

No. 843,101.

PATENTED FEB. 5, 1907.

H. P. ROBERTS.

DEVICE FOR MOISTENING AND DELIVERING GUMMED BINDING TAPE.

APPLICATION FILED JAN. 4, 1906.

2 SHEETS—SHEET 1.

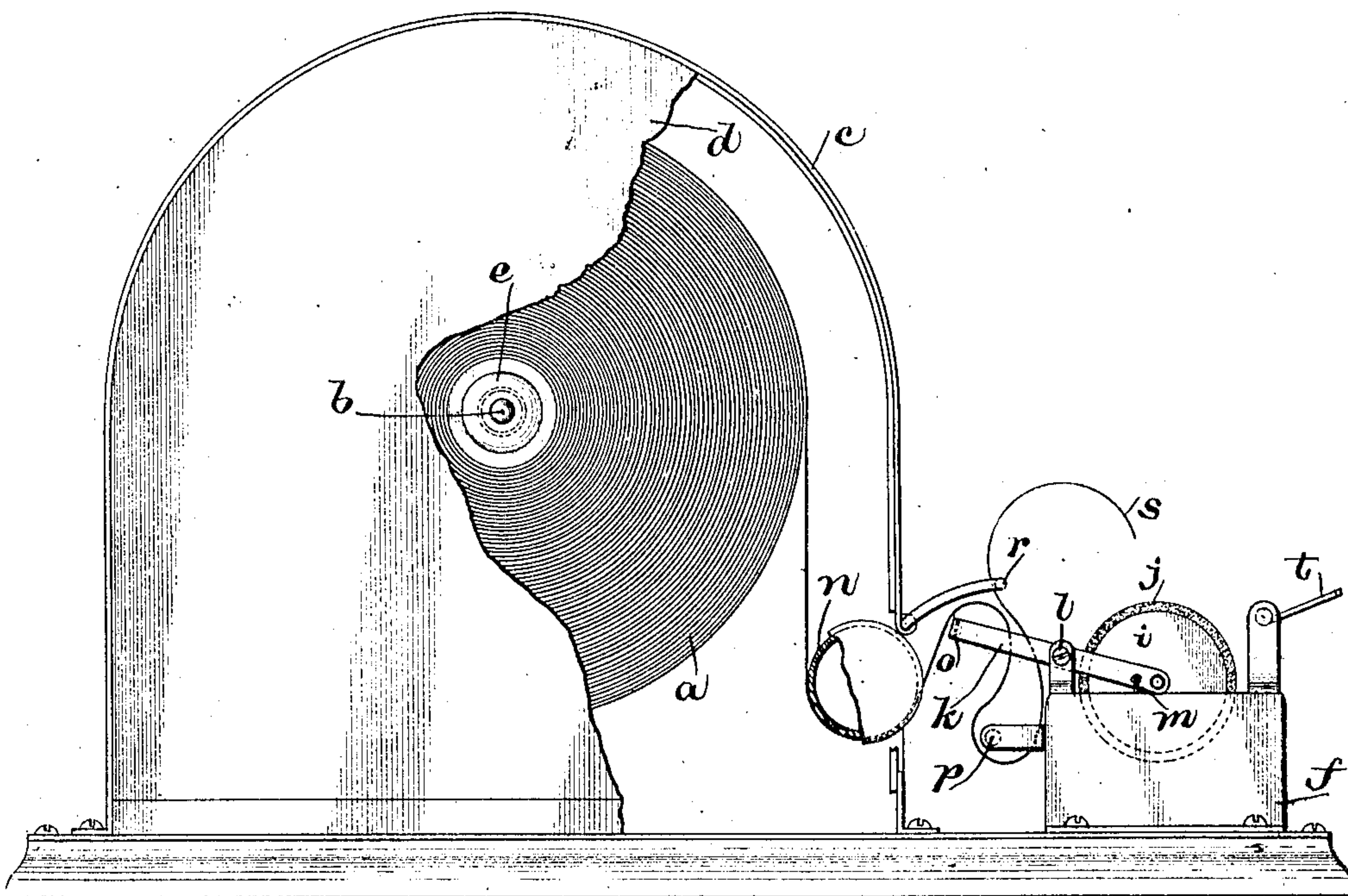


Fig. 1.

