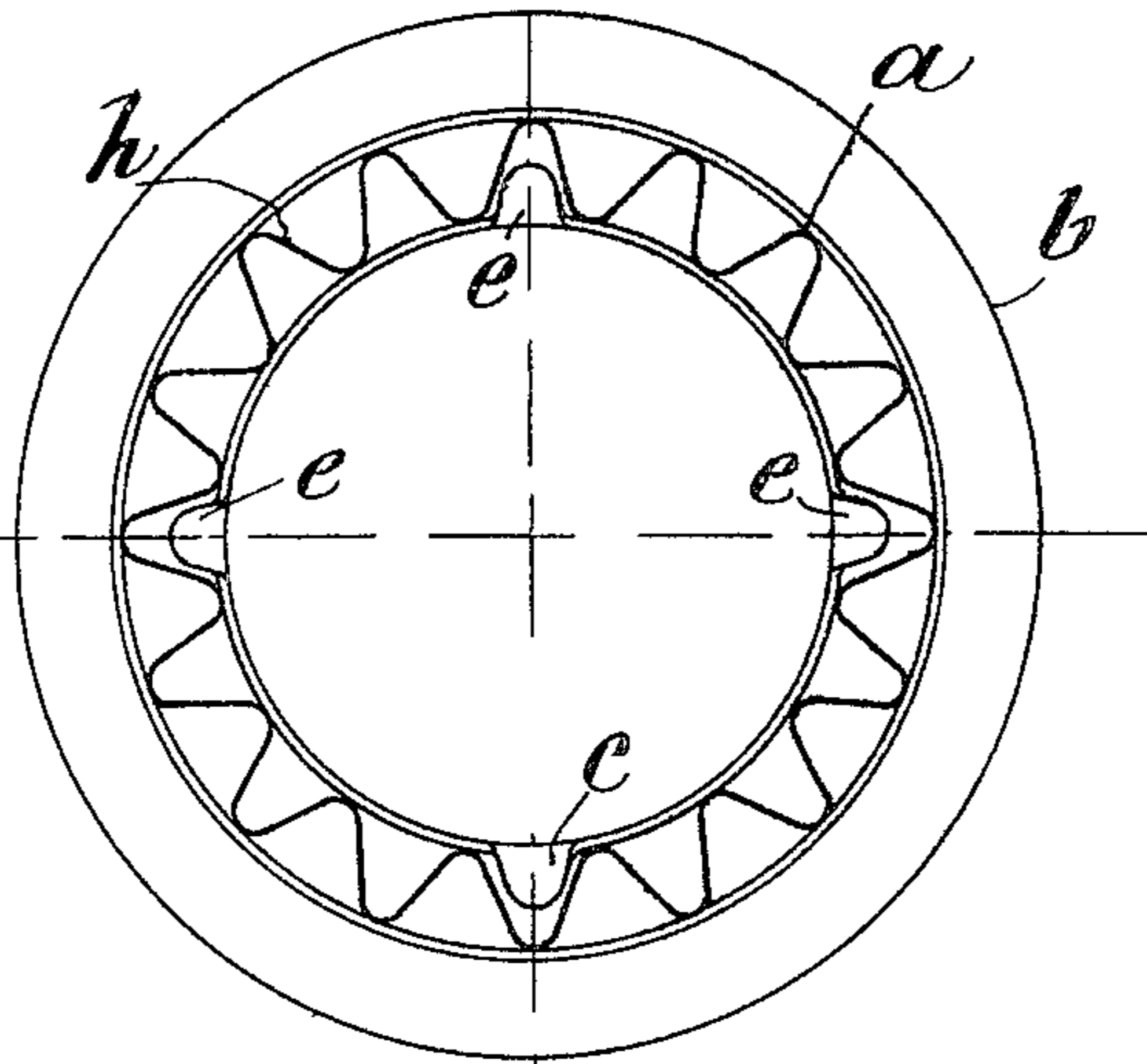


FIG 4

