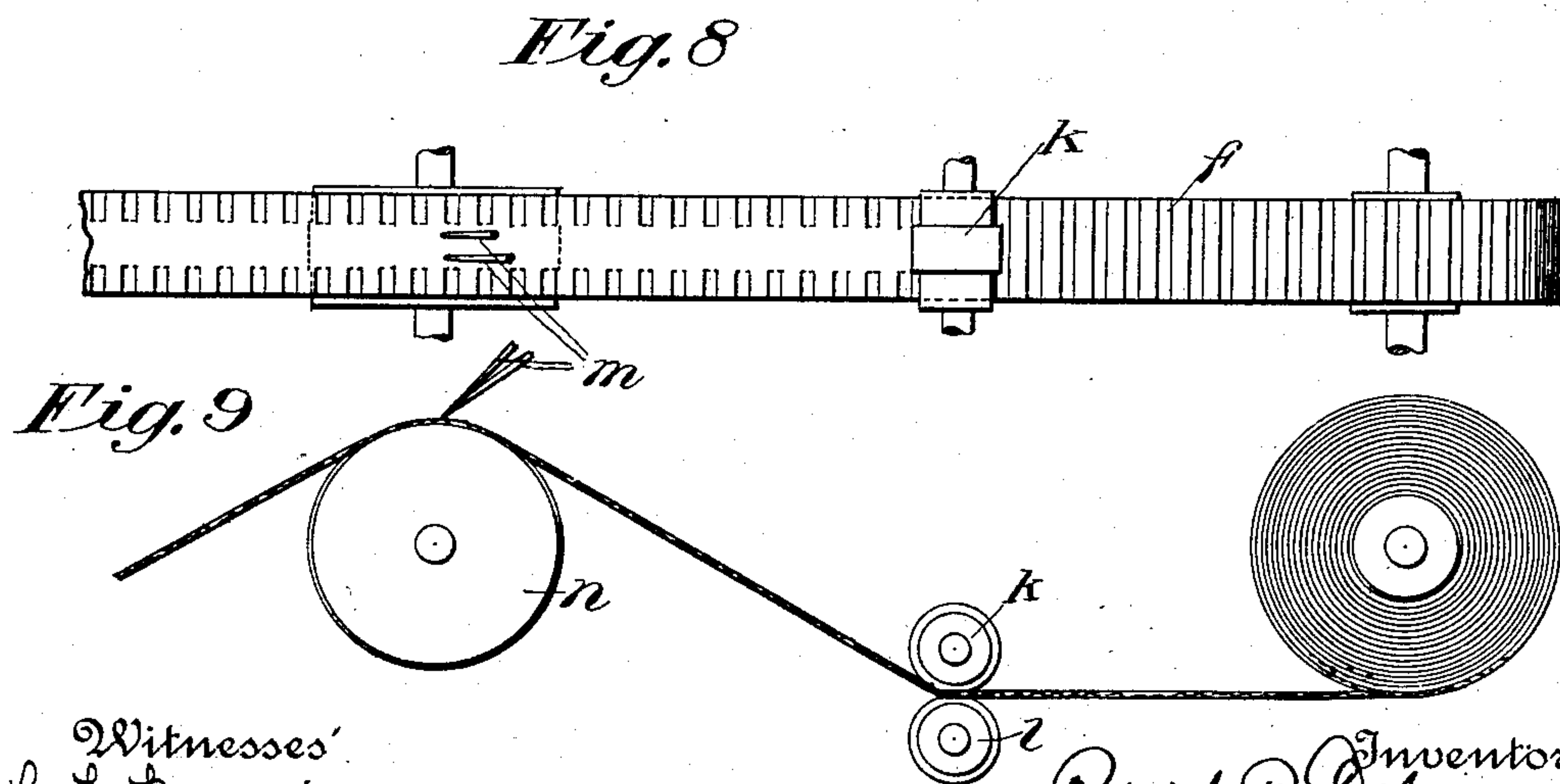
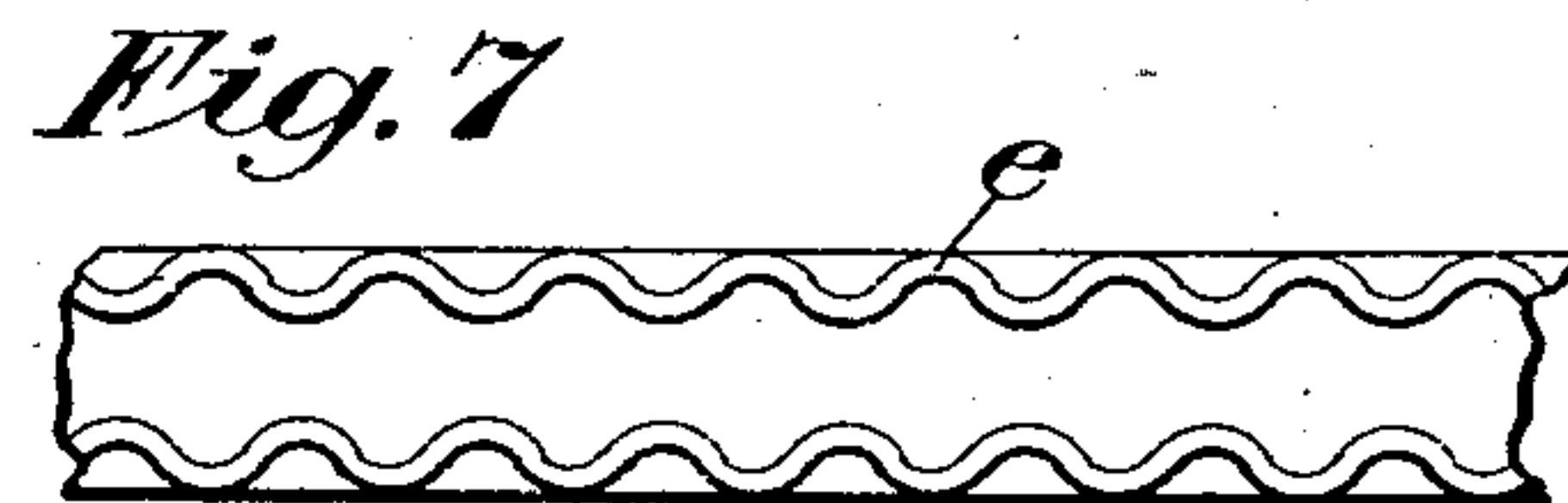