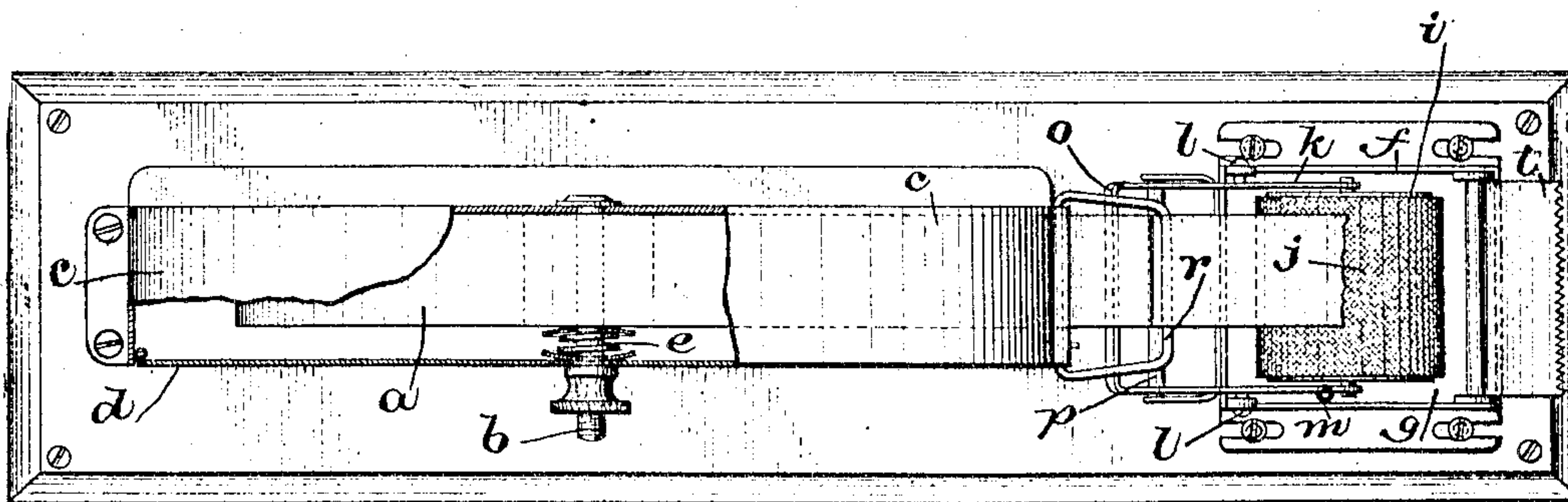


Fig. 2.