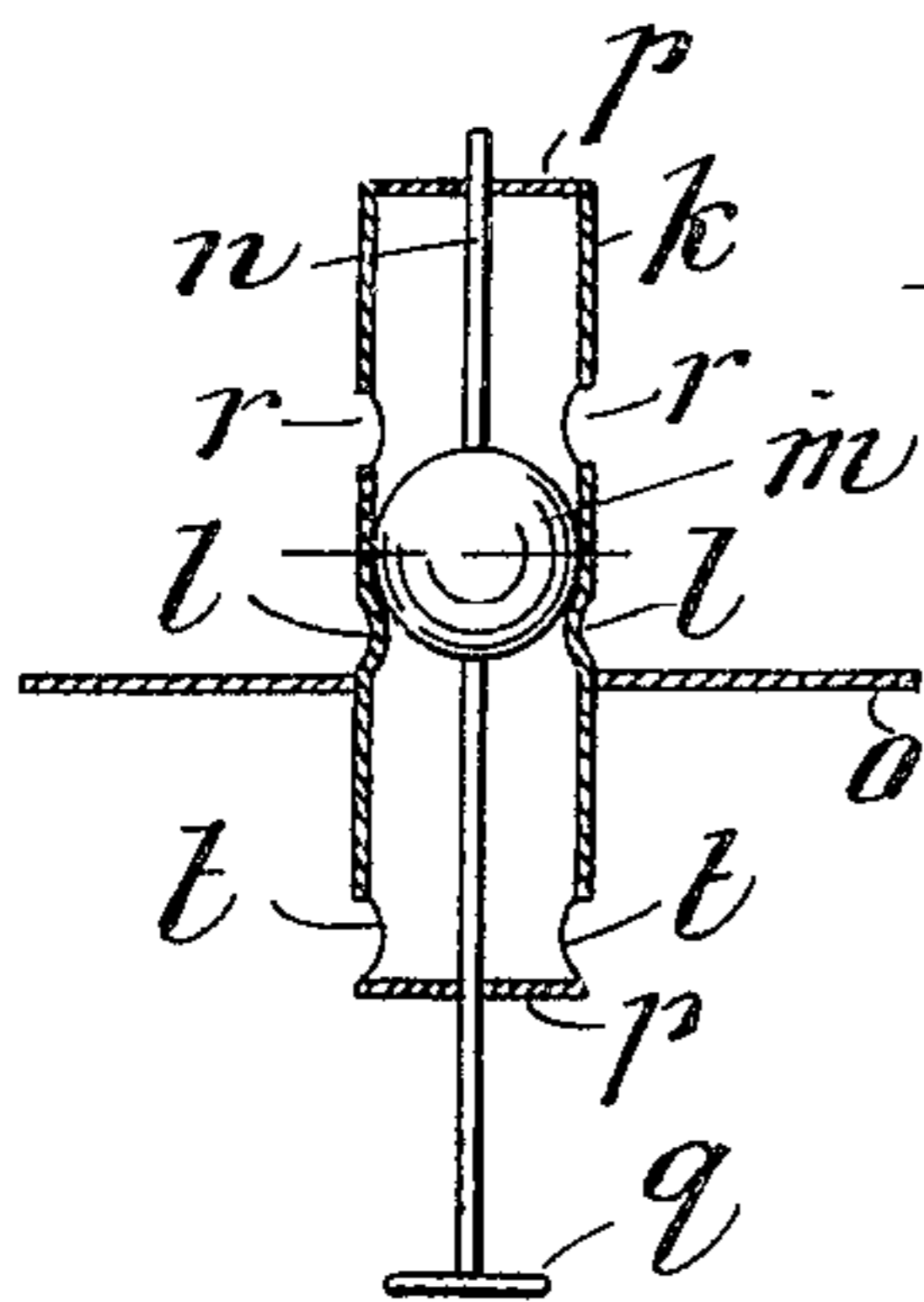
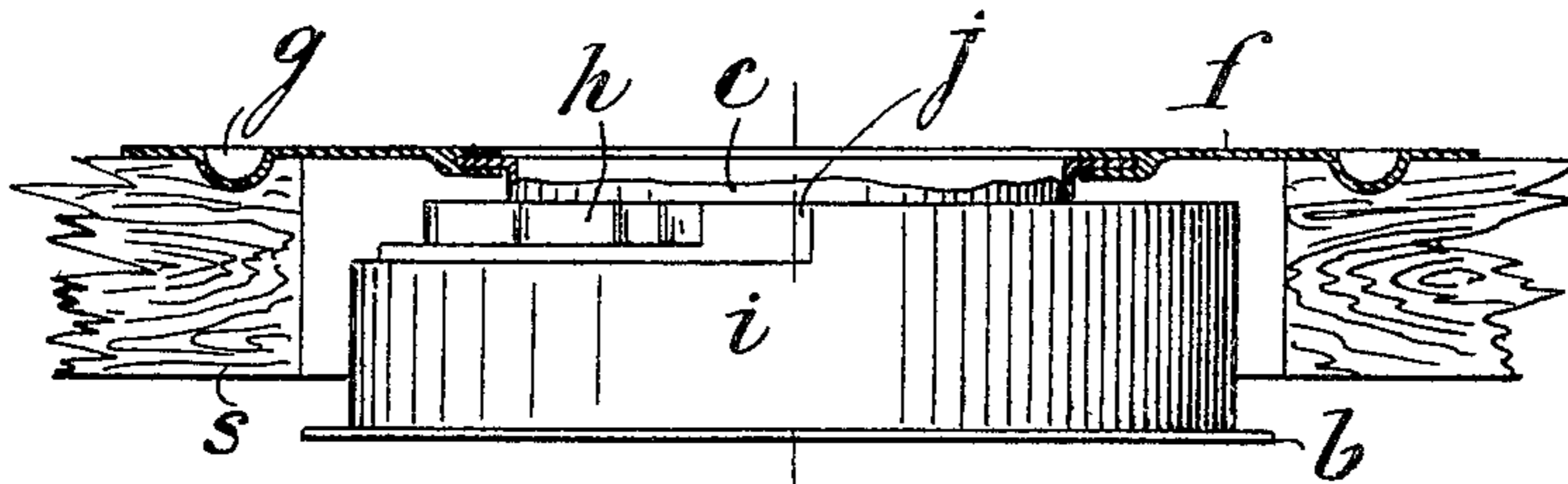