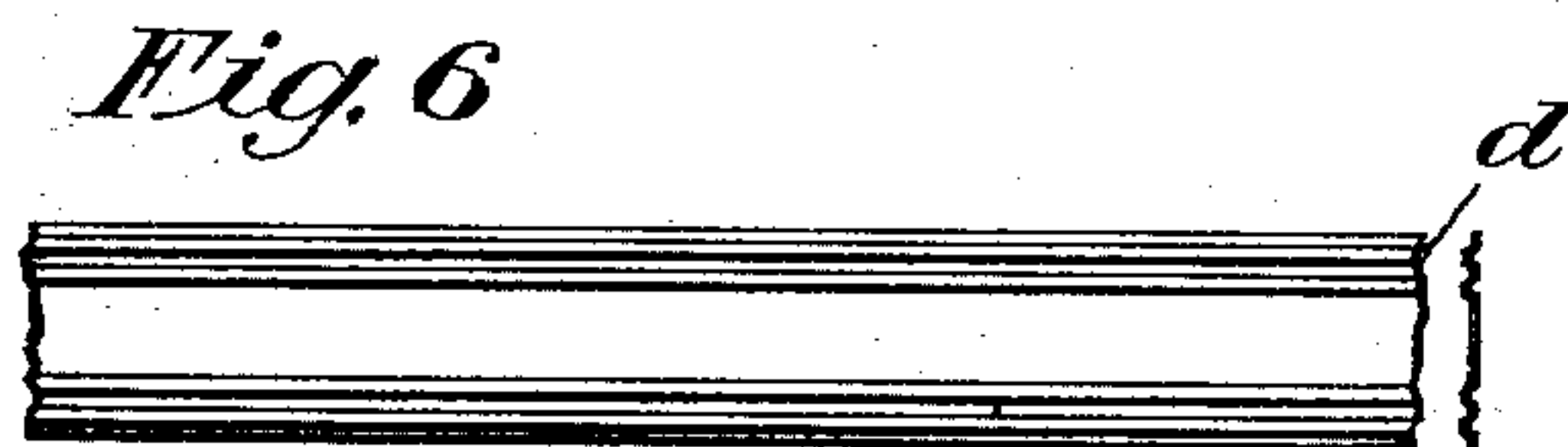