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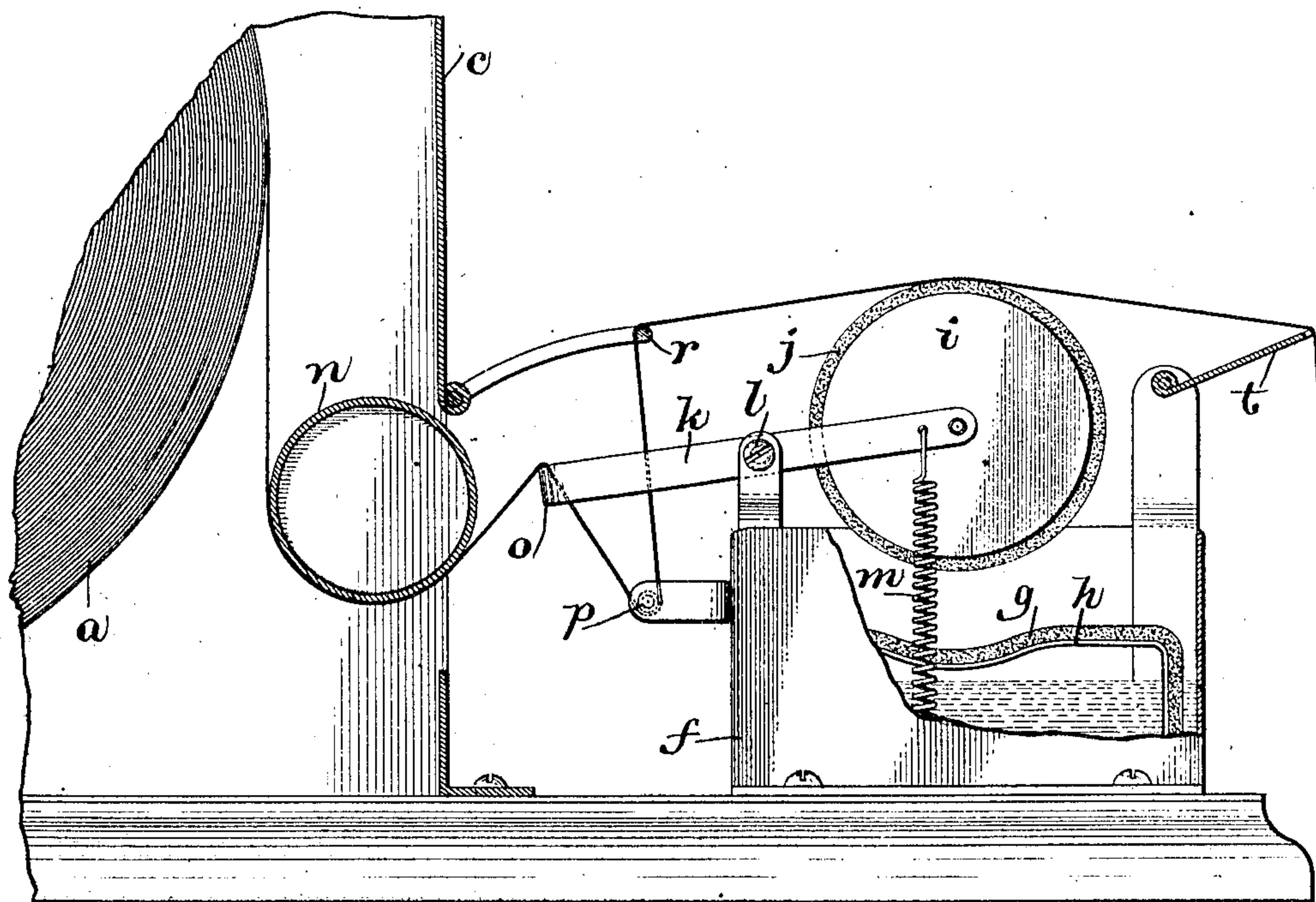


Fig. 3.

