

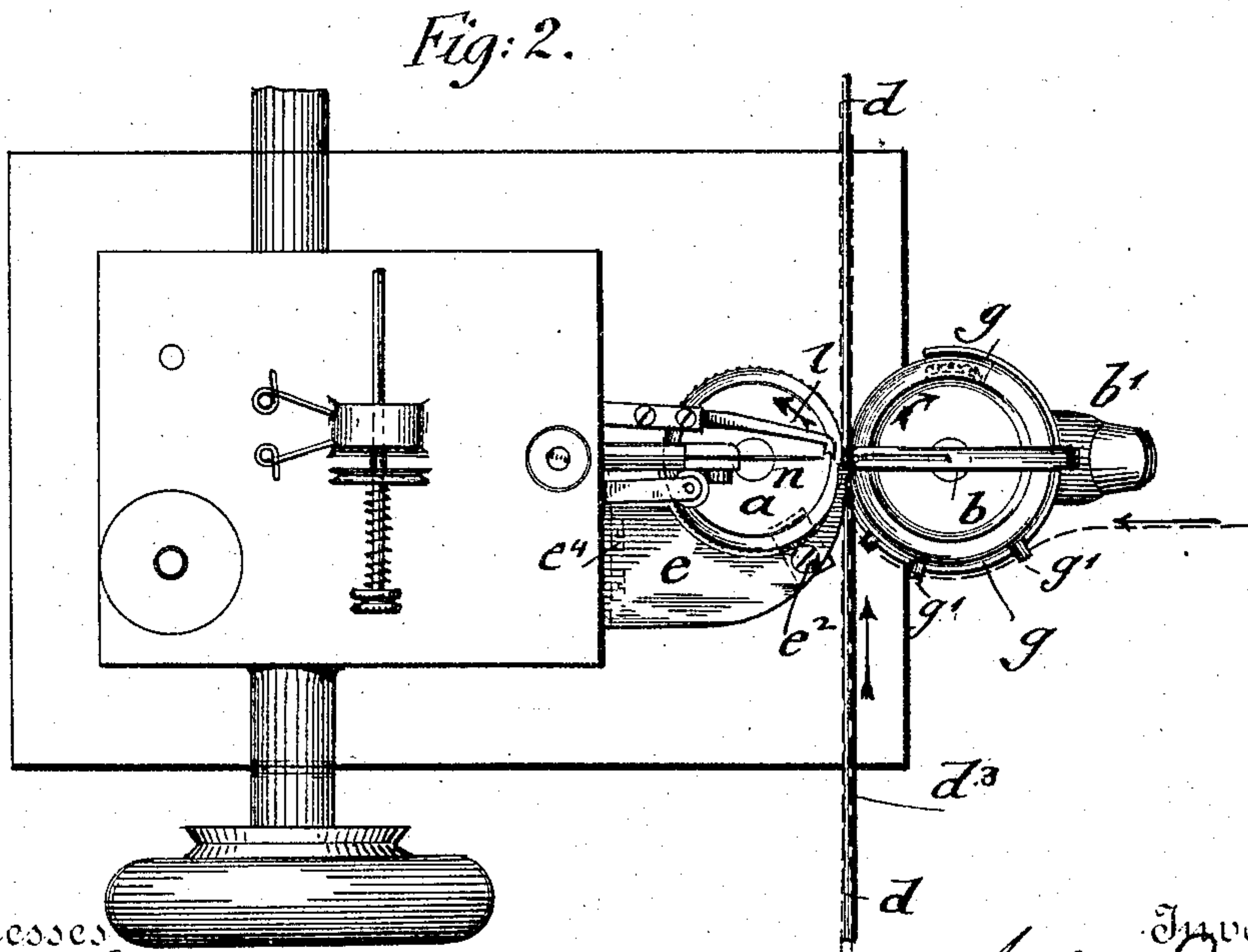
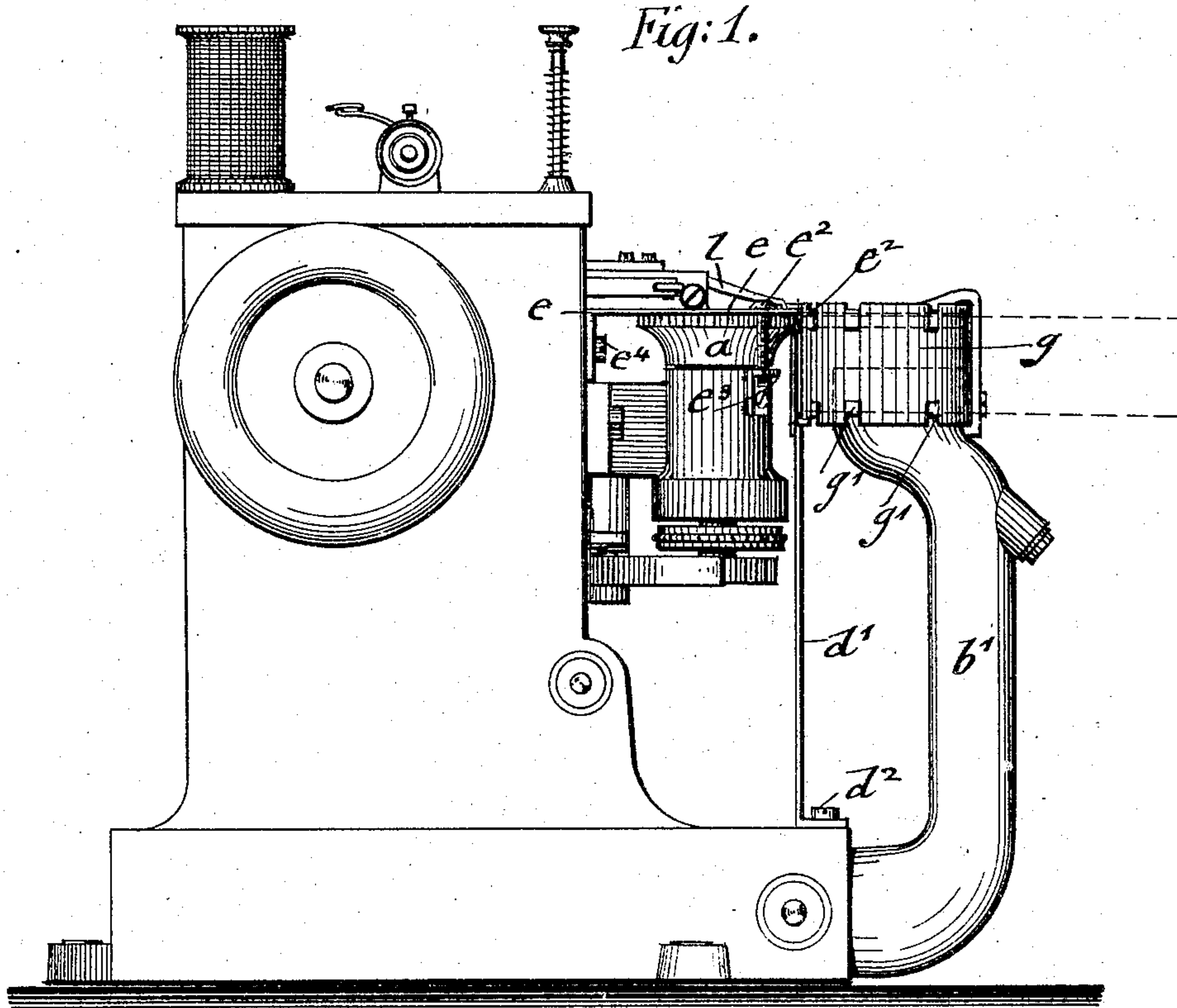
No. 772,044.

