

No. 719,881.

PATENTED FEB. 3, 1903.

C. A. SAMUELSON & J. A. LYNN.

SOAP GRANULATOR.

APPLICATION FILED JULY 8, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

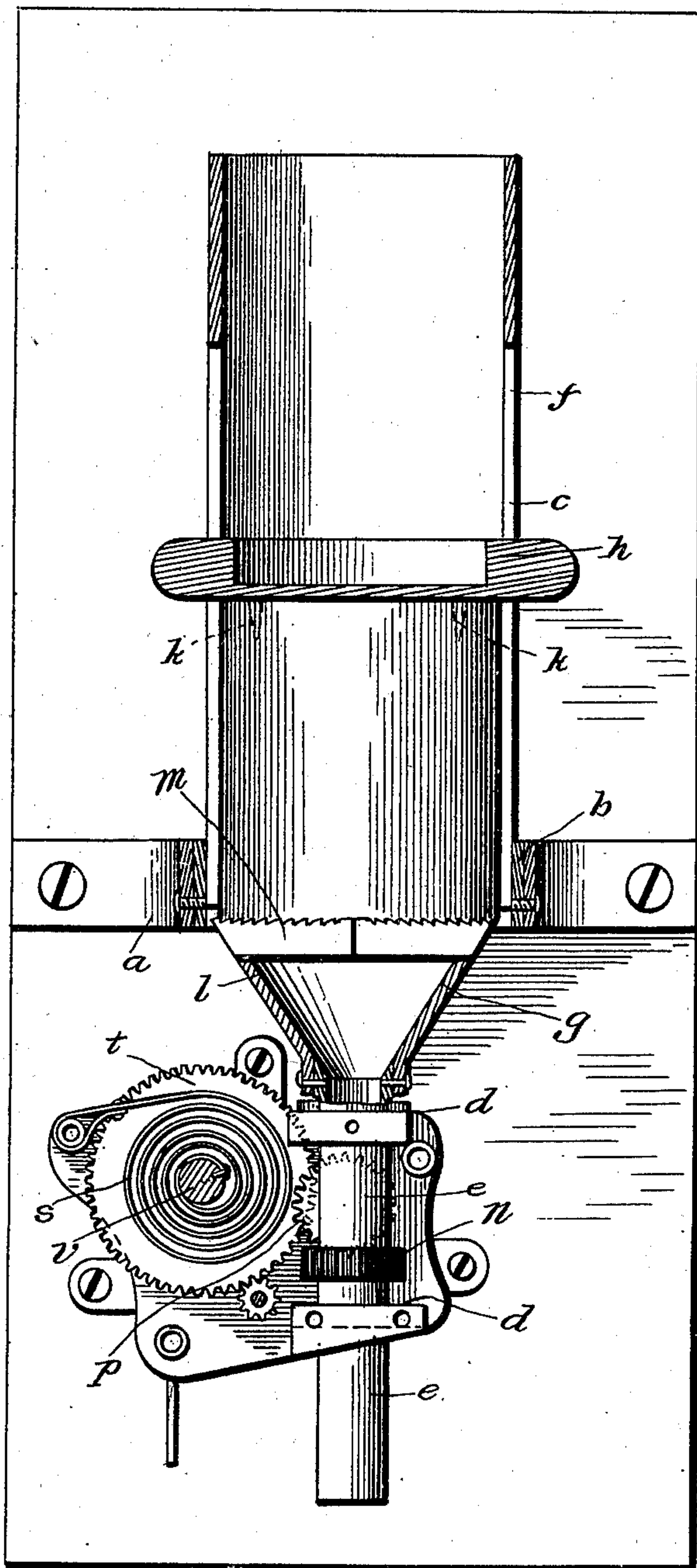


FIG. I.

Witnesses

*R. A. Boswell.*  
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Inventors

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By

*E. W. Anderson*

*their* Attorney

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2 SHEETS—SHEET 2.