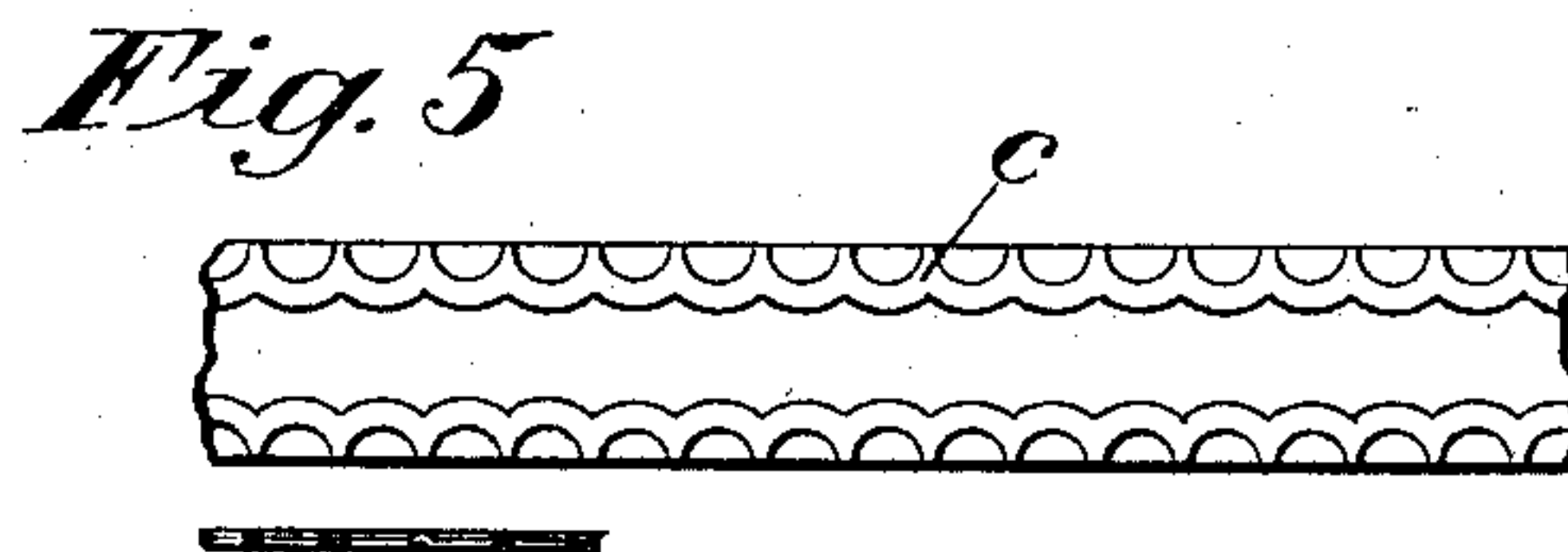
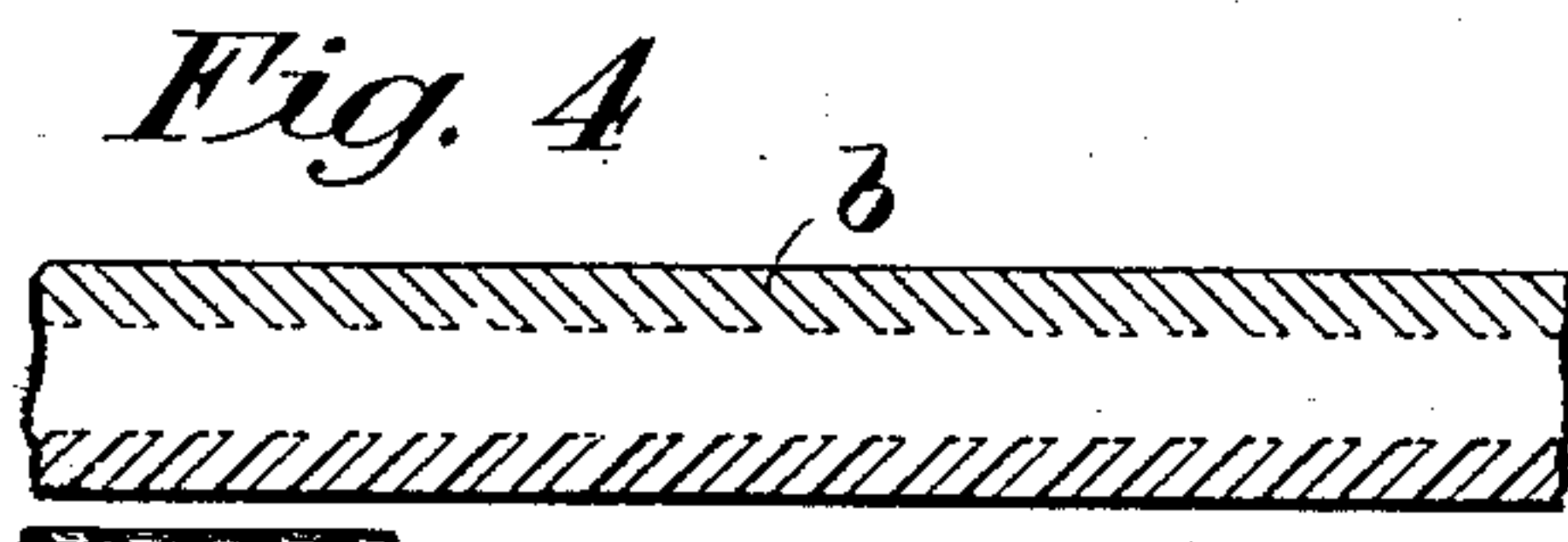