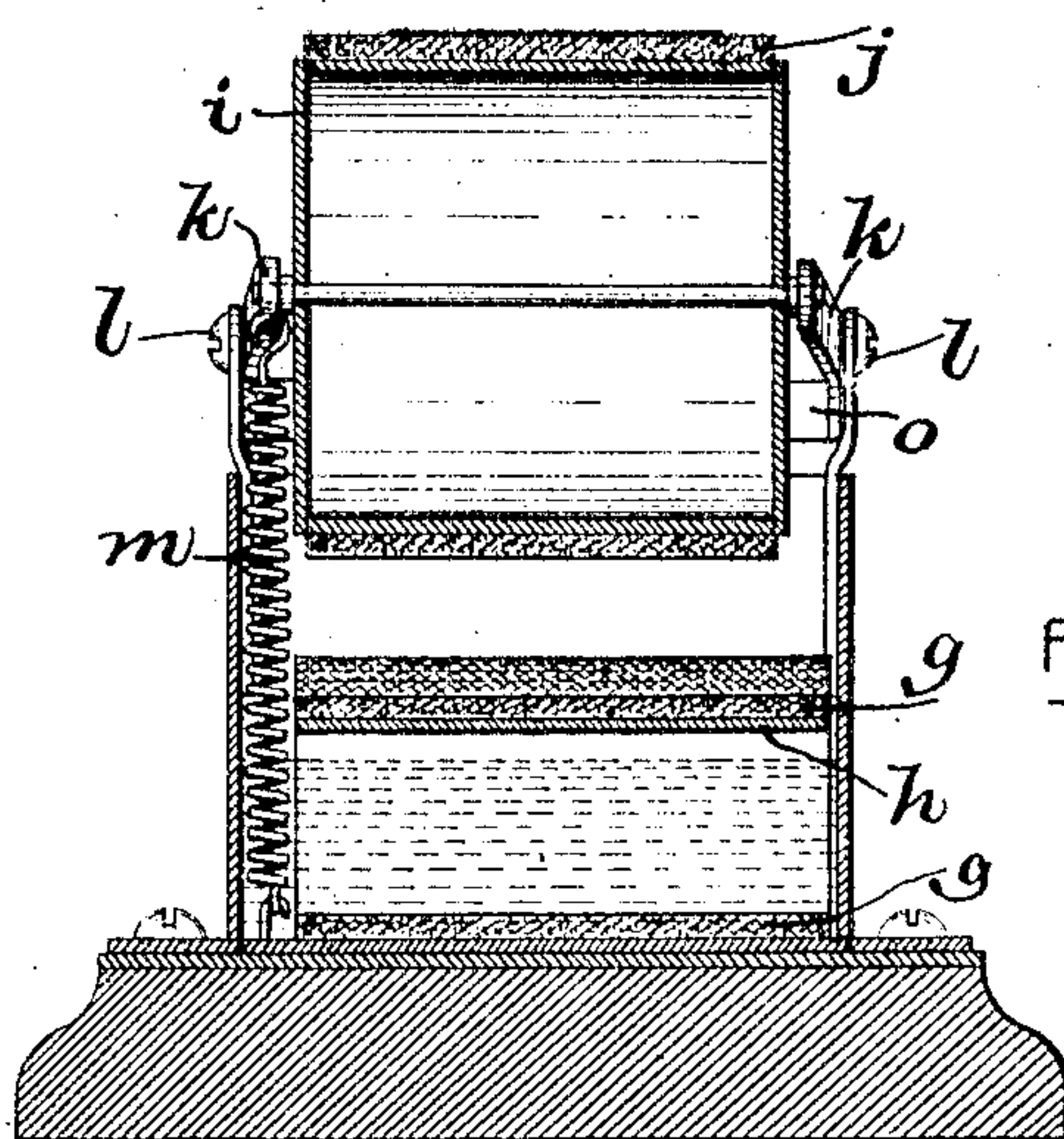


Fig. 4.

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UNITED STATES PATENT OFFICE.

HENRY P. ROBERTS, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO FREDERICK S. ANABLE, OF BOSTON, MASSACHUSETTS.

DEVICE FOR MOISTENING AND DELIVERING GUMMED BINDING-TAPE.

No. 843,101.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed January 4, 1906. Serial No. 294,645.

To all whom it may concern:

Be it known that I, HENRY P. ROBERTS, a citizen of the United States, residing in Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented certain new and useful Improvements in a Device for Moistening and Delivering Gummed Binding-Tape, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to devices for moistening and delivering gummed tape to be used to secure the wrappers of bundles and for other purposes.

Devices of this character have been in use for some time; but this invention differs in features of construction from such former devices, and it is believed the novel features render the device more generally available.

The drawings show, in Figure 1, a side elevation of my tape-moistener in normal position; Fig. 2, a plan of the machine; Fig. 3, a longitudinal sectional elevation of the moistening devices in action on a larger scale; Fig. 4, an enlarged cross-section of the machine through the moistening-roll, as in Fig. 3.

A roll of paper *a* is mounted on a drum or reel pivoted on the spindle *b*, which is secured, as by riveting, to the back of the casing *c*. The paper tape is gummed on one side before winding it into a roll. A face-plate, as *d*, covers the opening of the casing to protect the paper tape. To suitably restrain or retard motion of the roll of gummed tape, the tension device or frictional let-off *e* is provided, consisting of a spiral spring between two washers, one touching the drum carrying the paper tape and the other touching the face-plate *d*, sufficient tension being afforded by the thumb-screw threaded on the spindle *b* outside of the face-plate *d*, the thumb-screw holding the face-plate in position against the casing.

The pan *f* is placed in line with the casing *c* and is arranged to be adjusted at varying distances therefrom by means of set-screws in the base-plate of the machine and slots in flanged projections turned outward from the bottom of the pan. In the bottom of the pan a pad is arranged, consisting of the wicking *g*, covering the metal support *h*, and a sufficient quantity of water is put in the pan

to keep the wicking always wet. Upon this wet pad the roll *i* normally rests with its covering of wicking *j* in contact with the depressed portion of the pad. This pad constructed as described forms my preferred means of bringing the roll *i* into contact with the water in the pan *F*. This roll *i* is carried by a frame *k* of U-shape, the roll being pivoted at one end of the frame and the frame pivoted about centrally at *l* to the pan *f*. If the weight of the roll *i* is not sufficient to keep it in proper position to be moistened, a spring *m*, attached to the pan and connected with the tilting frame *k*, may be employed in addition to accomplish this purpose.

