

No. 894,540.

PATENTED JULY 28, 1908.

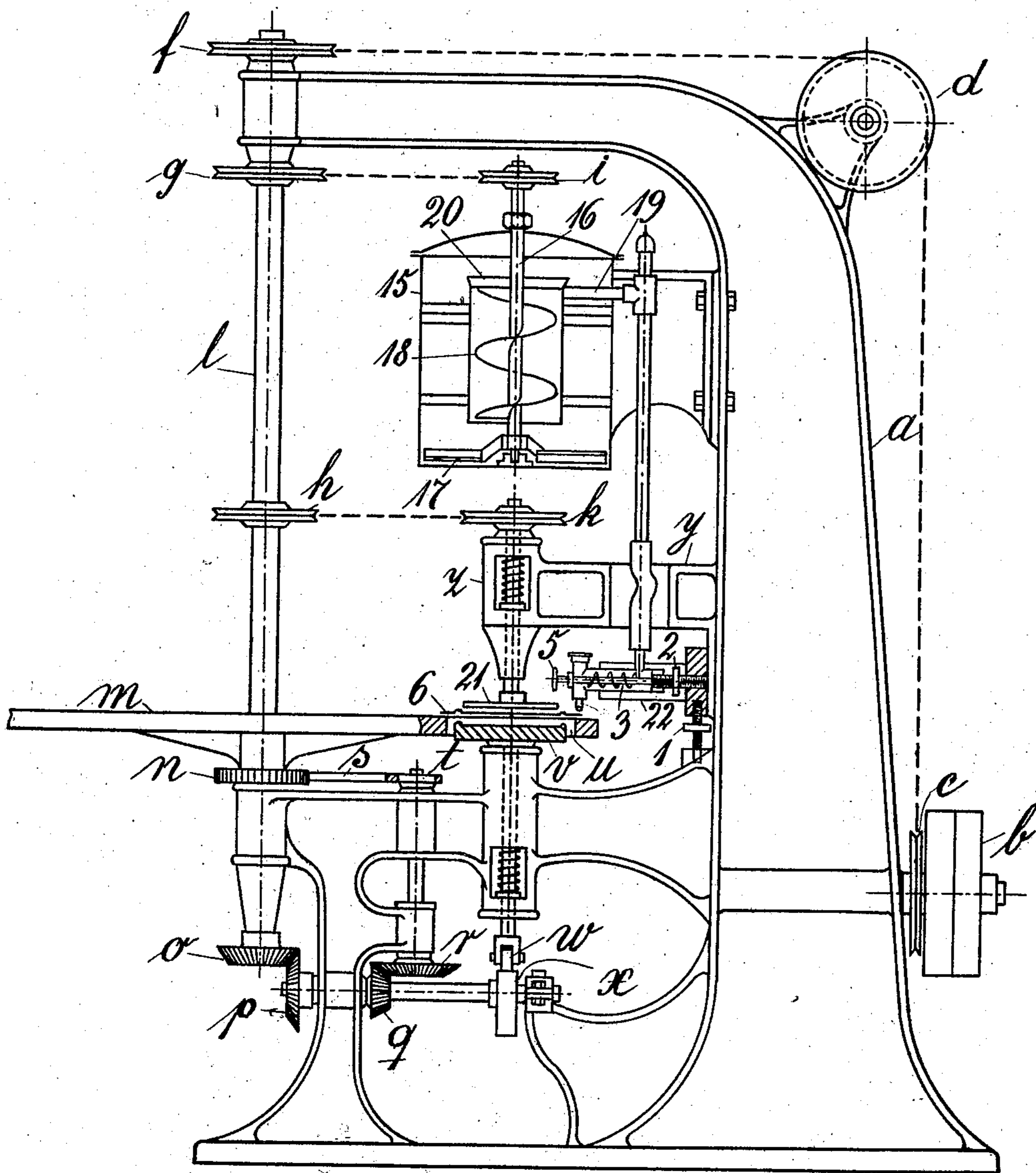
J.-SCHIÖNNING.

MACHINE FOR APPLYING GUM LIQUID COATING TO COVERS.

APPLICATION FILED AUG. 23, 1906.

3 SHEETS—SHEET 1.

Fig. 1.



