

No. 707,585.

Patented Aug. 26, 1902.

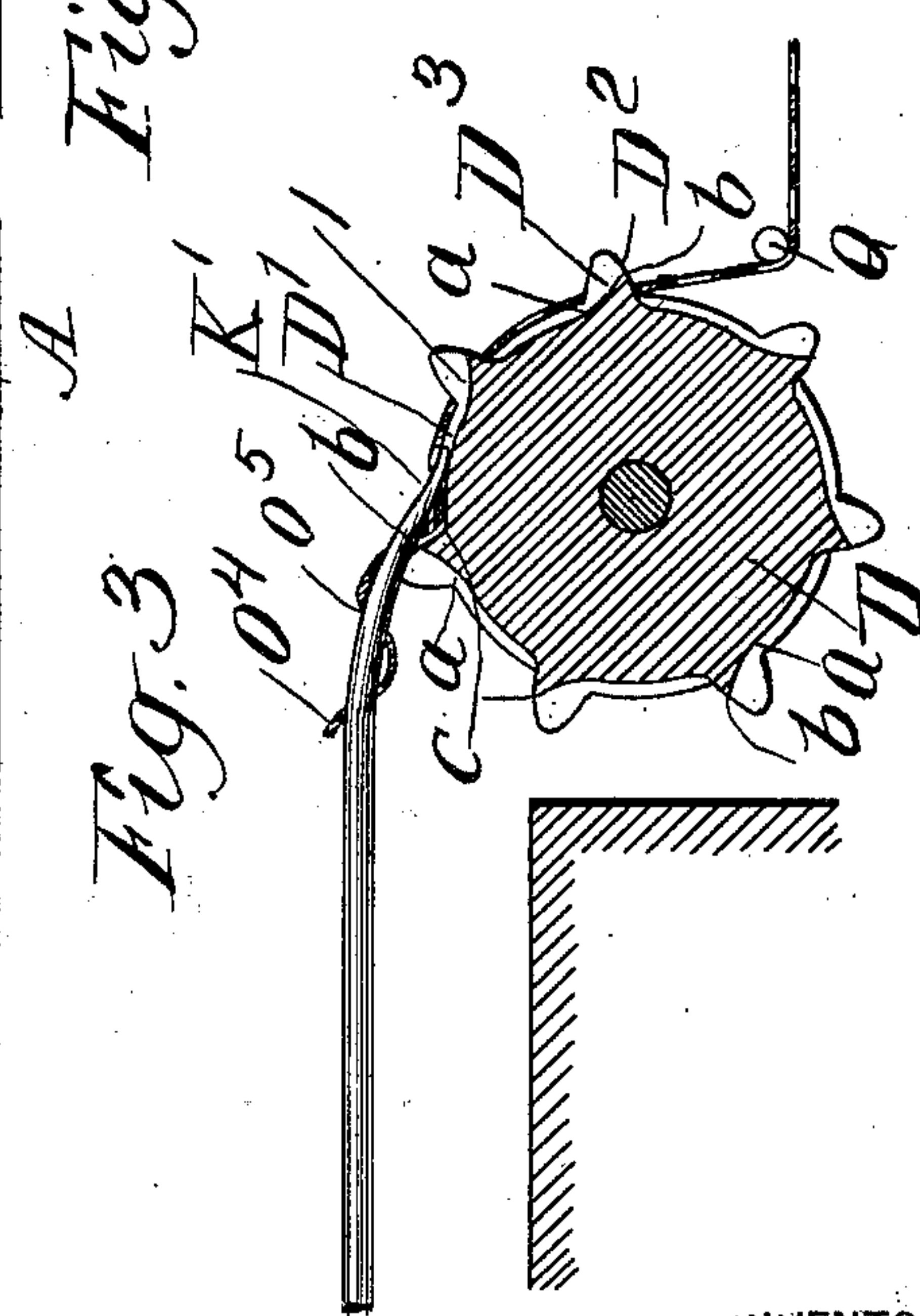