FIG 3



Witnesses
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UNITED STATES PATENT OFFICE.

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APPARATUS FOR FEEDING BEES.

No. 804,271.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JULIUS FISCHER SCHÖNING, schoolmaster, residing at Druedal, near Frederikssund, in the Kingdom of Denmark, have invented certain new and useful Improvements in Apparatus for Feeding Bees, of which the following is a true description.

My invention relates to an apparatus for feeding bees, said apparatus being so constructed that the feeding may be conveniently regulated.

Referring to the accompanying drawings, Figure 1 is a vertical section of an apparatus for feeding bees, the apparatus being shown without devices for regulating and without cover plate. Fig. 2 is a plan view of an altered embodiment of the apparatus without cover; Fig. 3, a side elevation of the apparatus with regulating devices secured to the cover of the beehive, said cover being shown in section; and Fig. 4 shows the cover plate over the inner reservoir.

The apparatus consists of an exterior cylindrical reservoir *a*, the bottom of which has a projecting edge *b*. Inwardly to the bottom is secured a smaller cylinder *c*, open at the top, which cylinder overreaches the exterior cylinder *a* and has a number of exits *d*. The cylinder *c* is provided with ears *e*, which enter into a groove in the cover *f*, provided with corresponding grooves, so that the cover is detachable for applying or removing the hereinafter-described regulating device. Said cover *f* has a central opening for the cylinder *c* and is provided with a groove *g*, which holds the cover, and thereby the whole apparatus, firmly to the loft *s* of the beehive, Fig. 3.