PATENTED OCT. 11, 1904.

A. E. LINDNER.
GLOVE SEWING MACHINE.
APPLICATION FILED APR. 7, 1904.

NC MODEL.

3 SHEETS--SHEET 1.



Witnesses
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By *his* Attorneys *Arthur E. Liedner*
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3 SHEETS—SHEET 2.

Fig: 3.

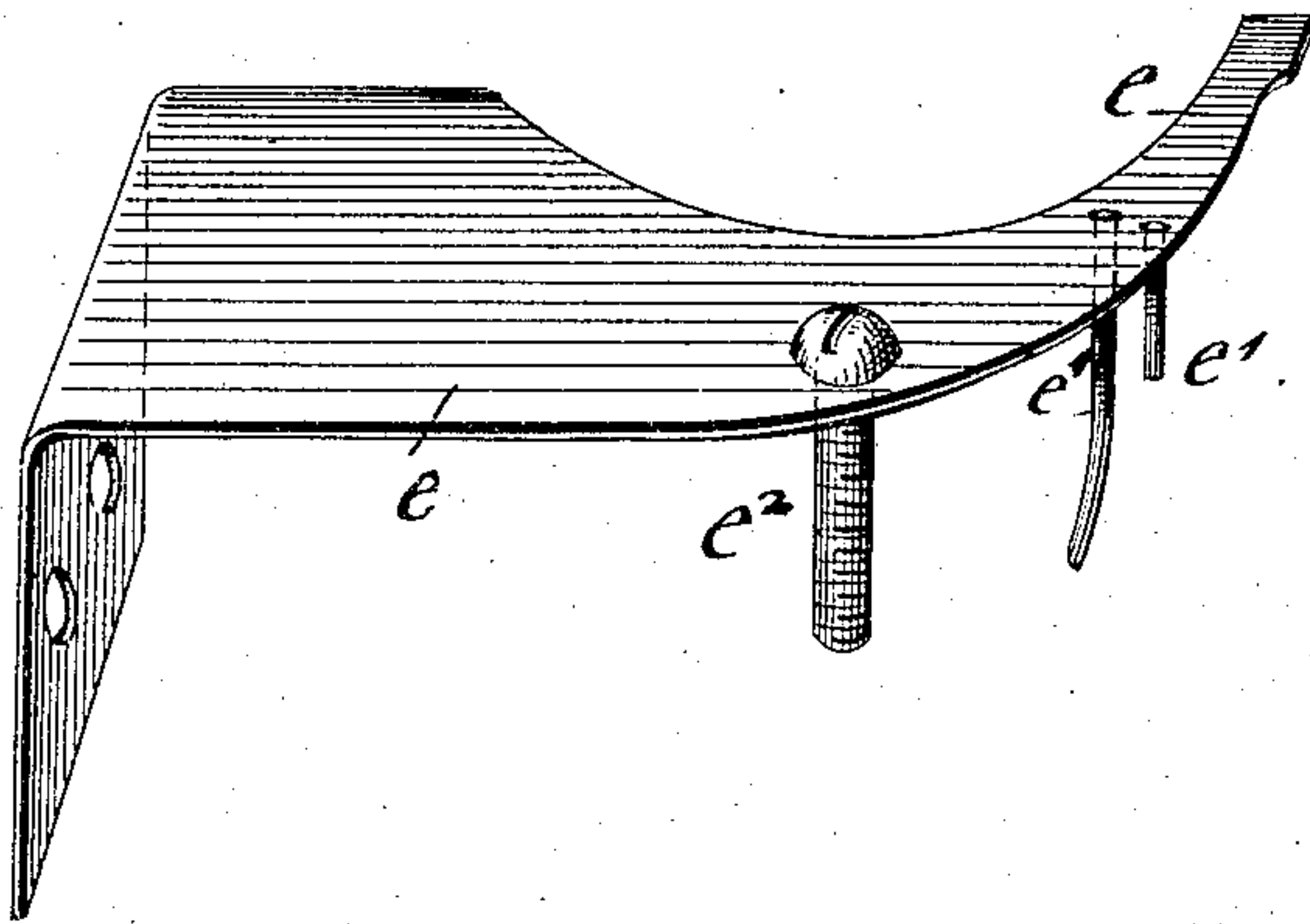
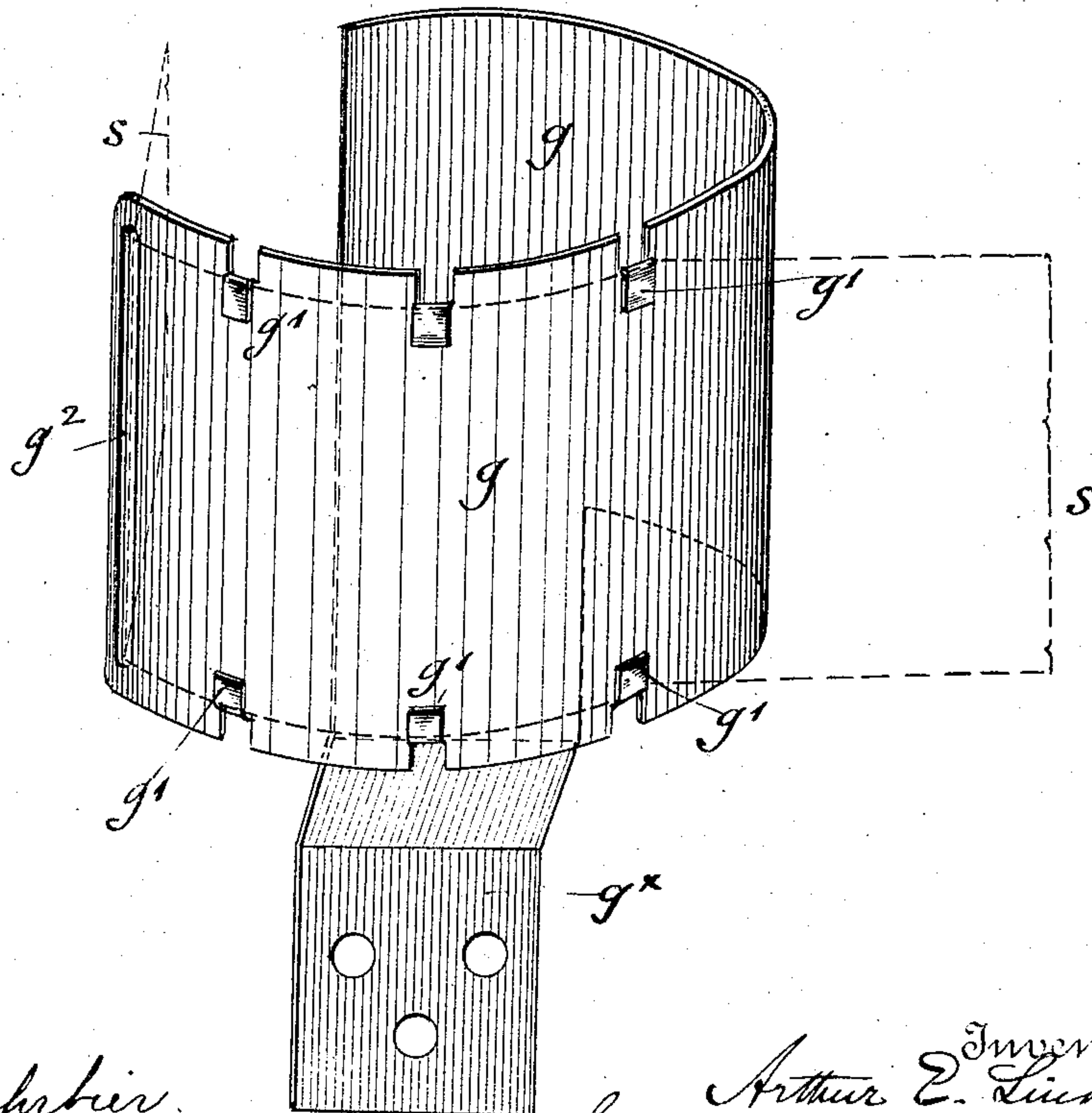


Fig: 4.



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3 SHEETS—SHEET 3.

Fig. 5.