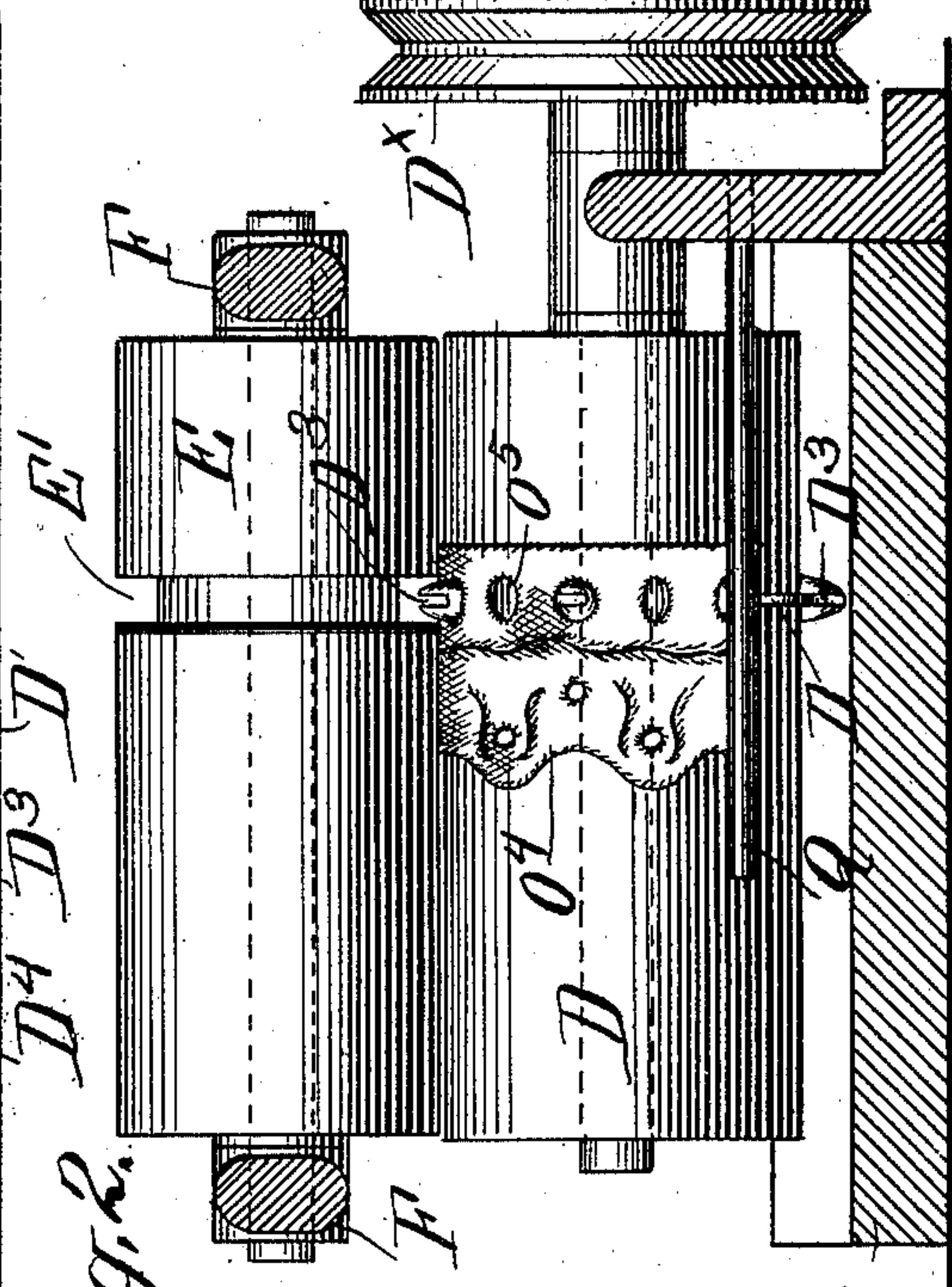
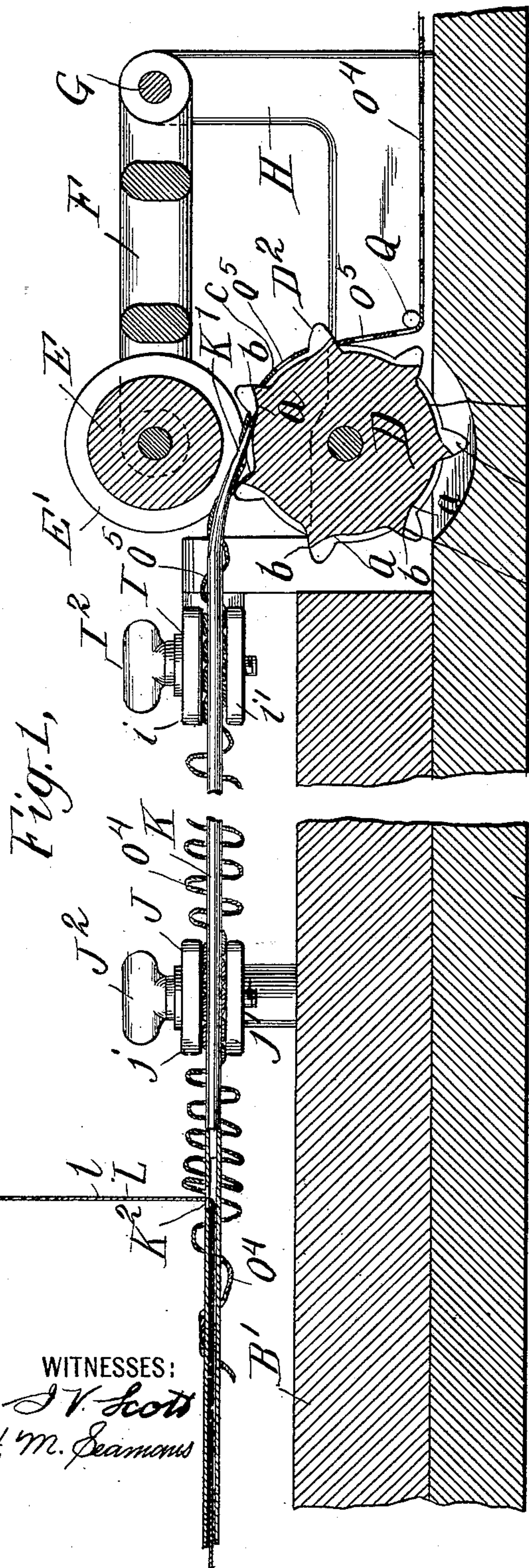
D. GROTTA.