Over the cylinder *c* may be placed a cover-plate *o*, Fig. 4, with a tube *k* for filling in the fodder, said plate and tube being described below. The fluid fodder is conducted to the cylinder *c* through the tube *k*, and therefrom it pours through the openings *d* in the exterior reservoir *a*, the edge of said reservoir being so low that the bees may get access to the fodder at the same time as the cover *f* shuts the opening in the loft of the beehive.

Coöperating to regulate the feeding and preventing the bees from dirtying or drowning themselves in the fodder, is placed a ring *h*, Fig. 2, between the cylinder *c* and the exterior reservoir *a*, said ring *h* being folded up, so that a series of cells is formed along its periphery. By means of suitable openings in

the under side of the ring these cells are connected with the reservoir *a*. The cells have the size of natural cells of honeycombs, so that the bees have an easy and safe access to the fodder, and the ring *h* is given about the height of the cylinder *c* and loosely placed around the cylinder.

To regulate the feeding, a number of the cells may be shut out by means of the rings *i* and *j*, Fig. 3. Said rings are of the same height as the corrugated ring *h* and placed the one around about the other on the outside of the cylinder *a*, leaning against the edge *b*. Each of the rings is provided with a cutting, as shown in Fig. 3, so that by displacing the rings conveniently relative to each other the cuttings may be placed in front of the number of cells which it is desired to keep open.

To maintain the heating of the fodder, the cover-plate *o*, Fig. 4, is placed above the cylinder *c*. Said plate is provided with a tube *k*, through which the fodder is conducted, said tube reaching the bottom of the cylinder *c*. The tube *k* is provided with a narrow pass *l* and has a little above this pass injection-orifices *r* and below the pass exits *t*. In the upper part of the tube is arranged a ball *m*, resting on the edge of the narrowing part of the tube and fitting within the tube. Fixed to the ball is a rod *n*, guided in cross-pieces *p* at each end of the tube *k* and carrying a little plate *q*. When the cover plate *o* is placed above the cylinder *c*, the plate *q* strikes against the bottom of the cylinder *a*, thereby lifting the ball *m* above the openings *r*, through which the fodder streams in the tube *k*, and from this tube it passes through the exits *t* to the cells.

Having now described the nature of my said invention and in what manner the same is to be performed, what I claim is

1. In an apparatus for feeding bees, the combination with an outer reservoir, of an inner reservoir arranged within said outer reservoir so as to leave an annular space between the outer wall of the inner reservoir and the inner wall of the outer reservoir, said inner reservoir having outlets opening into the outer reservoir and means dividing said annular space into a plurality of compartments.

2. In an apparatus for feeding bees, the combination with an outer reservoir, of an

inner reservoir centrally arranged within said outer reservoir and having outlets opening into said outer reservoir, and a corrugated ring arranged between said reservoirs and
5 dividing the space between the reservoirs into a plurality of compartments.

3. In an apparatus for feeding bees, the combination with a lower outer reservoir, of an inner higher reservoir, arranged within
10 said outer reservoir and having outlets opening into said outer reservoir, means dividing the space between said reservoirs into a plurality of compartments, and means for preventing the access to a number of said com-
15 partments.

4. In an apparatus for feeding bees, the combination with a lower outer reservoir, of an inner higher reservoir, arranged within
20 said outer reservoir and having outlets opening into said outer reservoir, means dividing the space between said reservoirs into a plurality of compartments, and means for preventing the access to a number of said compartments, said last-named means compris-

ing a pair of adjustable rings arranged around 25 said outer reservoir and having a portion projecting above the upper edge of said outer reservoir.

5. In an apparatus for feeding bees, the combination with an outer reservoir, of an
30 inner reservoir arranged within said outer reservoir and having outlets opening into said outer reservoir, and means for feeding the fodder to said reservoirs; said means comprising a cover adapted to be placed on said
35 inner reservoir, a feed-tube projecting through said cover and having inlets above the cover and outlets below the cover, a valve in said tube intermediate of the inlet and the outlet, and means automatically
40 opening said valve when the cover is placed on the inner reservoir.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JULIUS FISCHER SCHÖNING.

Witnesses:

MAGNUS JENSEN,
HAROLD FROST.