~~Witnesses:~~
~~Alison~~
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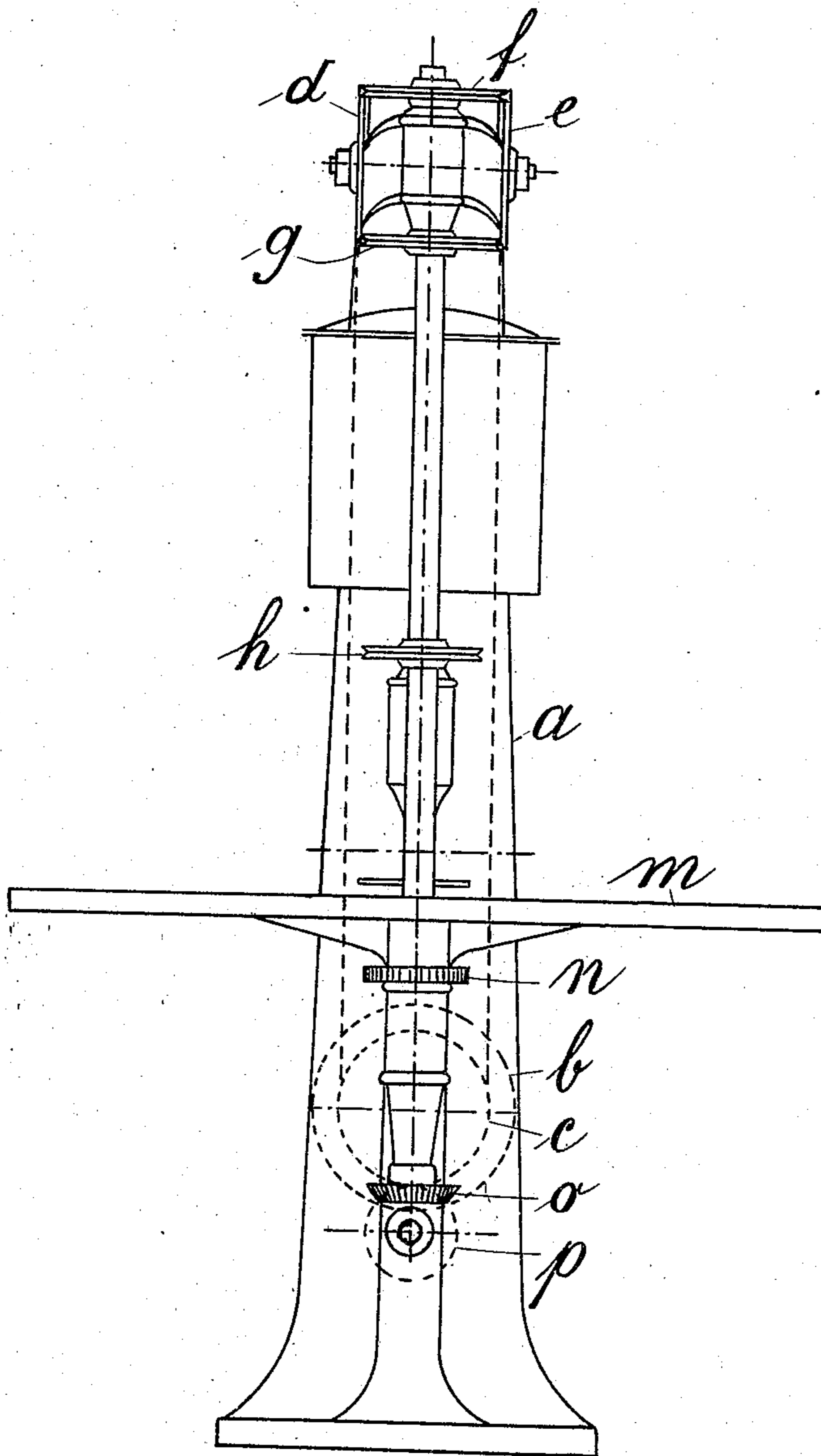
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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