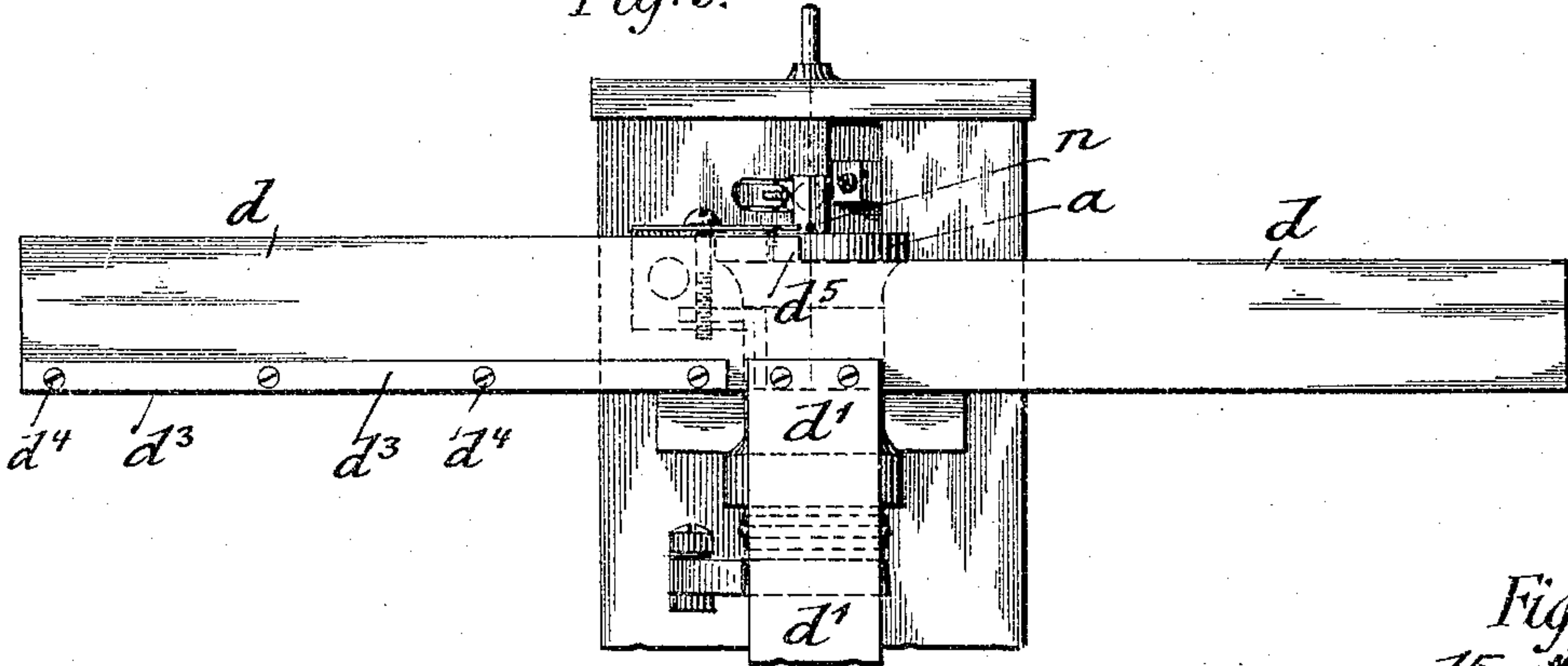


Fig. 6.

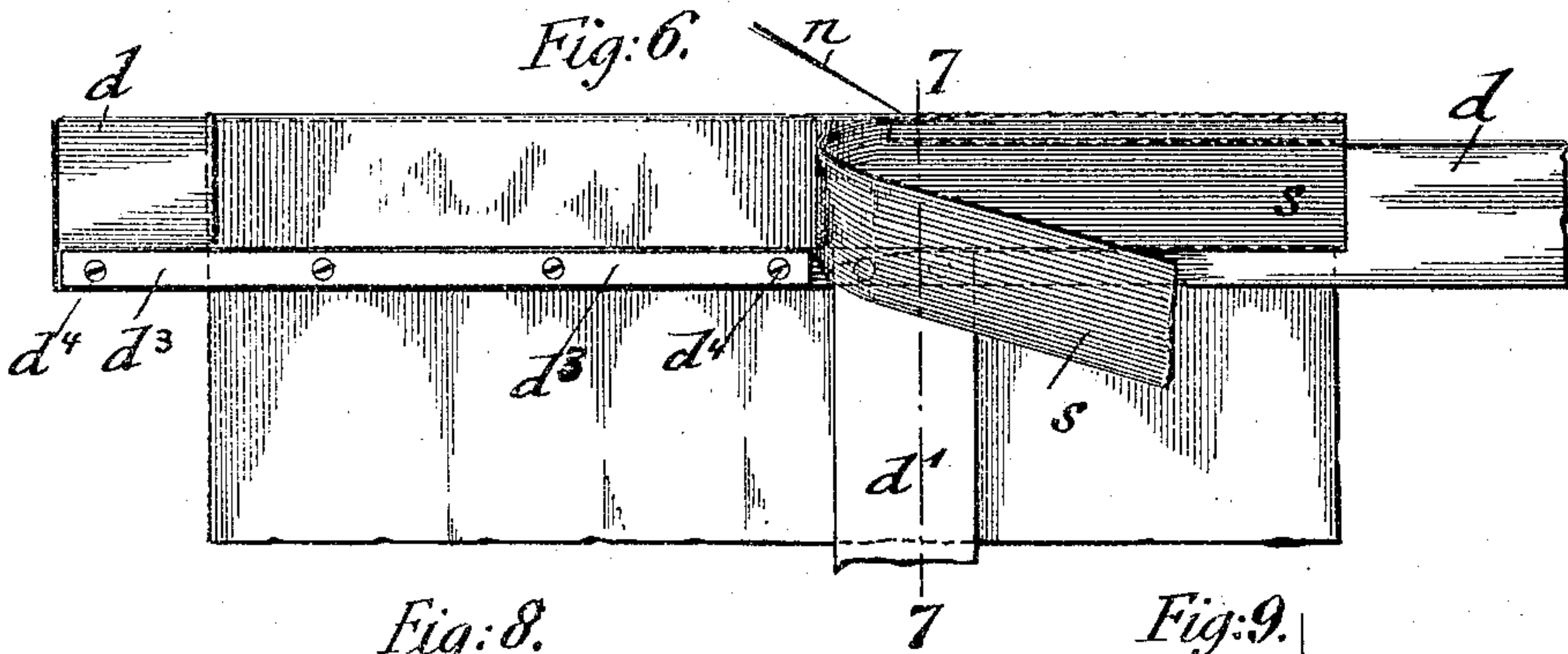


Fig. 7.