MACHINE FOR THREADING TAPE INTO EDGINGS.

(Application filed Aug. 1, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:
J. V. Scott
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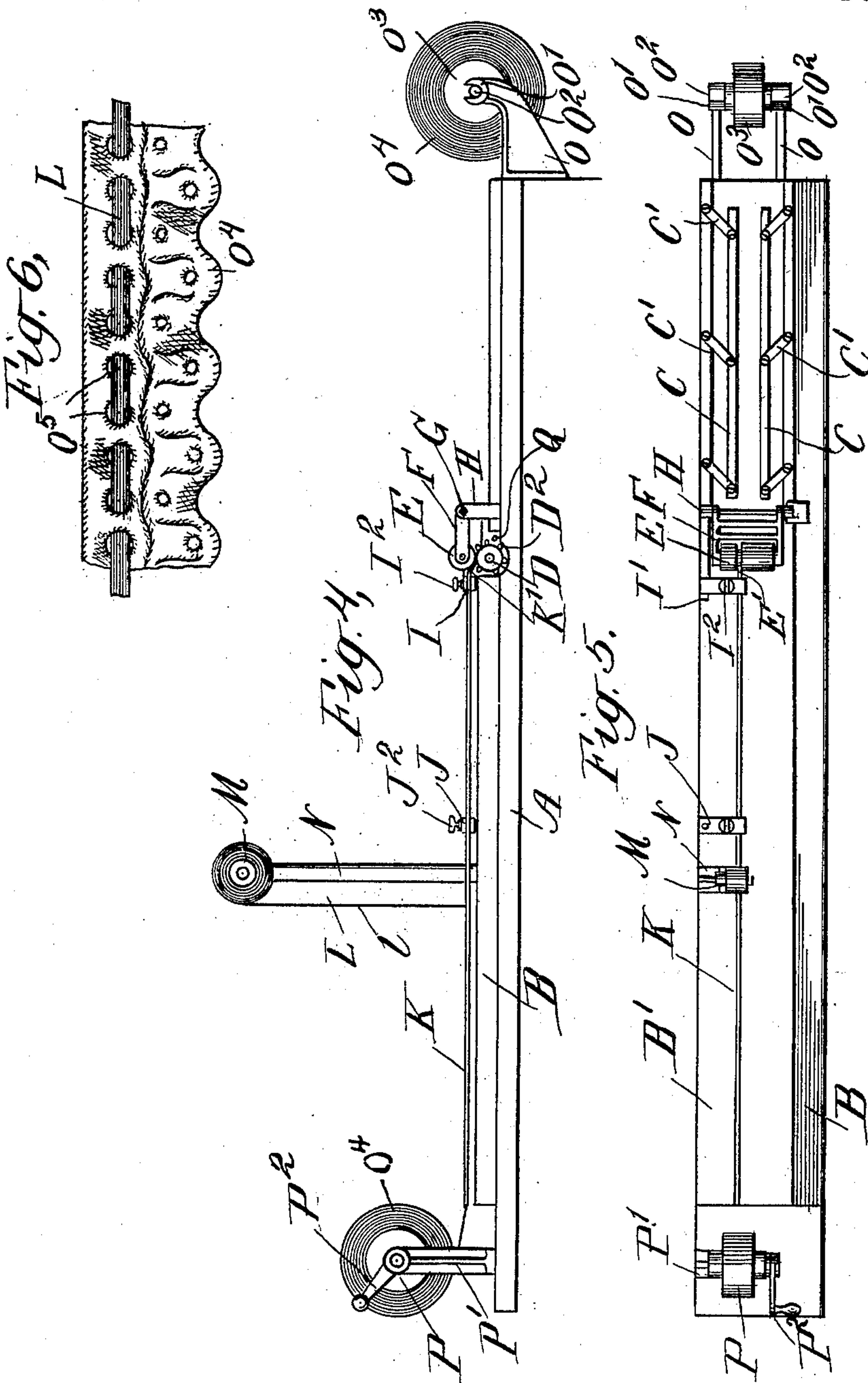
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2 Sheets.—Sheet 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DAVID GROTTA, OF NEWARK, NEW JERSEY, ASSIGNOR TO WEINGARTEN BROS., A COPARTNERSHIP COMPOSED OF LEVI WEINGARTEN, OSCAR WEINGARTEN, AND DAVID WEINGARTEN, OF NEW YORK, N. Y.