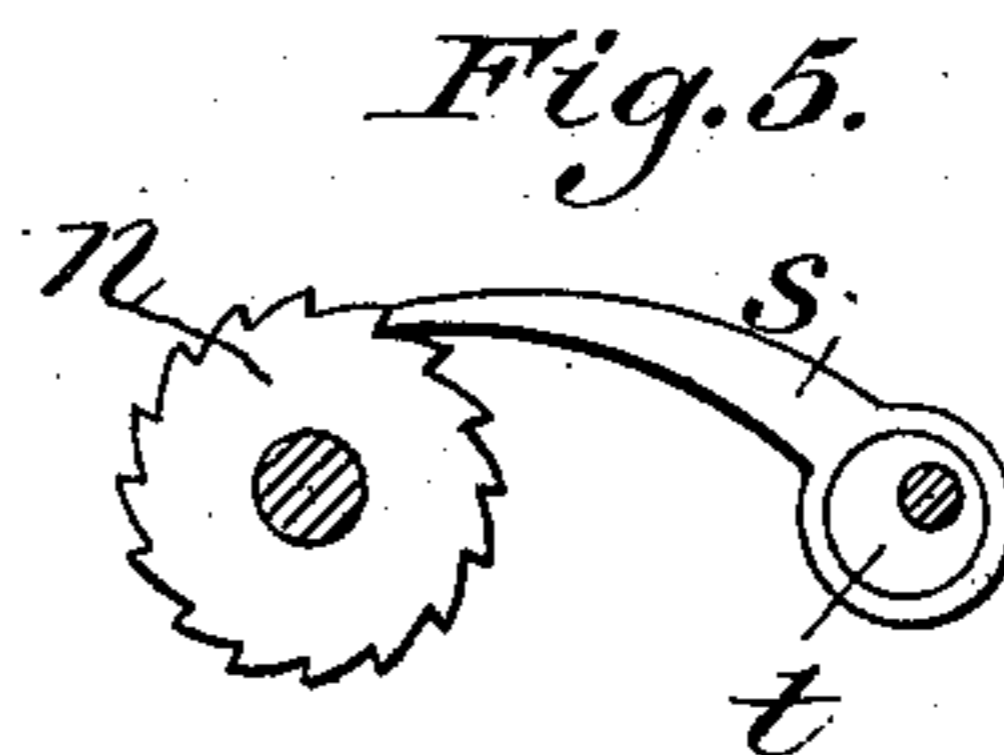
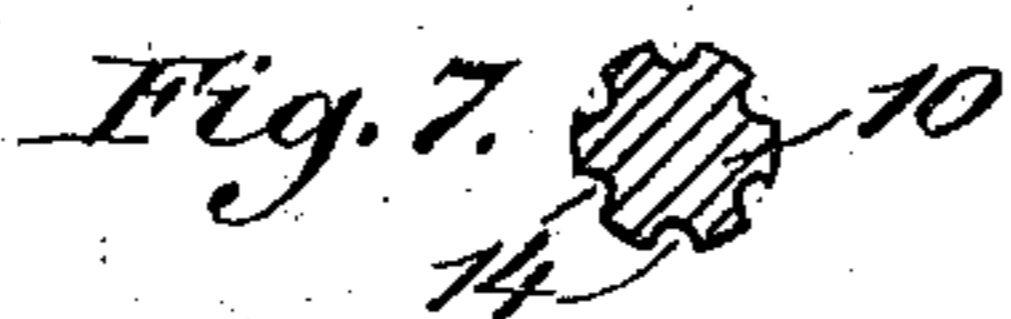


Fig. 3.