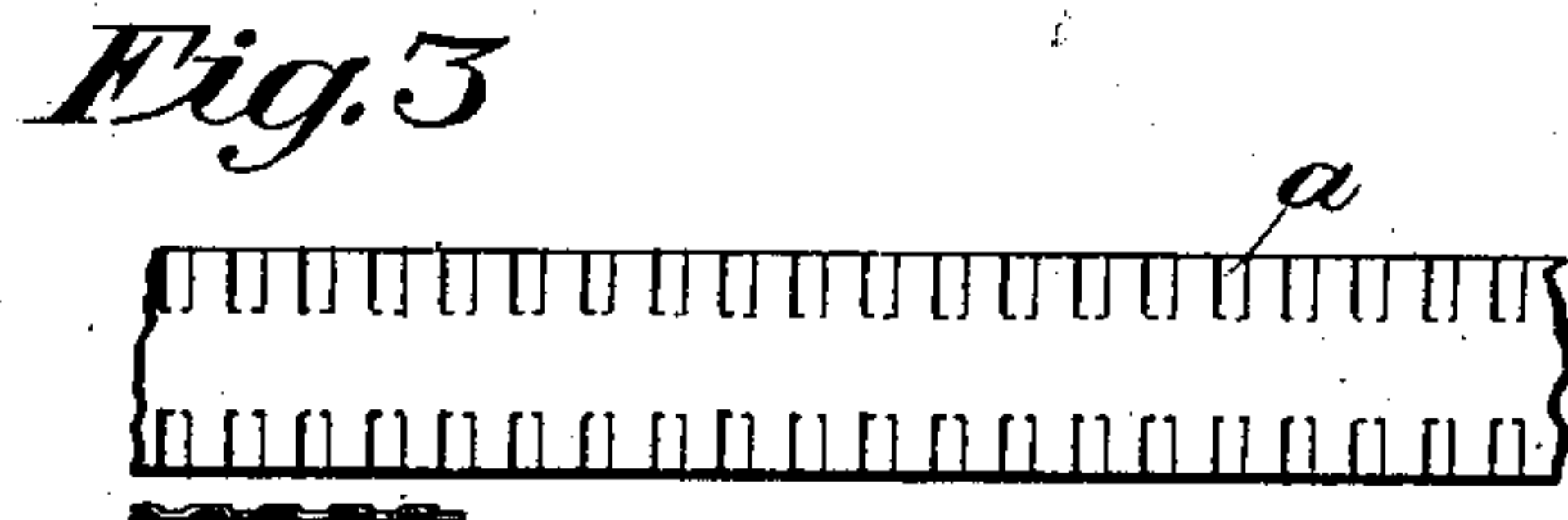