MACHINE FOR THREADING TAPE INTO EDGINGS.

SPECIFICATION forming part of Letters Patent No. 707,585, dated August 26, 1902.

Application filed August 1, 1901. Serial No. 70,451. (No model.)

To all whom it may concern:

Be it known that I, DAVID GROTTA, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Machines for Passing Ribbon Through Insertion, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to machines for passing ribbon or tape through insertion to be used on undergarments and other wearing-apparel, and especially on corsets.

The object of my invention is to produce a machine by which the ribbon may be passed through the openings in the insertion in a quick and efficient manner.

The invention will be readily understood from the following description, taken in connection with the accompanying drawings, forming a part of this specification.

Referring now to the drawings, in which like symbols of reference indicate the same parts, Figure 1 is a vertical section taken lengthwise of the machine. Fig. 2 is a vertical transverse section taken on the line 2 2 of Fig. 1. Fig. 3 is a detail showing the needle in a different position on the roller from that shown in Fig. 1. Fig. 4 is a side elevation, on a similar scale, of the machine. Fig. 5 is a plan view of Fig. 4; and Fig. 6 is a plan view of a section of the insertion, showing the ribbon passed therethrough.

In the drawings the part lettered A represents the bed of the machine, having raised guides B B' on each side thereof, between which passes the insertion after it leaves the rollers, hereinafter to be described.

C represents guides for the insertion before it enters the rollers. These guides are pivoted on links C', so that they may be adjusted for different widths of insertion.

Mounted on the bed of the machine in suitable bearings is a roller D, having on one end of its shaft a pulley D^x, around which passes a band or belt by which the roller is rotated in a well-known manner. This roller is grooved at D', and projecting from the grooves

above the periphery of the roll at equal distances from each other is a series of spurs D². These spurs are so spaced that they will enter every other one of the openings of the insertion through which the ribbon is to be passed when the insertion is passing through the machine and over the roller. Each of these spurs is slotted vertically, as shown at D³, the bottom of the slot being of such shape as to leave an incline or cam D⁴, beginning at a, at the bottom of the groove D' and extending up to the point b, above the periphery of the roller and about half-way the length of the spur.

E is a guide-roll located above the roller D and journaled in a frame F, pivoted at G to a bracket H, attached to the bed of the machine. This roll has a groove E' therein, into which the spurs D² enter when the roll is rotated, as shown in the drawings.

I J are two clamps for holding the needle, to be hereinafter described. The clamp I is pivoted to the guide B' at the point I'. The clamp J is rigidly attached to said guide B'. Each of these clamps is made in two parts or jaws i i' and j j'. Passing through these jaws are clamp-screws I² and J². Between the jaws of the clamps is held what I term a "hollow needle" K, the end K' of which is bent or curved and bears against the bottom of the groove D' of the roller D, as shown in the drawings. This needle has a hole or slot K² therein, through which passes the ribbon or tape L, which is on a roll M, journaled in a support N, attached to the bed of the machine.

At one end of the bed of the machine is attached a bracket O, having journal-bearings O', into which may be inserted the journal or spindle O² of the roller O³, which I term the "feed-roll," around which is rolled the insertion or lace O⁴. At the other end of the machine is what I term the "take-up" roll P, journaled in a bracket or support P', attached to the bed of the machine. Around this roll is wound the insertion after it has passed through the machine and the ribbon or tape inserted therein, the take-up roll being turned by the crank P². The lace or in-

section has holes or openings O^5 therein at equal distances apart, through which the ribbon L is inserted.

Q is a guide pin or roll adjacent to the roller B and under which the insertion passes before it is taken up by the roller D.

Having described the construction of the machine, its operation will now be set forth. The feed-roll D, having the insertion wound thereon, is inserted in its bearings in the bracket O. The end of the insertion is then led between the guides C, under the guide-pin Q, and around the upper surface of the roller D, the spurs D^2 of this roll entering and passing through every other one of the openings O^5 in the insertion. The roller D is then turned by hand and the end K of the needle passed, for example, up through the first opening O^5 , and then down through the next opening, and then up through the next, and so on for three or four openings. This is in order to properly start or thread the insertion on the needle. Supposing now the needle has just been passed down through one of the openings O^5 and is resting on the bottom of the groove D' with its extreme end, which is slightly upturned at the beginning a of the cam in the spur, as shown in Fig. 1 of the drawings, upon power being now applied and the roller caused to be rotated in the direction of the arrow the cam ab in the spur will raise the end of the needle, the clamp I being pivoted, so that the needle will be permitted to have a vertical movement or vibration and cause it to pass up through the opening O^5 , through which this spur is passed. When the spur passes from under the end of the needle, the needle will have passed through this opening O^5 in the insertion, and as the roller continues to rotate will drop down in the groove in the roller between the spurs, carrying with it that part of the insertion lettered c , and the point of the needle will enter the next opening between the spurs from above, and as the roller rotates the end of the needle, which is now resting on the bottom of the groove under the insertion, as shown in Fig. 3, will come in contact with the cam in the next spur and be raised up through the next opening on the next spur. As the roller continues to rotate this operation is repeated, and the insertion is strung on the end of the needle, which passes up through one hole and down through the other, as described, and shown in Figs. 1 and 3 of the drawings. As the needle is held by the clamp I, the insertion cannot pass beyond said clamp, and as the roller continues to rotate and thread the insertion on the needle it will be "banked up" or folded between the roller and the clamp. When there are several folds on this part of the needle, the clamp-screws are turned to unclamp the jaws from the needle, and the folded part of the insertion is then pushed along by the hand of the operator beyond this clamp to the left, as shown in Fig. 1 of the drawings, and the clamp is then reset on the needle. This op-