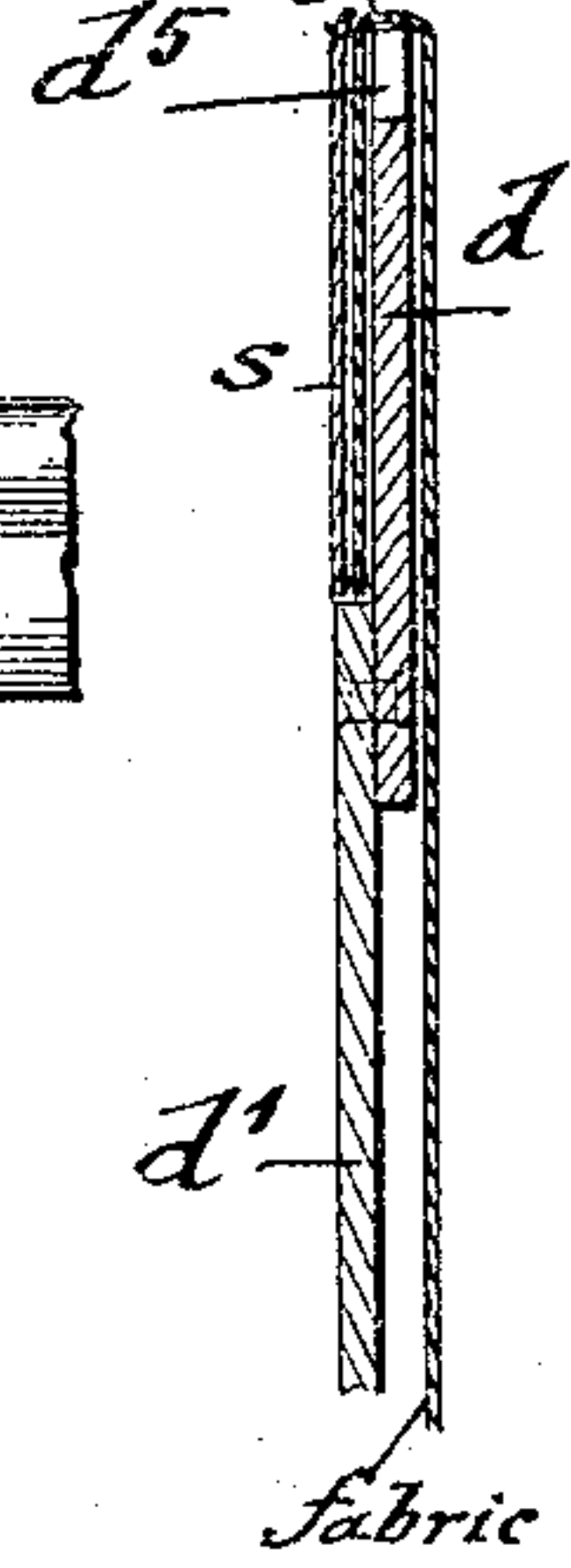


Fig. 8.