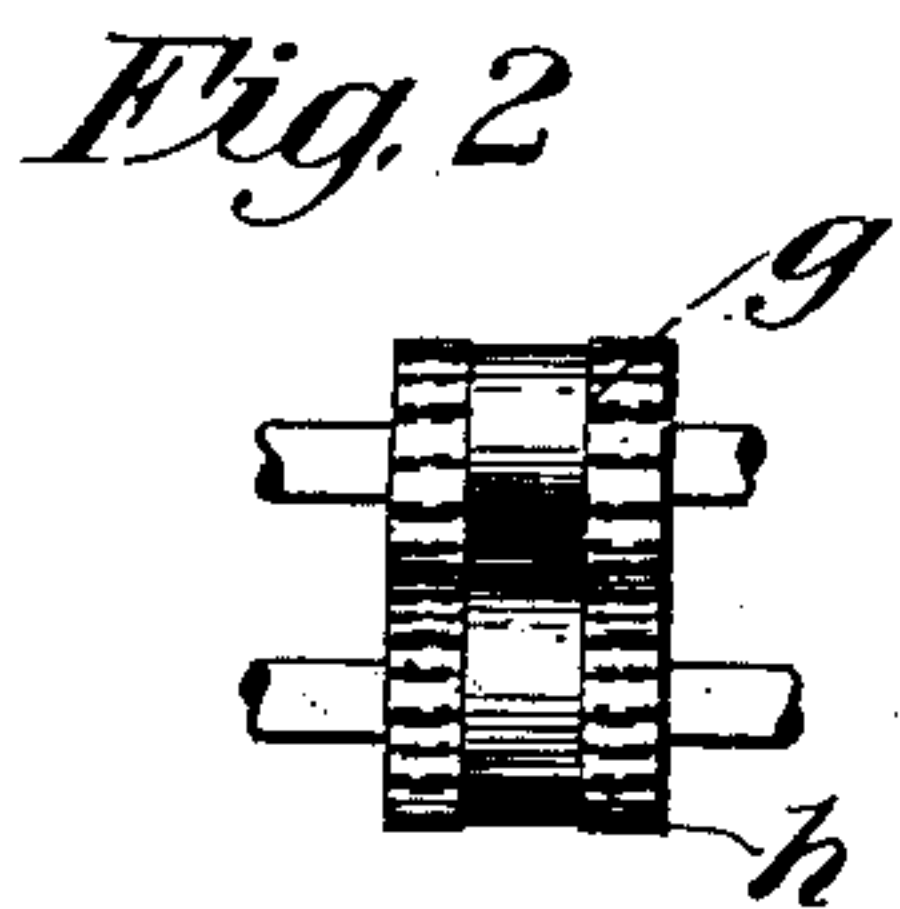
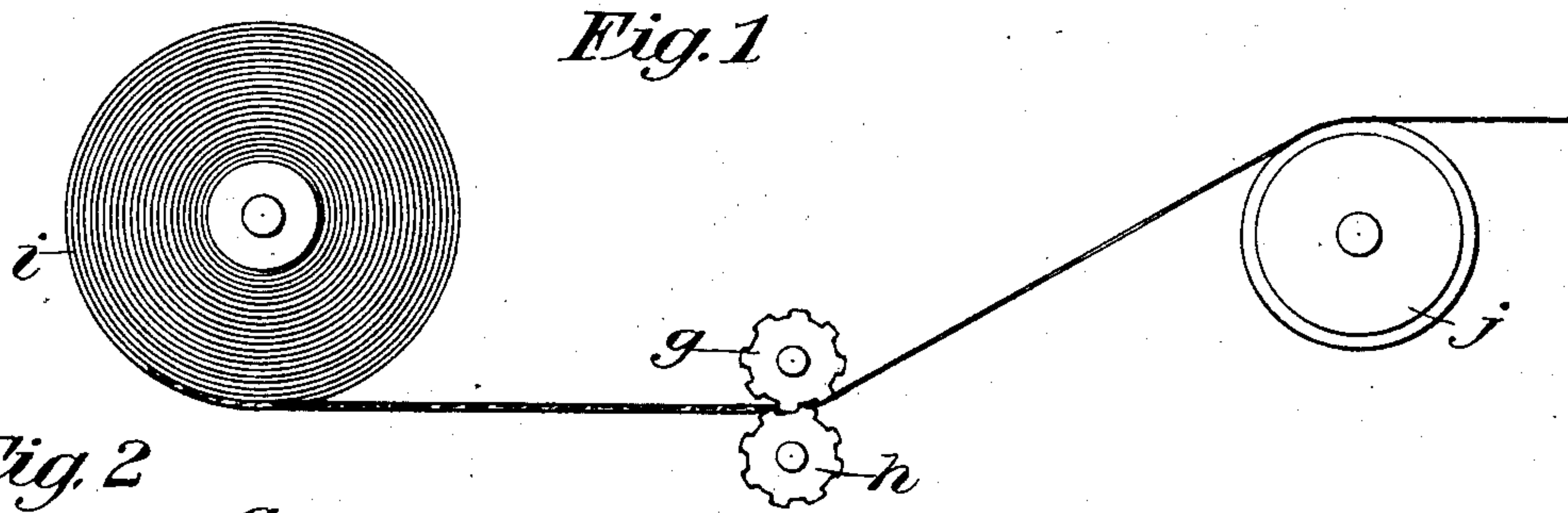