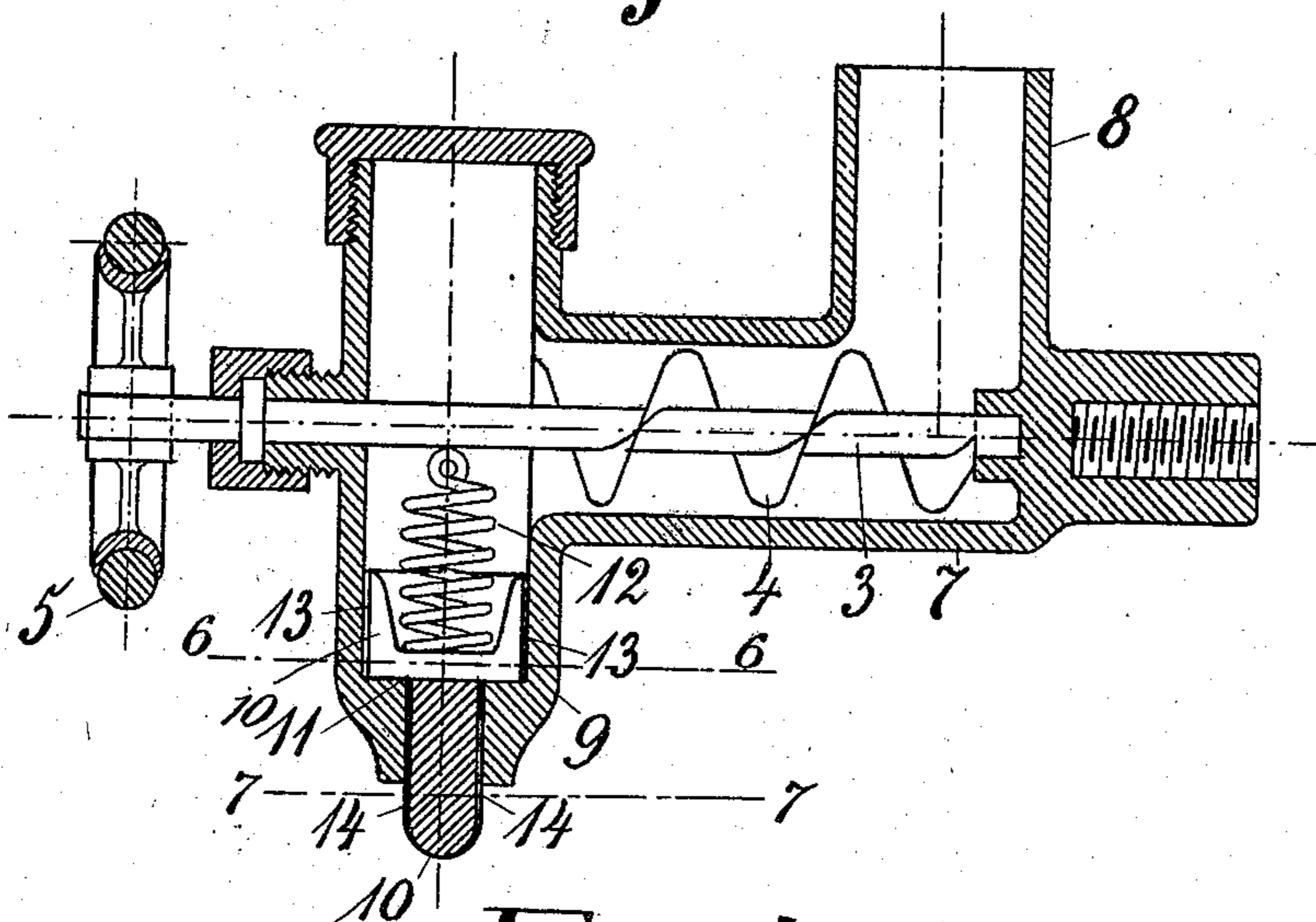
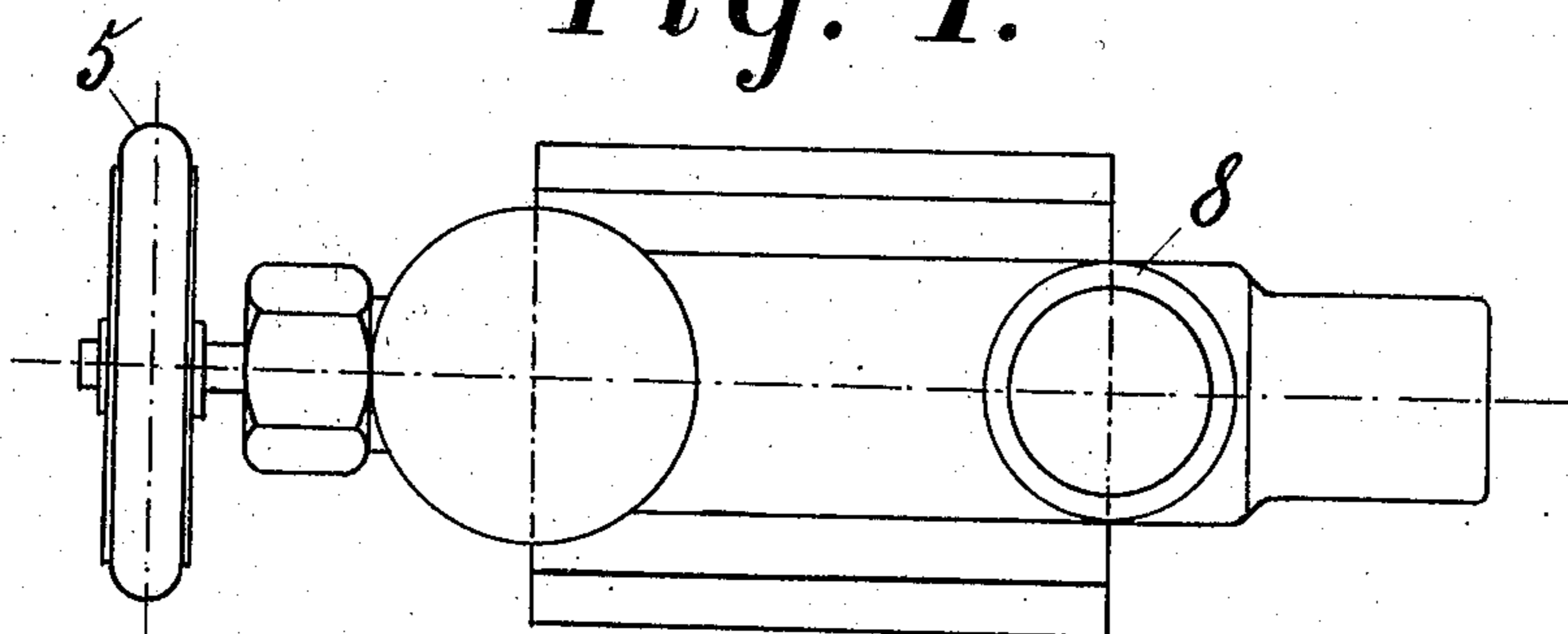
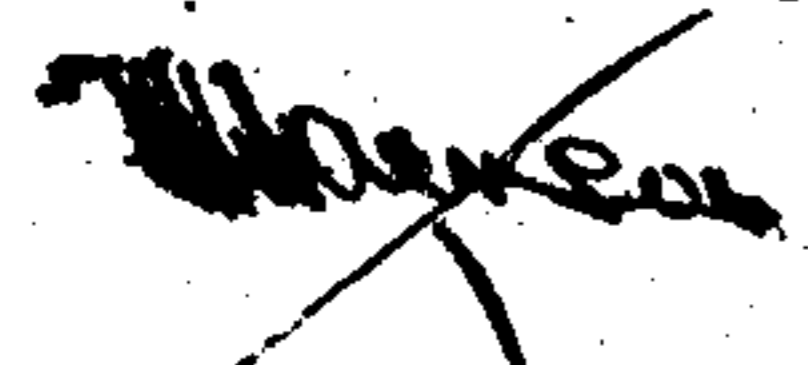