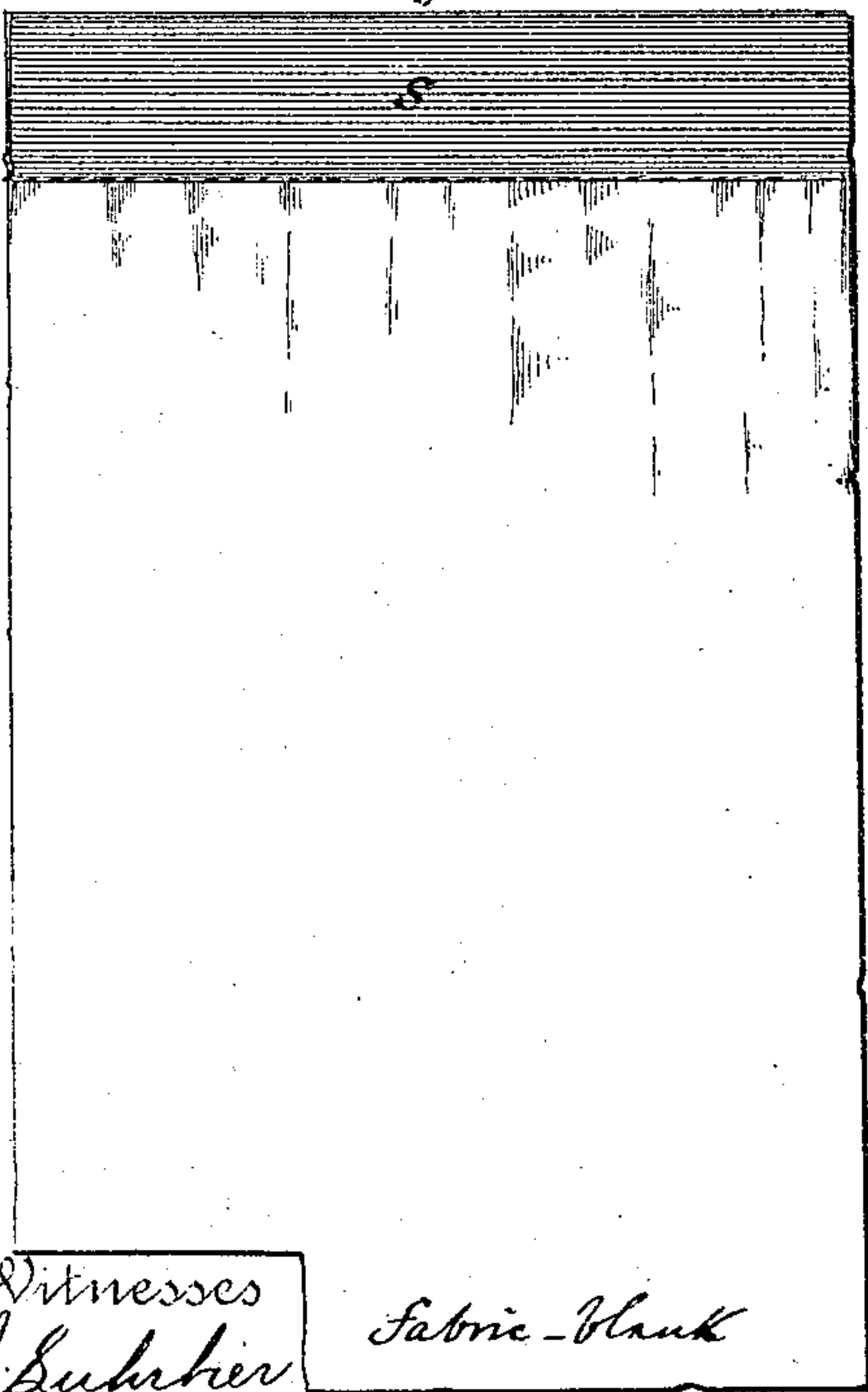
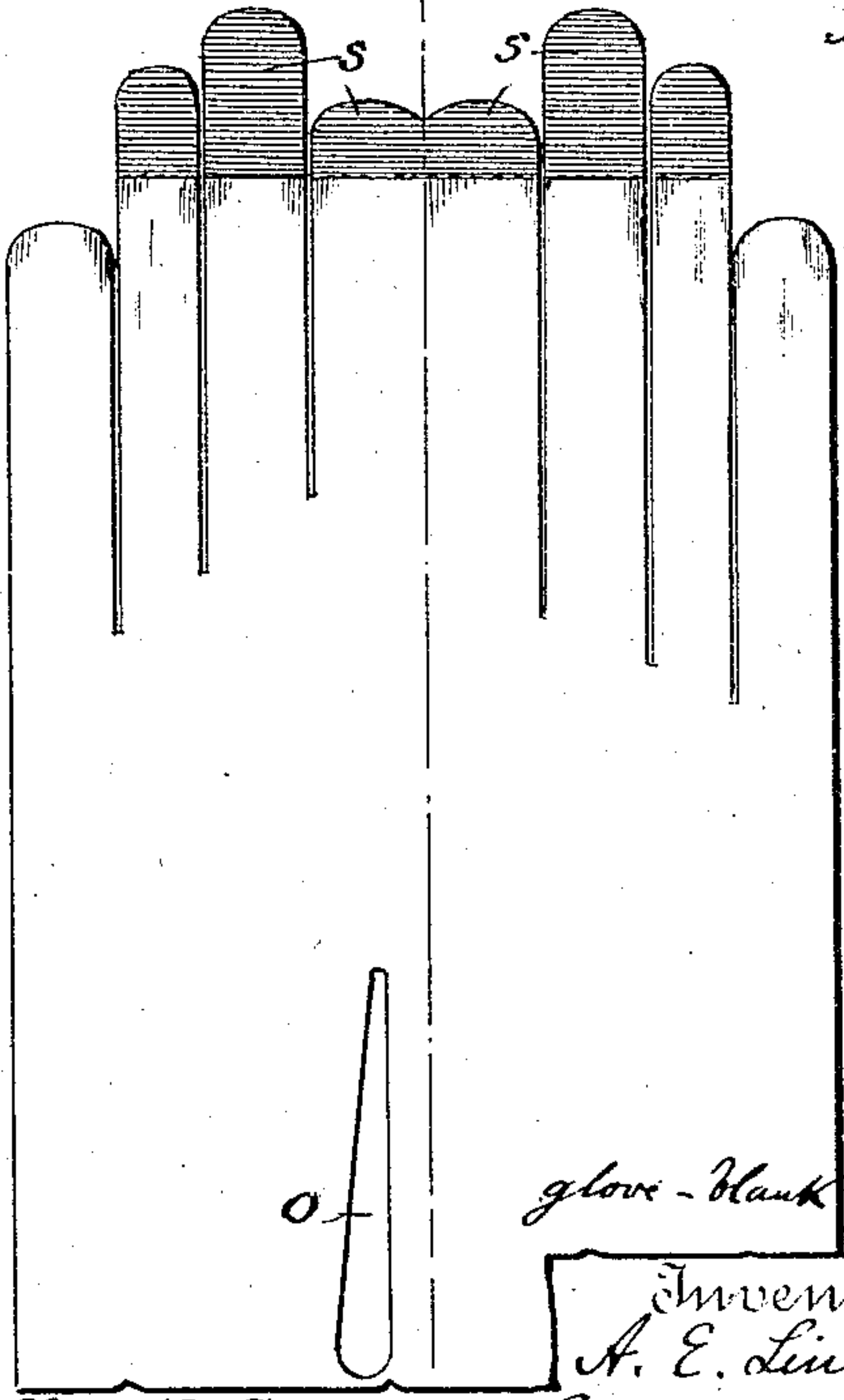


Fig. 9.