P. B. DELANY.
RECEIVING TAPE FOR CHEMICAL TELEGRAPHS.

APPLICATION FILED MAY 29, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

PATRICK B. DELANY, OF SOUTH ORANGE, NEW JERSEY.

RECEIVING-TAPE FOR CHEMICAL TELEGRAPHS.

SPECIFICATION forming part of Letters Patent No. 720,233, dated February 10, 1903.

Application filed May 29, 1902. Serial No. 109,536. (No model.)

To all whom it may concern:

Be it known that I, PATRICK B. DELANY, a citizen of the United States, residing at South Orange, county of Essex, State of New Jersey, have invented a certain new and useful Improved Receiving-Tape for Chemical Telegraphs, of which the following is a specification.

Heretofore rolls of receiving-tape have of necessity been loosely wound to permit proper saturation by the chemical solution. This involved considerable care and labor and limited their permissible size, because of difficulty of handling and shipment without derangement. It is, moreover, well known that if the tape is tightly wound the rolls are liable to burst by reason of expansion due to absorption of the solution. I have discovered that by corrugating the tape the rolls may be wound under suitable tension—i. e., tightly wound—so as to be compact or relatively stable, so that not only may their size be increased, but they may be handled freely without fear of disturbing the winding or the coil, whereas corrugations permit ready access of the bath for proper saturation and at the same time compensate expansion because of absorption of the solution.

Figure 1 is a diagrammatic view, in side elevation, showing a roll of paper that has passed through crimping-rolls and thence to cutters for cutting it into strips or tapes. Fig. 2 is an elevation showing one form of a crimping-roll that may be employed. Figs. 3, 4, 5, 6, and 7 show sections of tape with different styles of crimpings or corrugations. Fig. 8 and Fig. 9 show, respectively in plan and side elevation, an arrangement in which a tape corrugated transversely its full width is passed between smoothing-rolls before it passes under the recording-fingers. Fig. 3 shows corrugations *a* at right angles to the length of the tape and at each edge thereof and respectively of a length to approximately equal one-third of the width of the tape. Fig. 4 shows corrugations *b* obliquely disposed, and in Fig. 5 scallop-like corrugations *c* are shown. Fig. 6 shows longitudinal corrugations *d*, and Fig. 7 shows longitudinally-disposed but sinuously-curved corrugations *e*, while Fig. 8 shows transverse corrugations *f*, extending entirely across the tape.

One style of rolls that may be employed to form the corrugations or crimpings, such as shown in Fig. 3, is disclosed in Fig. 2, where- in *g* and *h* are the paste-rolls.

Fig. 1 shows a roll of paper *i* of indefinite width, from which the paper web passes between an appropriate number of corrugating-rolls, such as shown in Fig. 2, from whence it passes to a series of circular rotary cutters *j* for dividing it into strips or tapes, such as are shown in Fig. 3. Where the corrugations are disposed entirely across the tape, the tape may be passed between the smoothing-rolls *k l* and thence under the recording-fingers *m* and over the recording-drum *n*. The smoothing-surfaces of the rolls *k l* may be as wide or wider than the tape, so that the entire tape will be flattened, or they may be of such dimensions that only the central part of the tape, which passes under the recording-fingers, is smoothed or flattened. This smoothing of the tape may be readily accomplished in this way, as it is of course quite damp with the chemical bath. Of course in all the other forms of tapes illustrated the recording-finger runs upon a smooth central portion of the tape. The use of smoothing-rolls is optional.

I have found that expansion of the tape due to absorption of the solution largely or sufficiently eliminates the corrugations. I am inclined to prefer the use of the tape in which the corrugations extend entirely across it.

I claim as my invention—

1. A recording-tape for chemical telegraphs having regularly-arranged corrugations for the purpose set forth.
2. A recording-tape for chemical telegraphs having corrugations extending from its edges inwardly.
3. A recording-tape for chemical telegraphs having corrugations extending transversely across it.

In testimony whereof I have hereunto subscribed my name.

PATRICK B. DELANY.

Witnesses:

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IRA T. REDFERN.