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JULIUS SCHIÖNNING, OF COPENHAGEN, DENMARK.

MACHINE FOR APPLYING GUM-LIQUID COATING TO COVERS.

No. 894,540.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed August 23, 1906. Serial No. 331,720.

To all whom it may concern:

Be it known that I, JULIUS SCHIÖNNING, citizen of Denmark, residing at Copenhagen, Denmark, have invented certain new and
5 useful Improvements in Machines for Applying Gum-Liquid Coating to Covers; and I do declare the following to be a full, clear, and exact description of the invention, such as
10 it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

15 This invention relates to a machine for applying gum-liquid or the like to covers, lids and the like, so as to establish an air-tight closure of tins for conserves, or for other purposes.

20 In the accompanying drawings:—Figure 1 is a side elevation of the machine, Fig. 2 is a front elevation thereof, Fig. 3 shows the gum-liquid applying-mechanism in longitudinal section; Fig. 4 is a plan of the same.
25 Fig. 5, is a detached top or plan view of the pawl, and, Figs. 6 and 7, are sectional views taken on the lines 6—6 and 7—7 of Fig. 3.

The machine consists chiefly of a frame or standard *a*, driving pulleys *b*, cord pulleys and
30 guide pulleys *c*, *d*, *e* and *f* for driving the vertical shaft *l* which has fixed upon it cord pulleys *g* and *h*. These latter pulleys drive the other movable parts of the machine through other cord pulleys *i* and *k* and endless cords. The
35 vertical shaft *l* is supported in the machine frame *a* and passes centrally through a revolving table *m* which is also supported by the machine *a*. The table *m* is rotated at intervals by means of a click pawl *s* connect-
40 ed to an eccentric or cam *t* and engaging the teeth of the ratchet-wheel *n*. The eccentric or cam is rotated by the shaft *l* through the bevel-wheels *o*, *p*, *q* and *r*. The circular table *m* is formed with a number of holes *u* adapted to
45 receive a lower rotating stamp or holder *v* which is elevated and lowered by means of the roller *w* and the cam *x*. This cam is fastened on the same shaft as that carrying the bevel-wheels *p* and *q*. The machine frame *a*
50 carries an arm *y* with a head *z* in which an upper stamp or holder 21 may move up and down and at the same time be rotated through the pulleys *k* and *h*. Beneath the arm *y* is situated the gum-liquid applying-
55 mechanism 22, which is adjustable in vertical

and horizontal directions by the screws 1 and 2.