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UNITED STATES PATENT OFFICE.

ARTHUR E. LINDNER, OF FULTONVILLE, NEW YORK.

GLOVE-SEWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 772,044, dated October 11, 1904.

Application filed April 7, 1904. Serial No. 202,052. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR E. LINDNER, a citizen of the United States, residing in Fultonville, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Glove-Sewing Machines, of which the following is a specification.

This invention relates to certain improvements in glove-sewing machines by which the reinforcing layers for the finger-tips of silk gloves can be attached to the blank of knit silk fabric by mechanical means, so as to dispense with the insertion of the reinforcing layers into the finger-tips of the gloves by hand after the same are finished, as heretofore; and for this purpose the invention consists of a glove-sewing machine between the feed-cups of which extends a stationary carrier for the fabric blank located at right angles to the longitudinal axis of the feed-cups, said carrier guiding the fabric to the feed-cups in connection with a curved regulator-plate attached to the frame of the machine and extending over the carrier and inner feed-cup and with a cylindrical guide-plate for a strip from which the reinforcing layers are formed, said guide-plate extending around the outer feed-cup and being supported on the supporting-arm of the same.

The invention consists, further, of certain details of construction of the stationary fabric-carrier, of the regulator-plate, and of the cylindrical strip-guiding plate by which both the fabric blank as well as the strip for the reinforcing layers of glove-blanks are fed by the feed-cups to the action of the needle and looper of the machine, as will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved glove-sewing machine, showing the carrier for the fabric blank, the regulator-plate, and the guide-plate for the tip-reinforcing material in their proper relative positions. Fig. 2 is a plan view of Fig. 1. Figs. 3 and 4 are detail perspective views of the regulator-plate and cylindrical guide-plate for the tip-reinforcing

material shown as detached from the machine. Fig. 5 is a side elevation of the machine with the outer feed-cup removed, so as to show the stationary blank-carrier and its supporting-standard. Fig. 6 shows the fabric-carrier with the fabric blank placed in position thereon and in the act of being stitched to the strip of tip-reinforcing fabric. Fig. 7 is a vertical transverse section on line 7-7, Fig. 6, drawn on a larger scale. Fig. 8 is a side view of the fabric blank shown with the strip of reinforcing material stitched thereto, and Fig. 9 shows a glove blank cut from the reinforced fabric blank shown in Fig. 8 ready for being made into a glove.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, *a* represents the inner feed-cup, and *b* the outer feed-cups, of an over-stitch glove-sewing machine of the usual approved construction. The inner feed-cup *a* receives its rotary motion in the usual manner from the driving mechanism of the machine, while the outer feed-cup *b*, the circumference of which is placed in contact with the circumference of the inner feed-cup, is rotated by the friction with the inner feed-cup. The outer feed-cup *b* is supported on an arm *b'*, which is pivoted at its lower end in the usual manner to the base of the machine-casing, as shown in Fig. 1. Intermediately between the feed-cups is supported a vertical fabric-carrier *d*, which is supported at its middle portion by an upright standard *d'*, the lower end of which is attached by fasteningscrews *d''* to the base of the machine-casing, as shown clearly in Fig. 1. The fabric-carrier *d* is located at right angles to the longitudinal axis of the machine passing through the needle and feed-cups. The carrier *d* is preferably made of brass or other sheet metal and provided at one side along its lower edge in front of the feed-cups with a gage-strip *d'''*, that is attached by screws *d''''* to the carrier *d*, said gage-strip forming a guide for the upper part of the fabric blank, that is bent over and made to ride on the upper edge of the carrier *d*, as shown in Fig. 7. The distance between the upper edge of the fabric-carrier *d* and the

upper edge of the gage-strip d^3 determines the width of the bent-over portion of the fabric blank when it is fed through the glove-sewing machine. The fabric-carrier d is made of greater height in front of the feed-cups a and b than back of the same, a shoulder d^5 being formed in the upper edge of the fabric-carrier in front of the contact-point of the feed-cups a b , so that the rear part of the fabric-carrier passes below the circumferences of the feed-cups in backward direction without being in contact with the same. This permits the feed-cups to take up the fabric which is placed on the carrier and feed it to the action of the needle n and looper l without being interfered with by the fabric-carrier d .

A horizontal regulator-plate e is attached to the side wall of the machine-casing and so formed as to extend sidewise around the inner feed-cup and to have its tapering end over the same, as shown in Fig. 2. The end of the regulator-plate e extends over the fabric-carrier in close proximity to the shoulder d^5 of the same and serves to retain the bent-over part of the fabric on the carrier. The curved regulator-plate e is provided near its front end with two downwardly-extending guide-pins e' , which are shown in Fig. 3 and which extend downwardly over the fabric-carrier d and guide the fabric riding on the carrier toward the feed-cups, so as to hold it in position on the carrier while it is gradually fed to the action of the needle and looper of the machine. In front of the guide-pins e' the regulator-plate e carries a set-screw e^2 , which turns in a tapped hole of the plate e and which engages the tapped hole of an angular lug or bracket e^3 , that is attached below the regulator-plate e to the supporting-sleeve of the shaft of the inner feed-cup a . The regulator-plate e is flexible to a certain degree, so that it is slightly raised or lowered by the adjustment of the set-screw e^2 and adjusted relatively to the upper edge of the fabric-carrier d and the fabric on the same so as to hold the fabric on the carrier and prevent it from riding up or rising above the same. The regulator-plate e is made, like the carrier, of suitable sheet metal and bent in downward direction at its outer and wider end, so as to be readily attached by fastening-screws e^4 to the casing of the machine, as shown in Figs. 1 and 2.