The tape is led from the reel with its gummed side down under the guide *n*, fixed to the casing *c*, up over the rear member *o* of the U-shaped frame *k*, next down around the rod *p*, which is permanently attached to the pan *f*, and then up over the bracket *r*, which is fastened generally in a fixed position to the casing *c*, although in some cases this bracket may with advantage be provided with adjustments so it may be varied in position with relation to the positions of the roll *i*.

It will be noticed that the end *o* of the U-shaped carrying-frame *k* is placed within a bight of the tape extending from fixed guides about which guides the tape must pass when pulled from the drum. This arrangement insures when the tension *e* is properly adjusted the prompt lifting of the moistening-roll at the outer end of the carrying-frame into contact with the gummed side of the tape when the tape is pulled, the immediate fall of the moistening-roll clear of the tape when the pull on the tape decreases or ceases and the certain withdrawal of the tape when severed to a position clear of the moistening-roll, so the free end of the tape may be dry for the convenience of the user. Ordinarily the end of the tape hangs loosely from the bracket *r* and if a piece of tape is required the loose end *s* is grasped and pulled abruptly forward over and in line with the edge of the cutter *t*, this edge of the cutter serving as a forward guide to position the tape for moistening. This sudden pull on the tape depresses the end *o* of the frame *k* and causes the roll *i* to rise and touch the gum on the tape, rendering it adhesive. When, or shortly before suf-

ficient tape has been pulled past the serrated
 edge of the cutter *t*, the pull is lessened on the
 tape and the roll drops away from the tape,
 leaving the tape between the bracket *r* and
 5 the cutter *t* dry. Then a sharp downward
 jerk over the edge of the cutter severs the
 tape, and the frame *k*, actuated by the mois-
 tening-roll, takes up the slack of the tape, and
 the end *s* of the tape takes the position clear
 10 of the moist roll illustrated at Fig. 1. It is
 not necessary to pull abruptly at first on the
 tape, as, if the tension at *e* of the drum carry-
 ing the tape is well adjusted, the roll will rise
 when the tape is pulled, and a slight decrease
 15 in the pull will allow it to drop away from the
 tape.

I claim—

1. In a tape-moistener, a holder for a
 gummed roll of tape, an adjustable tension
 20 device restraining rotation of the roll of tape,
 a series of fixed guides for the tape in its line
 of feed, a pan, a wet pad in the pan, a carry-
 ing-frame pivoted on the pan, a moistening-
 roll normally resting on the pad pivoted at
 25 one end of the carrying-frame, a bight of the
 tape leading from a fixed guide, passing over
 the opposite end of the carrying-frame and
 leading to another fixed guide, a bracket to
 hold the tape normally clear of the moisten-
 30 ing-roll, and a cutter to position the tape
 above the roll and to sever the tape when
 moistened, substantially as described.

2. In a tape-moistener, the combination
 with a pan, a wet pad in the pan, and a mois-
 35 tening-roll yieldingly pressed against the pad,
 of devices to support gummed tape above the
 moistening-roll, and means to move the roll
 from the wet pad into contact with the
 gummed side of the tape, substantially as
 40 described.

3. In a tape-moistener, a pan containing a
 wet pad, and a moistening-roll in yielding
 contact with the pad, combined with devices
 to guide and support a strip of gummed tape,
 45 and means to remove the moistening-roll
 from the pad to touch the said roll to the tape
 when the tape is pulled; substantially as de-
 scribed.

4. In a tape-moistener, in combination,
 50 means for restraining, directing, and position-
 ing a strip of gummed tape, a movable mois-
 tening-roll, and means actuated by said roll
 for separating the end of the tape and the
 surface of the roll after the tape has been fed
 55 and severed.

5. In a tape-moistener, the combination
 with means to restrain, guide, and position a
 strip of gummed tape, of a movable moisten-
 ing-roll, and mechanism connecting the tape
 60 with the roll, such that varying feeling stress
 in the tape will change the position of the
 moistening-roll with relation to the tape, sub-
 stantially as described.

6. A tape-moistener comprising tape-sup-
 65 plying mechanism; tape-moistening mechan-

ism normally in tape-receiving relation but
 movable into tape-moistening relation, tape-
 operating mechanism for said tape-moisten-
 ing mechanism and guiding provisions to di-
 rect the tape from its engaging relation with
 said operating mechanism in a substantially
 70 vertical path, thereby to impart a substan-
 tially vertical pull upon the said operating
 mechanism.