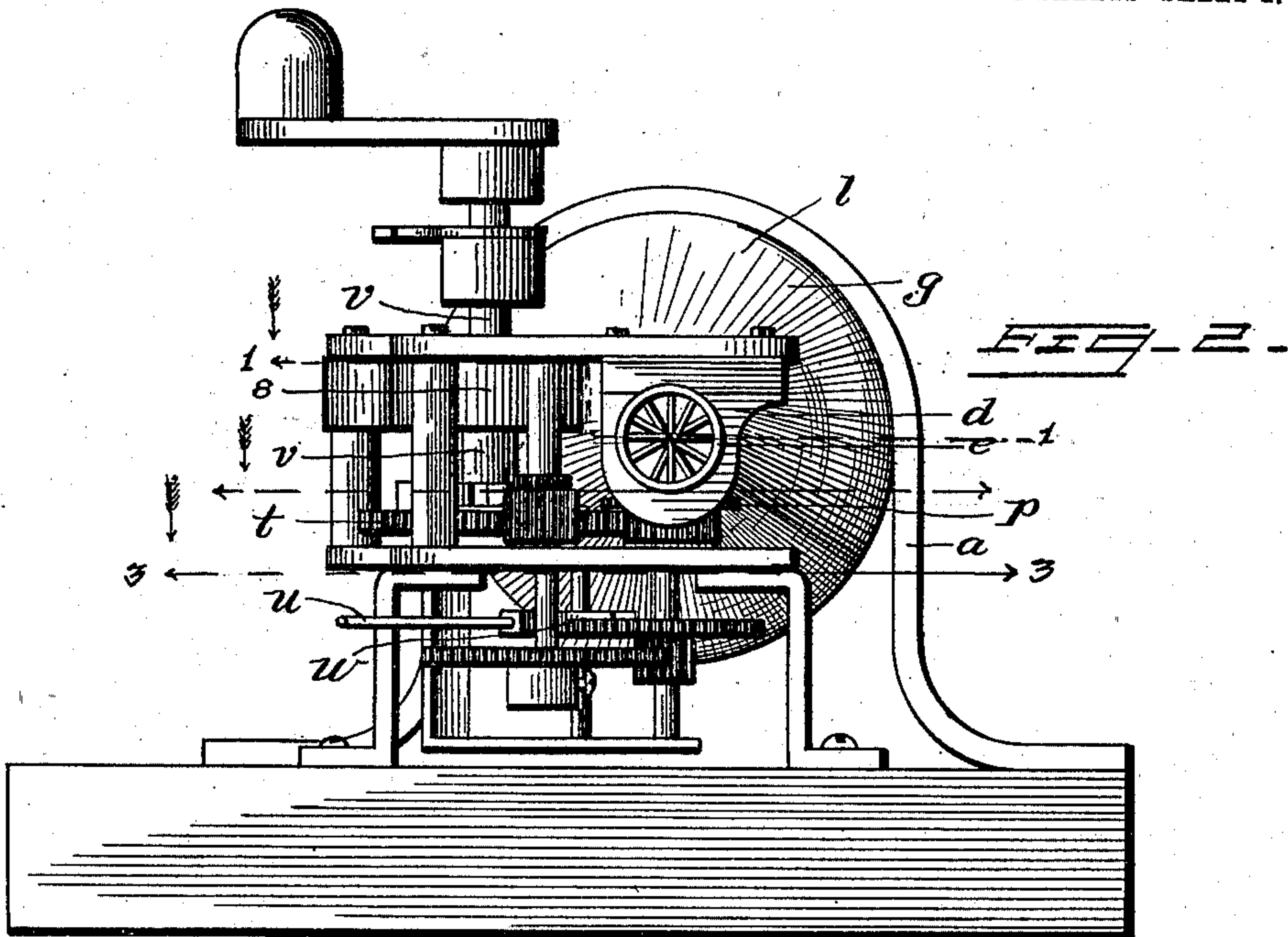


FIG. 3.