To the supporting-arm of the outer feed-cup b is attached a cylindrical guide-plate g by means of a shank portion g^x and fasteningscrews, said guide-plate extending from a point near the end of the regulator-plate e around the feed-cup to the opposite side of the same, so as to surround the outer feed-cup for the greater portion of its circumference. The guide-plate g is provided at its upper and lower edges with bent-up lugs g' , that are made integral with the guide-plate g and ar-

ranged at such a distance from each other as to guide a strip s of knitted silk fabric of a width equal to the bent-over portion of the fabric blank on the carrier d toward the same.

The strip s passes through a slot g^2 in the end of the guide-plate g adjacent to the end of the regulator-plate e . The strip s serves for the purpose of reinforcing the upper end of the fabric blank from which the glove-blank is to be cut. The strip of knit fabric is wound on a spool and supplied to the guide-plate g , as shown in dotted lines in Fig. 2. The bent-over portion of the fabric blank and the reinforcing-strip s are taken hold of by the feed-cups, fed simultaneously between the same, and subjected to the action of the needle n and looper l , so as to be connected at the bent-over edge of the fabric blank and the upper edge of the strip by overseam-stitches in the well-known manner of glove-sewing machines. The bent-over edge of the fabric blank and the edge of the reinforcing-strip are thereby united in such a manner that the stitches show only on one side of the fabric blank, but not on the other side, so that when the fabric blank, with the reinforcing-strip s sewed thereon, is spread out flat, as shown in Fig. 8, a blank is obtained in which the connecting-stitches are shown at one side, which forms then the inside of the glove to be made therefrom, but not on the other side or outside of the glove. The fabric blank (shown in Fig. 8) is then cut out by a die for forming the glove-blank, (shown in Fig. 7,) which is provided with reinforcing layers at the inside of the finger-tips and from which the glove is made and completed in the usual manner. The blank for the thumb is made up from a fabric blank and a reinforcing layer of fabric in the same manner as the glove-blank and stitched to the opening o for the thumb-blank in the same manner as heretofore.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a glove-sewing machine, the combination, with the inner and outer feed-cups, of a fabric-carrier located at right angles to the longitudinal axis of the feed-cups, and extending backwardly beyond the same, a curved regulator-plate supported on the casing and adapted to extend by its end point over the upper edge of the fabric-carrier adjacent to the needle, and a guide-plate surrounding the outer feed-cup for guiding a fabric strip toward the fabric-carrier, feed-cups, needle and looper, substantially as set forth.

2. In a glove-sewing machine, the combination, with the inner and outer feed-cups, of a stationary fabric-carrier extending at right angles to the longitudinal axis of the feed-cups backwardly beyond the same, said fabric-carrier being provided at its front end with a gage at its lower part and at its opposite end and upper edge with a shoulder and

a recessed portion back of the shoulder, a curved regulator-plate extending above the upper edge of the fabric-carrier near the needle, and a guide-plate for guiding a fabric strip attached to the supporting-arm of the outer feed-cup and extending around the outer feed-cup toward the recess and shoulder of the guide-plate, substantially as set forth.

3. In a glove-sewing machine, the combination, with the inner and outer feed-cups, of a stationary fabric-carrier extending at right angles to the longitudinal axis of the feed-cups beyond the same, said fabric-carrier being provided at its lower front part with a gage and at its opposite end and upper edge with a shoulder and a recessed portion back of the shoulder, a curved regulator-plate extending around the inner feed-cup to a point above the upper edge of the fabric-carrier near the needle, and means for adjusting the end of the regulator-plate relatively to the upper edge of the guide-plate, and a cylindrical guide-plate for a reinforcing fabric strip attached to the supporting-arm of the outer feed-cup and extending around the same toward the shoulder of the guide-plate, substantially as set forth.

4. In a glove-sewing machine, the combination, with the inner and outer feed-cups of the same, of a stationary fabric-carrier extending at right angles to the longitudinal axis of the feed-cups backwardly beyond the same, an upright standard attached to the base of the machine and the fabric-carrier for supporting the latter, a gage at the lower front edge of the fabric-carrier, a shoulder on the fabric-carrier adjacent to the needle and a re-

cess extending along the upper rear edge of the fabric-carrier, a curved horizontal regulator-plate attached to the casing of the machine and extending by its point over the upper edge of the guide-plate and inner feed-cup, means for regulating the point of the regulator-plate relatively to the upper edge of the guide-plate, and a cylindrical guide-plate extending around the outer feed-cup and provided with a shank attached to the arm of the outer feed-cup, said circular guide-plate being provided with guide-lugs for the reinforcing fabric strip, substantially as set forth.

5. In a glove-sewing machine, a regulator-plate composed of a flexible plate having one end secured rigidly to the machine-casing, guide-pins for the fabric blank near the opposite end of said plate, and a set-screw engaging said regulator-plate and a bracket on the supporting-sleeve of the inner feed-cup, for regulating the position of said guide-pins, substantially as set forth.

6. In a glove-sewing machine, a cylindrical guide-plate extending around the outer feed-cup and being provided with a shank for attachment to the arm of said feed-cup, and guide-lugs at its upper and lower edges for guiding the reinforcing fabric strip, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ARTHUR E. LINDNER.

Witnesses:

PAUL GOEPEL,

HENRY J. SUHRBIER.