7. A tape-moistener comprising tape-sup- 75
 plying mechanism, tape-tensioning mechan-
 ism, tape-moistening mechanism normally in
 moisture-receiving relation but movable into
 tape-moistening relation, tape-operating
 mechanism for said tape-moistening mech- 80
 anism, and guiding provisions to direct the
 tape from its engaging relation with said op-
 erating mechanism in a substantially vertical
 path, thereby to impart a substantially ver-
 tical pull upon the said operating mechan- 85
 ism.

8. A tape-moistener comprising tape-sup-
 plying mechanism, a tape-moistening roll
 normally in moisture-receiving relation but
 movable into tape-moistening relation, tape- 90
 operating mechanism for said tape-moisten-
 ing roll and guiding provisions to direct the
 tape from its engaging relation with said op-
 erating mechanism in a substantially vertical
 path, thereby to impart a substantially ver- 95
 tical pull upon said operating mechanism.

9. A tape-moistener comprising tape-sup-
 plying mechanism, tape-moistening mechan-
 ism normally in moisture-receiving rela- 100
 tion, tape-operating mechanism for said tape-
 moistening mechanism and tape-guiding
 means disposed in relation to said operating
 mechanism to permit engagement of said op-
 erating mechanism by a vertically-disposed 105
 bight of tape looped about said operating
 mechanism, whereby a substantially vertical
 pull is exerted upon said operating mechan-
 ism.

10. A tape-moistener comprising tape-sup- 110
 plying mechanism, tape-tensioning means,
 tape-moistening mechanism normally in
 moisture-receiving relation but movable into
 tape-moistening relation, tape-operating
 mechanism for said tape-moistening mech- 115
 anism and tape-guiding means disposed in
 relation to said operating mechanism to per-
 mit engagement of said operating mechan-
 ism by a vertically-disposed bight of tape
 looped about said operating mechanism, 120
 whereby a substantially vertical pull is ex-
 erted upon said operating mechanism.

11. A tape-moistener comprising a tape-
 supplying mechanism, a tape-moistening roll
 normally in moisture-receiving relation but 125
 movable into tape-moistening relation, a le-
 ver supporting said roll and adapted to move
 the same and tape-guiding means disposed in
 relation to said lever to permit of engage-
 ment of said lever by a vertically-disposed 130

bight of tape looped thereabout, whereby a substantially vertical pull is exerted upon said operating mechanism.

12. A tape-moistener comprising tape-supplying mechanism, tape-moistening mechanism normally in moisture-receiving relation but movable into tape-moistening relation, operating mechanism for said tape-moistening mechanism and tape-guiding means in the rear of and in advance of the tape-moistening mechanism to position the tape for moistening.

13. A tape-moistener comprising tape-supplying mechanism, tape-moistening mechanism normally in moisture-receiving relation but movable into tape-moistening relation, operating mechanism for said tape-moistening mechanism and tape-guiding means located below and above said operating mechanism and means to guide the tape into engagement with said operating mechanism.

14. A tape-moistener comprising tape-supplying mechanism, a tape-moistening roll normally in moisture-receiving relation but movable into tape-moistening relation, a lever supporting said moistening-roll, tape-guiding means located below and above said operating-lever and means to guide the tape into engagement with said lever.

15. A tape-moistener comprising tape-supplying mechanism, tape-moistening mechanism normally in moisture-receiving relation but movable into tape-moistening relation, operating mechanism for said tape-moisten-

ing mechanism, tape-guiding means disposed in relation to said operating mechanism to permit engagement of said operating mechanism by a vertically-disposed bight of tape looped about said operating mechanism, and guiding means to lead said tape from said bight-forming guiding means in a vertical path.

16. In an apparatus of the character specified a tank or reservoir, a moistening device normally in moisture-receiving relation thereto, strip-guiding means and means controlled by the draft of the strip for use to move said moistening device bodily out of moisture-receiving position into strip-moistening relation.

17. A tape-moistener comprising tape-supplying mechanism, tape-moistening mechanism normally in moisture-receiving relation but movable into tape-moistening relation, operating mechanism for said tape-moistening mechanism, tape-guiding means in the rear of said tape-moistening mechanism and combined tape-guiding and severing means in advance of the tape-moistening mechanism, said guiding means acting to position the tape for moistening.

In testimony whereof I have subscribed my name to this specification in the presence of two subscribing witnesses.

HENRY P. ROBERTS.

Witnesses:

GEORGE W. JACKSON,
CHAS. F. HOWE.