eration is repeated until the folds are banked up between the clamps I and J, when the clamp J is then loosened from the needle by turning its clamp-screw J^2 and the folds pushed along by hand on that section of the needle between its end and the clamp J. The end of the ribbon L is then pulled down from the roll M and inserted in the opening K^2 and passed through the needle and left as shown in Fig. 1, where it comes out at the left end of the needle, as shown in the drawings. The operator then takes hold of the end of the insertion and the ribbon, fastens them to the roll P, and winds them on a take-up roll by turning the crank P^2 , the ribbon coming off the roll M and through the needle as the insertion is wound on the roll. When that part of the ribbon which is in folds between the slot K^2 and the end of the needle is wound on the take-up roll, so that there will only be a straight part of the ribbon between the slot K^2 and this roll, the operator ceases turning the take-up roll, cuts the ribbon at points—say l —so that there will be an end of the ribbon projecting out of the slot of the needle. The operator then unclamps the clamp J from the needle (in the meantime the clamp I^2 having been removed and the folds pushed along between the two clamps) and pushes another section of the fold to the left between the opening K^2 and the end of the needle. The ribbon, which has been cut at l , is then joined together—by needle and thread, for example—and the crank on the take-up roll turned to wind thereon that part of the folded insertion between the end of the needle and the slot or opening K^2 . This operation is repeated until all the insertion on the feed-roll has been passed through the machine and wound on the take-up roll with the ribbon inserted therein.

It is understood that the roller D is readily removed from its bearings, so as to replace it by another roll with the spurs closer together or farther apart, so as to operate on lace or insertion having the openings at different distances apart from that illustrated in the drawings. It is also understood that minor details may be varied in my invention without departing from the spirit thereof.

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

1. As an article of manufacture, a roller adapted to be used in a machine for passing ribbon through insertion, said roller having a series of spurs or sprockets thereon, said spurs being slotted and having an incline or cam-surface at the bottom of each slot.

2. As an article of manufacture, a roller adapted to be used in a machine for passing ribbon through insertion, said roller having a groove around the periphery thereof, a series of spurs in the groove projecting beyond the periphery of the roller and having longitudinal slots therein, a cam or incline at the bottom of each slot.

3. As an article of manufacture, a roller adapted to be used in a machine for passing ribbon through insertion, said roller having a groove around the periphery thereof, a series of spurs in the groove at equal distances apart projecting beyond the periphery of the roller and having slots therein, and a cam or incline at the bottom of each slot.

4. In a machine for passing ribbon through insertion, a roller having spurs thereon adapted to enter every other hole in the insertion through which the ribbon is to pass, a needle carrying a ribbon, and means for vibrating the needle so that it may enter one of said holes from one side of the insertion and pass through the next hole from the other side of the insertion.

5. In a machine for passing ribbon through insertion, a roller having a groove around the periphery thereof, a series of spurs in the groove adapted to enter every other hole in the insertion through which the ribbon is to pass, each spur projecting beyond the periphery of the roller and having a slot therein, a cam or incline at the bottom of the slot, a needle the end of which rests in the bottom of the groove and adapted to be raised by a cam so that the needle is vibrated to enter one of the openings in the insertion from one side thereof and the next opening from the other side as the roller rotates.

6. In a machine for passing ribbon through insertion, a roller having a groove around the periphery thereof, a series of spurs in the groove adapted to enter every other hole in the insertion through which the ribbon is to pass, each spur projecting beyond the periphery of the roller and having a slot therein, a cam or incline at the bottom of the slot, a needle the end of which rests in the bottom of the groove and adapted to be raised by a cam so that the needle is vibrated to enter one of the openings in the insertion from one side thereof and the next opening from the other side as the roller rotates, and a guide-roll above the roller.

7. In a machine for passing ribbon through insertion, a roller having a groove around the periphery thereof, a series of spurs in the groove adapted to enter every other hole in the insertion through which the ribbon is to pass, each spur projecting beyond the periphery of the roller and having a slot therein, a cam or incline at the bottom of the slot, a needle the end of which rests in the bottom of the groove and adapted to be raised by a cam so that the needle is vibrated to enter one of the openings in the insertion from one side thereof and the next opening from the other side as the roller rotates, a guide-roll above the said roller adapted to bear upon the surface of the insertion when passing through the machine and having a groove around the periphery thereof through which the spurs pass.