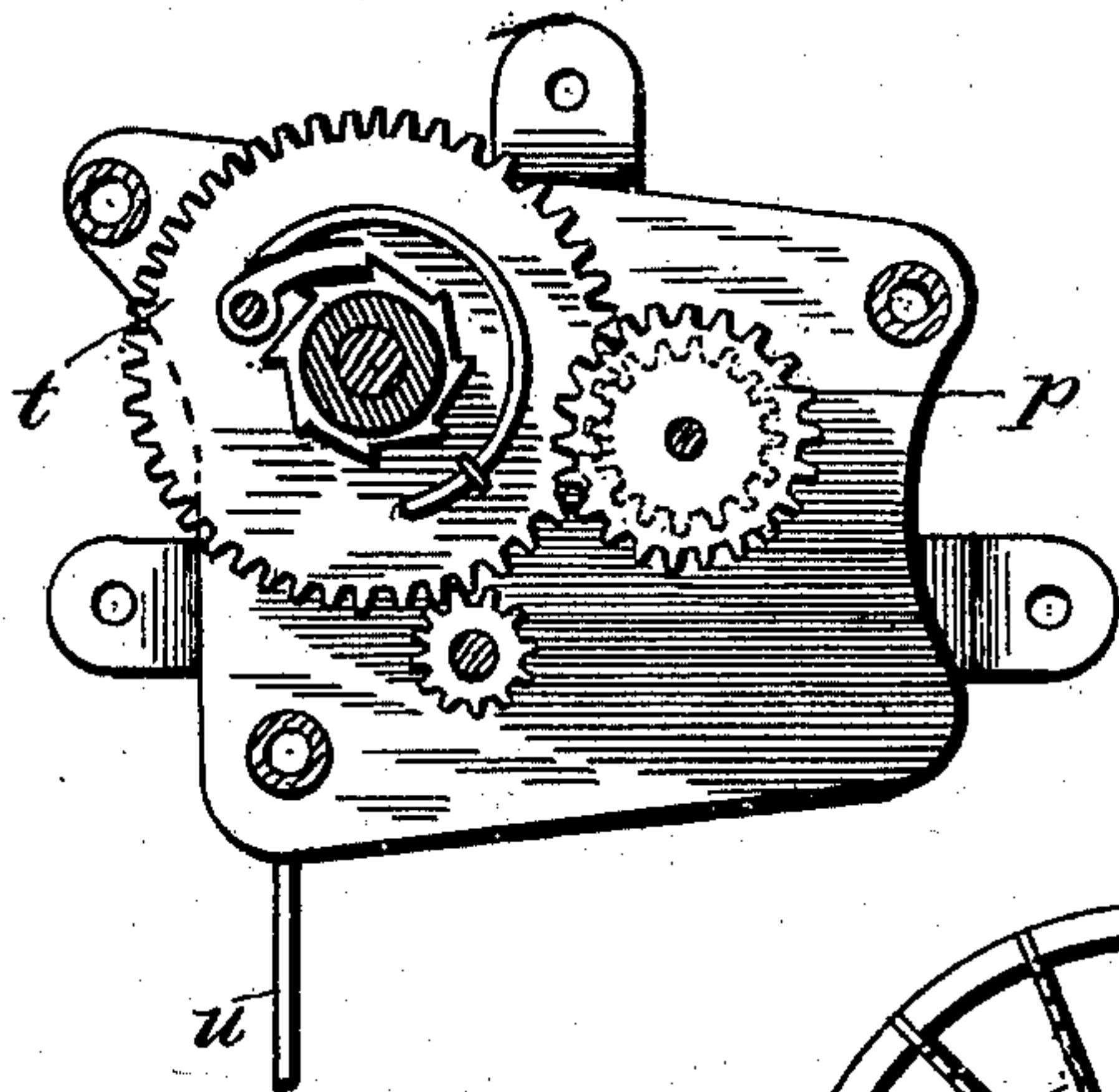


FIG. 4.