The gum-liquid applying-mechanism is shown to a larger scale in Figs. 3 and 4; it comprises a shaft 3 with a screw-snail 4 and
60 a driving friction wheel 5 which rotates the shaft 3 when it touches the revolving stamp 21. The wheel 5 bears on the stamp 21 when the stamp *v*, with a lid 6 to which the gum-liquid is to be applied lying thereon, is ele-
65 vated so as to bear against the upper stamp and raise the same. The shaft 3 is supported in a casing 7 having a feeding tube 8 for the gum-liquid which is conveyed to the mouth-
70 piece 9 by means of the feed screw 4. In the mouth-piece 9 is arranged to work a stopper 10 the bearing shoulder 11 of which closes the outlet, a spring 12 being provided for keeping the stopper down. The upper part
75 of the stopper is formed with grooves 13 and the lower part with other grooves 14. The gum-liquid runs out through the grooves 13 and 14 when the stopper 10 is raised by the
lid 6. The machine frame *a* also carries a reservoir 15 for the gum-liquid in which
80 works a shaft 16 having blades 17 rotated in order to stir the gum-solution by means of the rope pulleys *i* and *g*. The shaft 16 is also furnished with a feed screw 18 encircled by an open cylinder 20 fastened within the
85 reservoir. By means of the screw the gum-liquid is raised to the feeding-tube 19 through which it descends to the gum-liquid applying mechanism always under the same amount
90 of pressure.

The machine works in the following manner:—The reservoir is charged with raw-gum, benzin or other dissolving-liquid, and other mixing-substances, which, by means of the stirring-mechanism are homogeneously
95 mixed. The tube 19 is then opened and the gum solution allowed to flow to the applying mechanism 22. The lids 6 to be gummed are then placed over the holes *u* in the table
100 *m* and are thereby carried successively between the stamps or holders *v* and 21. The stamp or holder *v* is raised and forces the lid 6 above it against the stamp or holder 21 which is thereby raised to such an extent that
105 its rotating upper surface comes in contact with the little wheel 5 of the applying-mechanism 22 and rotates the shaft 3. At the same time the edge of the raised lid 6 lifts the stopper 10 and the lid edge receives, while it is rotated, a certain portion of the gum solu- 110

tion. As the applying mechanism 22 and the wheel 5 are easily adjustable it is possible to readily regulate the amount of gum applied and also to apply the gum to lids of different sizes.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed I declare that what I claim is:—

1. In a machine of the type recited the combination of mechanism for applying gum liquid or the like, a reservoir for the gum liquid, an outlet pipe from the reservoir to the applying mechanism, a feed screw and its complemental open cylinder arranged within the reservoir, and means for rotating the feed screw, whereby the gum liquid is fed through the outlet pipe to the applying mechanism at substantially the same pressure.

2. In a machine of the type recited the combination of holders for rotating and raising and lowering the lids, gum liquid applying mechanism including the mouth piece and a stopper for opening and closing it, the mouth piece being arranged to contact with a lid, and means for adjustably supporting the applying mechanism in such a way that it can be moved in one direction for operation upon lids of different sizes and in another direction for regulating the gum feed, substantially as described.

3. In a machine of the type recited the combination of a revoluble table having openings therein for supporting lids, rotatable holders arranged above and below the ta-

ble and adapted to receive the lids carried thereby, means for raising and lowering the holders to lift the lids and rotate them clear of the table, mechanism for actuating said parts, gum liquid applying mechanism including a mouth piece and a stopper adapted to collide with the plate and be opened thereby, and means for feeding gum to said applying mechanism, substantially as described.

4. In a machine of the type recited the combination of means for elevating and lowering and rotating lids, gum applying mechanism including a mouth piece and a stopper arranged therein and in range of the lids and having lengthwise grooved cylindrical surfaces and a bearing shoulder for opening and closing the mouth piece, substantially as described.

5. In a machine of the type recited the combination of means for rotating and raising and lowering lids, a reservoir provided with an open cylinder and with a rotating feed screw arranged therein, gum liquid applying mechanism provided with a rotating feed screw and with a mouth piece, a pipe for conveying gum liquid from one feed screw to the other, and a normally closed nozzle for the mouth piece arranged to be opened by the raising and lowering of the lid, substantially as described.

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

JULIUS SCHIÖNNING.

Witnesses:

OSCAR ALSAE,

CHARLES EINERSEN.