8. In a machine for passing ribbon through insertion, a roller having a groove around the

periphery thereof, a series of spurs in the groove adapted to enter every other hole in the insertion through which the ribbon is to pass, each spur projecting beyond the periphery of the roller and having a slot therein, a cam or incline at the bottom of the slot, a needle the end of which rests in the bottom of the groove and adapted to be raised by a cam so that the needle is vibrated to enter one of the openings in the insertion from one side thereof and the next opening from the other side as the roller rotates, a pivoted frame, a guide-roll mounted in the frame and adapted to bear upon the upper surface of the insertion when passing through the machine and having a circular groove around the periphery thereof through which the needle and the spurs pass.

9. In a machine for passing ribbon through insertion, a roller having a circular groove around the periphery thereof, spurs projecting from said groove at equal distances apart, each spur being slotted, a cam or incline at the bottom of each slot, a pivoted clamp, a needle carried by said clamp and resting in the bottom of the groove at its lowest position, means for rotating the roller so that the cam will pass under the needle to raise its end and permit said end to pass through that opening of the insertion through which the spurs pass, and then lowered to pass through the next opening in the insertion from the opposite direction.

10. In a machine for passing ribbon through insertion, a roller having a circular groove around the periphery thereof, spurs at equal distances apart projecting from said groove beyond the periphery of the roller, each of said spurs having a slot therein, a cam-surface at the bottom of the slot, clamps for holding a needle, one of the clamps being pivoted to permit the vibration of the end of the needle, a needle, the end of which rests at the bottom of the groove and adapted to be raised by the cam-surface in the slot, as and for the purpose specified.

11. In a machine for passing ribbon through insertion, a roller having a circular groove around the periphery thereof, spurs at equal distances apart projecting from said groove beyond the periphery of the roller, each of said spurs having a slot therein, a cam-surface at the bottom of the slot, clamps for holding a needle, one of the clamps being pivoted to permit the vibration of the end of the needle, a needle, the end of which rests at the bottom of the groove and adapted to be raised by the cam-surface in the slot, and a guide-roll above the said roller and adapted to bear upon the upper surface of the insertion as it passes through the roll, as and for the purpose specified.

12. In a machine for passing ribbon through insertion, a roller having a circular groove around the periphery thereof, spurs at equal distances apart projecting from said groove beyond the periphery of the roller, each of

said spurs having a slot therein, a cam-surface at the bottom of the slot, clamps for holding a needle, one of the clamps being pivoted to permit the vibration of the end of the needle, a needle, the end of which rests at the bottom of the groove and adapted to be raised by the cam-surface in the slot, a guide-roll having a circular groove around the periphery thereof through which pass the needle and the spurs, and a pivoted frame carrying said roll, as and for the purpose specified.

13. In a machine for passing ribbon through insertion, a supply-roll adapted to carry insertion to be operated upon, a roller having a circular groove around the periphery thereof, spurs projecting at equal distances apart from the groove and above the circumference of the roller, each spur having a slot therein and adapted to enter every other opening in the insertion through which the ribbon is to be passed, an incline or cam at the bottom of each slot, means for guiding the insertion to the roll, clamps, one of which is pivoted, a hollow needle, having a slot therein, carried by said clamps, the end of which rests in the bottom of the groove of the roller and is adapted to be raised by the cam in the spurs, a guide-roll having a circular groove around the periphery thereof and in which the spurs and needle enter when the roller is in its lowered position, a pivoted frame carrying said guide-roll, a ribbon-spool adapted to feed the ribbon through the slot in the hollow needle, a take-up roll adapted to receive and take up the insertion and ribbon as they come from the needle, substantially as described.

14. In a machine for passing ribbon through insertion, a supply-roll adapted to carry insertion, a feed-roller having spurs thereon adapted to enter every other opening in the insertion through which the ribbon is to be passed, means for guiding the insertion to said roller, a vibrating needle, means for raising and lowering the needle to permit it to pass through one of the openings in the insertion from one side thereof and to enter the next opening through the other side thereof, a take-up roll, and means for permitting the ribbon to pass through the insertion while on the needle, substantially as and for the purpose described.

15. In a machine for passing ribbon through insertion or lace, the combination with a needle, of a roll, spurs on said roll with which the point of said needle is in sliding engagement, said spurs being constructed to alternately raise and lower the point of the needle, substantially as and for the purpose set forth.

16. In a machine for passing ribbon through insertion or lace, the combination with a needle, of a roll, cams or inclines on said roll with which the point of the needle is in sliding engagement, said cams or inclines being constructed to alternately raise and lower the point of the needle, and means on said roll for feeding the lace or insertion upon said

needle, and causing it to be gathered upon the needle, substantially as and for the purpose set forth.