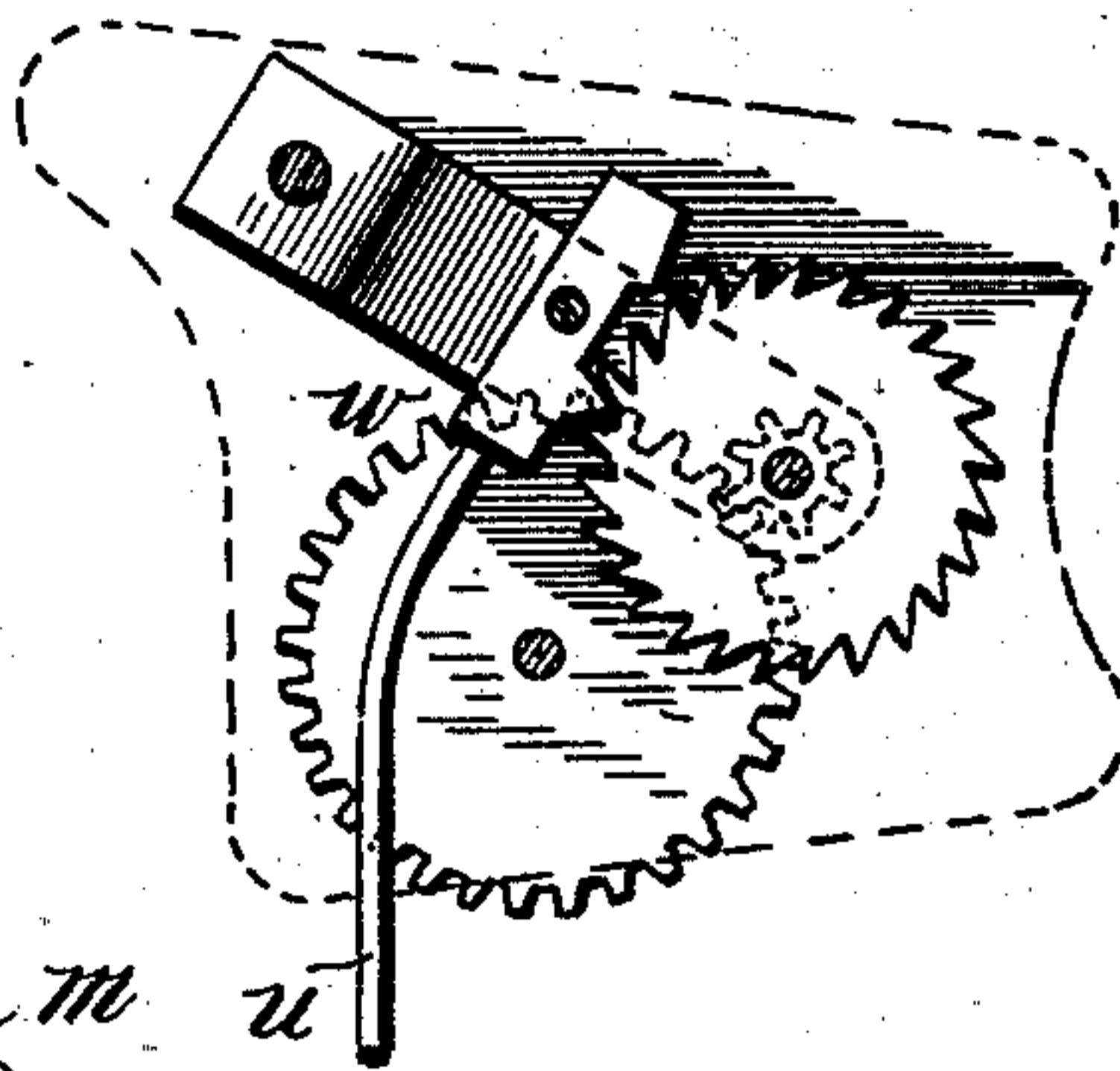
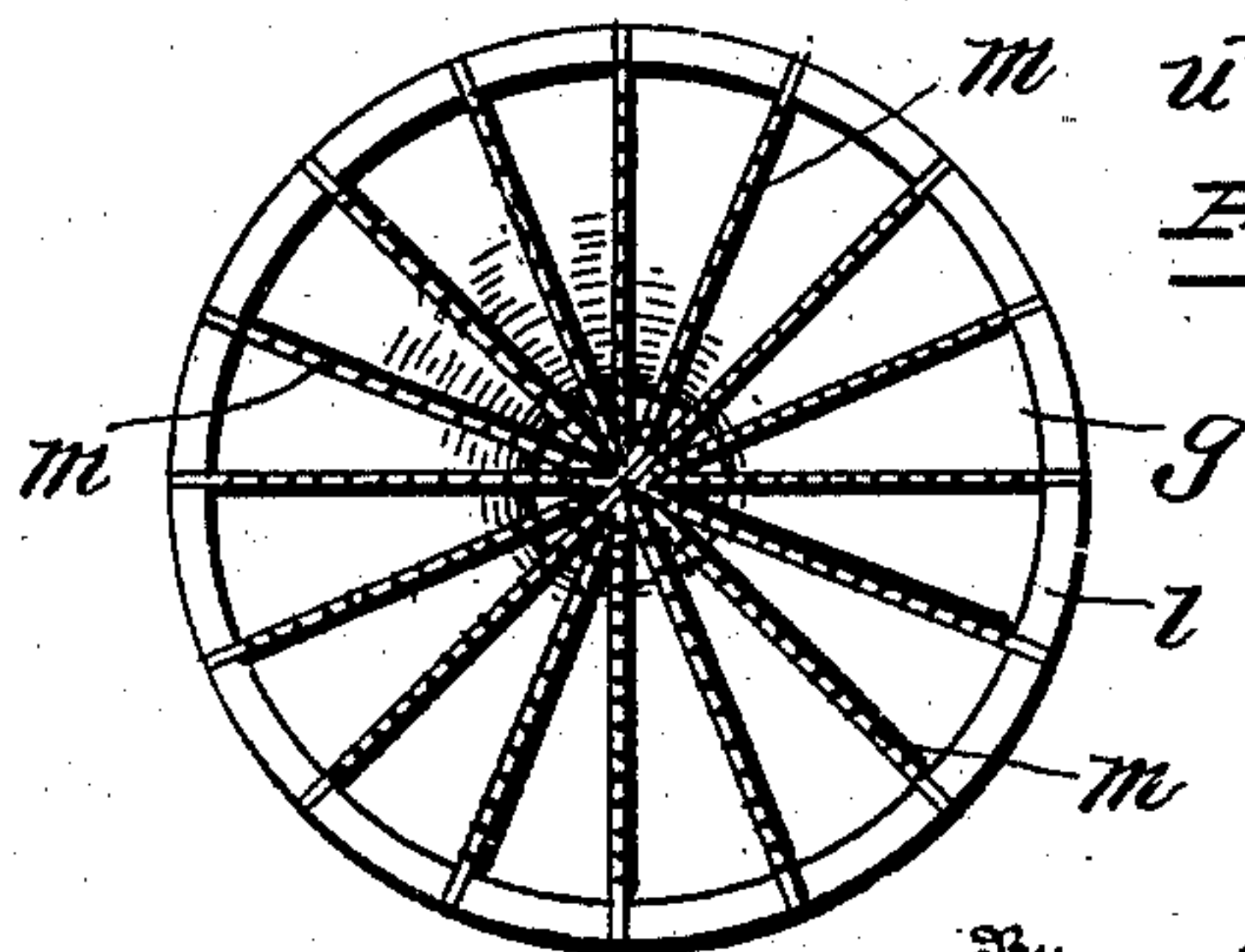


FIG. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

CHARLES A. SAMUELSON AND JOHN A. LYNN, OF CHICAGO, ILLINOIS.

## SOAP-GRANULATOR.

SPECIFICATION forming part of Letters Patent No. 719,881, dated February 3, 1903.

Application filed July 8, 1902. Serial No. 114,806. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES A. SAMUELSON and JOHN A. LYNN, citizens of the United States, and residents of Chicago, in the county of Cook and State of Illinois, have made a certain new and useful Invention in Soap-Granulators; and we declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a section on the line 1 1, Fig. 2. Fig. 2 is a bottom plan view of the granulator. Fig. 3 is a section through the gearing on the line 3 3, Fig. 2, looking outwardly. Fig. 4 is a section on the same line looking inwardly. Fig. 5 is a detail cross-section through the cutters *m*.

The invention relates to machines for cutting or granulating soap and similar articles; and it consists in the novel construction and combinations of parts, as hereinafter set forth.

In the accompanying drawings, illustrating the invention, the letter *a* designates framework having a bearing *b* for the soap tube or carrier *c* and a bearing *d* for the tubular stem *e* of the grinder or granulator *g*, the soap-carrier and soap-granulator being arranged in axial line with each other.

The soap-carrier *c* is removable and is provided with slots *f*, extending vertically in opposite sides of its wall to receive the arms of the soap-holder or press-head *h*, which is provided with points *k* to engage the top of the cake or block of soap and prevent it from turning.

The grinder or granulator *g* is formed with a flaring mouth *l* and a tubular stem *e*, communicating with the cavity of said mouth below the grinding or granulating cutters *m*, which are radially arranged across the upper portion of said mouth, the lower portion of the cavity of the mouth being free below the cutters to allow the fine particles which are

removed from the block of soap to escape easily through the tubular stem. The stem of the grinder or granulator is provided with gear-teeth, as indicated at *n*, to engage a pinion *p*, which is operated by the main gear *t* in pawl-and-ratchet engagement with the shaft *v* of the mainspring *s*. This clock-work movement is regulated by an escapement at *w*, having a vibrating arm *u*, which gives the movement a vibratory or shaking motion, which is communicated to the grinder or granulator. The serrations or teeth of the granulating or grinding cutters *m* are of fine character, being usually similar to the teeth of a fine saw, and the vibratory action of the escapement causes these teeth during the rotation of the grinder to chip off the cake of soap in fine feathery particles, which float down through the tubular stem to a receiver placed below it. Weights may be placed on the press-head in the soap-carrier, as may be necessary to secure the pressure desired.

It will be observed that the saw-like faces of the grinding-cutters are in the same plane, and as they are radial the pressure is equalized and the grinding action similar. The cake of soap is ground off level, so that there is scarcely any waste—none at all if the butt is placed in the carrier on the end of the fresh cake.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

In a soap-granulator, the combination with a tubular soap-carrier, of a grinder or granulator having a flaring mouth and a tubular stem, and provided with radial serrated cutters at the upper portion of said mouth, and means for turning said stem and cutters, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES A. SAMUELSON.

JOHN A. LYNN.

Witnesses:

HENRY BERNAHL,

LOUIS A. MUELLER.