17. In a machine for passing ribbon through insertion or lace, the combination with a needle, of a roll, cams or inclines on said roll with which the point of the needle is in sliding engagement, said cams or inclines being constructed to alternately raise and lower the point of the needle, and spurs or sprockets on said roll adapted to enter the openings of said insertion and feed the same upon the needle, and to be gathered on said needle, substantially as and for the purpose set forth.

18. In a machine for passing ribbon through insertion or lace, the combination with a needle, of a roll, spurs or sprockets on said roll adapted to enter the openings of said insertion, said sprockets or spurs being provided with cams or inclines with which the end of the needle is brought into sliding engagement to cause said end of the needle to enter the openings of the lace or insertion and gather the same upon the needle, substantially as and for the purpose set forth.

19. In a machine for passing ribbon through insertion or lace, the combination with a needle, of a roll, cams or inclines on said roll with which the point of the needle is in sliding engagement, said inclines being constructed to alternately raise and lower the point of the needle, and an upper roll bearing upon said first-named roll, said upper roll being provided with an annular groove, and means on said first-mentioned roll extending into the groove on said upper roll for feeding the meshes of the lace upon said needle and causing the insertion to be gathered on said needle, substantially as and for the purpose set forth.

20. In a machine for passing ribbon through insertion or lace, the combination with a needle, of a lower roll, cams or inclines on said roll with which the point of the needle is in sliding engagement, said inclines being constructed to alternately raise and lower the point of the needle, and an upper roll bearing upon the lower roll, said upper roll being provided with an annular groove, and sprockets on said lower roll extending into the groove on said upper roll and adapted to enter the openings of the insertion and feed the lace upon the needle and causing the insertion to be gathered on said needle, substantially as and for the purpose set forth.

21. In a machine for passing ribbon through insertion or lace, the combination with a needle, of a lower feed-roll, cams or inclines on said roll with which the point of the needle is in sliding engagement, said cams or inclines being constructed to alternately raise and lower the point of the needle, and an upper feed-roll bearing upon the said lower roll, said upper roll being provided with an annular groove and sprockets or spurs on said roll extending into the groove on said upper roll and adapted to enter the openings of the

insertion and feed the insertion upon the needle, and to be gathered on said needle, substantially as and for the purpose set forth.

22. In a machine for passing ribbon through insertion or lace, the combination with a needle, of a lower feed-roll and an upper feed-roll bearing upon the said lower roll, said upper roll being provided with an annular groove, and spurs or sprockets on said roll extending into the annular groove in said upper roll, said spurs being provided with a curved surface with which the end of the needle is brought in sliding engagement to cause said needle to enter the openings of the insertion and gather it upon the needle, substantially as and for the purpose set forth.

23. In a machine for passing ribbon through insertion or lace, the combination with a base provided with a support and a needle in said support, of a second support, having bearings, a lower roll rotatively arranged in one of said bearings, and a frame pivotally connected with a spindle in another of said bearings, an upper feed-roll in said frame provided with an annular groove, and means on said lower roll extending into the groove in said upper roll for feeding the insertion upon said needle, and causing the insertion to be gathered upon the needle, substantially as and for the purpose set forth.

24. In a machine for passing ribbon through insertion or lace, the combination with a base provided with a support and a needle in said support, of a second support, having bearings, a roll rotatively arranged in one of said bearings, and a frame pivotally connected with a spindle in another of said bearings, an upper feed-roll in said frame provided with an annular groove, and sprockets or spurs on said lower roll extending into the groove in said upper roll and adapted to enter the openings of said insertion and feeding the insertion upon the needle, and to be gathered on said needle, substantially as and for the purpose set forth.

25. In a machine for passing ribbon through insertion or lace, the combination with a base provided with a support and a needle in said support, of a second support, having bearings, a lower roll rotatively arranged in one of said bearings, and a frame pivotally connected with a spindle in another of said bearings, an upper feed-roll in said frame provided with an annular groove, and sprockets or spurs on said lower roll extending into the groove in said upper roll, said sprockets having inclined surfaces with which the end of the needle is brought in sliding engagement to cause said end of the needle to enter the openings and gather the same upon the needle, substantially as and for the purpose set forth.

26. In a machine for passing ribbon through insertion or lace, the combination of a base provided with a support and a needle in said support, of a guide and a roll on said base, cams or inclines on said roll with which the point of the needle is in sliding engagement,

and said inclines being constructed to alternately raise and lower the end of the needle, and means on said roll for feeding the openings of the insertion upon said needle, and causing it to be gathered upon the needle, substantially as and for the purpose set forth.

27. In a machine for passing ribbon through insertion or lace, the combination with a base provided with a support and a needle in said support, of a guide and a roll on said base, cams or inclines on said roll with which the point of said needle is in sliding engagement, said inclines being constructed to alternately raise and lower the point of the needle, and spurs or sprockets on said roll adapted to enter the openings of said insertion and feed it upon the needle, and cause it to be gathered upon the needle, substantially as and for the purpose set forth.

28. In a machine for passing ribbon through insertion or lace, the combination with a base provided with a support and a needle in said support, of a guide and a roll on said base and sprockets or spurs on said roll adapted to enter the openings of said insertion, said spurs being provided with an incline having surfaces with which the end of the needle is brought in sliding engagement to cause said end of the needle to enter the openings of the insertion, and cause the insertion to be gathered upon the needle, substantially as and for the purpose set forth.

29. In a machine for passing ribbon through insertion or lace, the combination with a base provided with a support and a needle in said support, of a guide on said base, a second support having bearings, a lower roll rotatively arranged in one of said bearings, and a frame pivotally connected with a spindle in another of said bearings, an upper roll in said frame provided with an annular groove, and means on said lower roll extending into the groove in said upper roll for feeding the openings of the insertion upon said needle, and causing the insertion to be gathered upon the needle, substantially as and for the purpose set forth.

30. In a machine for passing ribbon through insertion or lace, the combination with a base provided with a support and a needle in said support, of a guide on said base, a second support having bearings, a lower roll rotatively arranged in one of said bearings, and a frame pivotally connected with a spindle in another of said bearings, an upper roll in said frame provided with an annular groove and sprockets or spurs on said lower roll extending into the groove in said upper roll and adapted to enter the openings of said insertion and feed it upon the needle, and cause it to be gathered upon the needle, substantially as and for the purpose set forth.

31. In a machine for passing ribbon through insertion or lace, the combination with a base provided with a support and a needle in said support, of a guide on said base, a second support having bearings, a lower roll rota-

tively arranged in one of said bearings, and a frame pivotally connected with a spindle in another of said bearings, an upper roll in said frame provided with an annular groove, and
 5 sprockets or spurs on said lower roll extending into the groove in said upper roll, said sprockets being provided with inclines having surfaces with which the end of the needle is brought in sliding engagement to cause
 10 said end of the needle to enter the openings of the insertion, and gather the same upon the needle, substantially as and for the purpose set forth.

32. In a machine for passing ribbon through insertion or lace, the combination with a roll, cams or inclines on said roll, of a needle having its pointed end in sliding engagement with said inclines, said inclines being constructed to alternately raise and lower the
 15 point of said needle and thereby gather the insertion upon said needle, substantially as and for the purpose set forth.

33. In a machine for passing ribbon through insertion or lace, the combination with a base, of a support provided with a pair of holding-jaws, a needle detachably secured between said jaws, means on said base for feeding and gathering insertion upon said needle, a second support on said base having a bearing
 25 and a holding clamp or dog provided with jaws adapted to grasp the end of the needle, substantially as and for the purpose set forth.

34. In a machine for passing ribbon through insertion or lace, the combination with a needle and means for feeding and gathering insertion upon said needle, of a support having a bearing, a holding-clamp in said bearing provided with jaws, and means for fixing said jaws about the needle, substantially as and
 30 for the purpose set forth.

35. In a machine for passing ribbon through insertion or lace, a roll, cams or inclines on said roll, and means coöperating with said cams or inclines for picking up and gathering the insertion, substantially as and for the
 40 purpose set forth.

36. In a machine for passing ribbon through insertion or lace, the combination, with a base, of a support provided with a pair of holding-jaws, a needle detachably secured near one
 50 end between said jaws, means on said base

for feeding and gathering lace upon said needle, a second support upon said base having a bearing, and a movable holding-dog arranged in said bearing provided with holding-jaws adapted to grasp the gathering end of the needle, substantially as and for the purpose set forth. 55

37. In a machine for passing ribbon through insertion or lace, the combination, with a base, of a support provided with a pair of holding-jaws, a needle detachably secured near the rear end between said jaws, means on said base for feeding and gathering the lace upon the said needle, a second support on said base having a bearing, and a holding-dog pivotally arranged in said bearing provided with holding-jaws adapted to grasp the gathering end of the needle, substantially as and for the purpose set forth. 60 65 70

38. In a machine for passing ribbon through insertion or lace, the combination, with a needle and means for feeding and gathering lace upon said needle, of a support having a bearing, a movable holding-dog arranged in said bearing provided with holding-jaws, and means for fixing said jaws about the needle, substantially as and for the purpose set forth. 75

39. In a machine for passing ribbon through insertion or lace, the combination, with a needle and means for feeding and gathering lace upon said needle, of a support having a bearing, a holding-dog pivotally arranged within said bearing provided with holding-jaws, and means for fixing said jaws about the needle, substantially as and for the purpose set forth. 80 85

40. In a machine for passing ribbon through insertion or lace, the combination, with a feed-roll having feed-sprockets arranged with spaces between them, inclines or cams between said sprockets provided with curved surfaces, of a needle having a curved end in sliding engagement with said curved surfaces of said inclines, as and for the purpose set forth. 90 95

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

DAVID GROTTA.

Witnesses:

C. MARSH,
 W. KILLBY.