

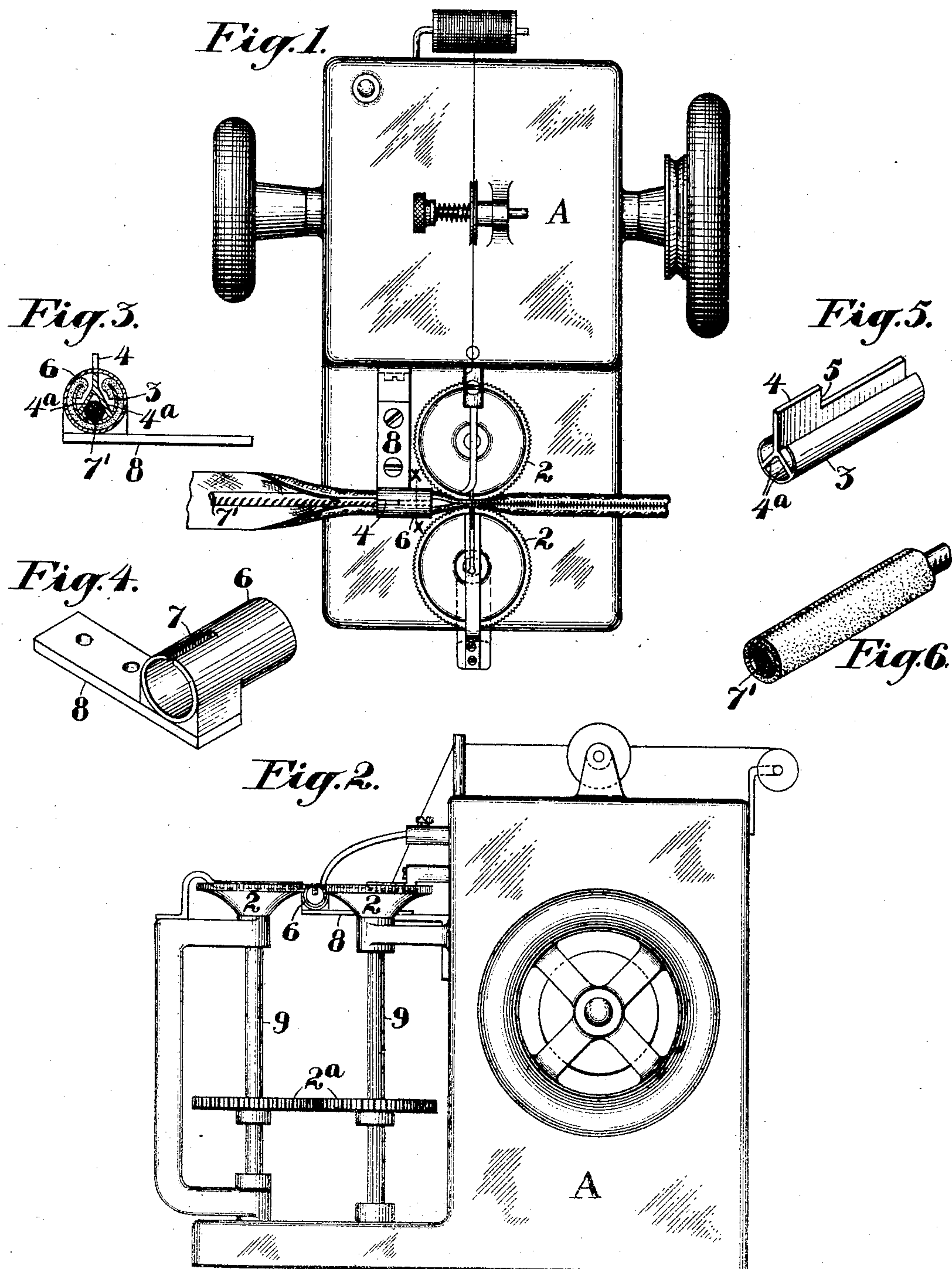
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C. A. BURNS.

ATTACHMENT FOR SEWING MACHINES FOR PRODUCING DRAPERY CORDS.

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Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES A. BURNS, OF SAN FRANCISCO, CALIFORNIA.

ATTACHMENT FOR SEWING-MACHINES FOR PRODUCING DRAPERY-CORDS.

SPECIFICATION forming part of Letters Patent No. 779,764, dated January 10, 1905.

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To all whom it may concern:

Be it known that I, CHARLES A. BURNS, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Attachments for Sewing-Machines for Producing Drapery-Cords, of which the following is a specification.

My invention relates to a certain new and useful attachment for sewing-machines for producing drapery-cords or like and equivalent material; and my invention consists of the parts and the constructions and combinations of parts which I will hereinafter describe and claim.

Figure 1 is a plan view of a machine, showing my invention applied thereto. Fig. 2 is a side view of same. Fig. 3 is a section on line *xx* at Fig. 1. Fig. 4 is an enlarged perspective view of the tube 6 with its supporting-arm. Fig. 5 is an enlarged perspective view of the segment. Fig. 6 shows a completed cord.

In carrying out my invention I employ any well-known form of sewing-machine—such, for instance, as those which are employed for making an overcast or round seam stitch on fur garments or gloves. The body of such a machine I have shown at A. These machines have a pair of opposed milled serrated feed-wheels, as at 2, here shown as mounted to revolve in a substantially horizontal plane, and the material to be stitched is advanced between these feed-wheels and in the line of the reciprocation of the needle.

My invention is applied to this class of machine, and is designed to produce a tubular cylindrical structure out of material, such as plush or velours, which is woven with an ornamental pile-surface. This material is first cut into strips of such width as will form a desired tube, with a sufficient addition thereto to allow the raw edges of the cut material to be folded inward, thus preventing the raveling or tearing of the raw edges. In order to effect this, I have shown a device for this purpose which consists of a cylindrical segment 3, which is supported with its open side upward. Centrally within this segment

is fixed a plate 4, which projects upwardly above the open or separated edges of the segment. This plate diverges at the bottom into two parts 4^a. One end of this vertical plate is higher than the other by reason of an offset or shoulder about midway of its length, as shown at 5. This segment is adapted to slip into a tube 6, which has a slot 7 in the upper side, and the higher portion of the plate 4 slips into this slot and the shoulder 5 abuts against the inner end of the slot 7.

The tube 6 is supported by an arm 8, which is fixed to some convenient portion of the machine A, and the segment is thus supported with its upper portion in line with the transversely-movable needle.

The strip of material from which the tube is to be formed is first bent around the outside of the segmental sleeve 3, and its edges are turned inwardly upon each side of the plate 4. The rope or cord 7' is inserted to pass through the space between the divergent plates 4^a and is advanced simultaneously with the material forming the tube and is thus inclosed when the work is completed. The segment 3 being inserted into tube 6, the material is bent into a tube with infolded edges, and being passed between the feed-rollers 2 the fabric is thus continually curved and the edges folded in so that the stitching which completes the tube will be formed in the body of the material at such a distance from the raw edges as will prevent any fraying or raveling out. Tubes of any desired length may thus be constructed, and a rope or cord which passes through the interior will give the tube sufficient body for the required purposes. The character of the material which is used for these tubes is such that there is a tendency of the material to be drawn so that one side will be stretched and advance faster than the other and the tube thus distorted by the use of feed-rollers in which one only is driven and the other follows, because the pull is only upon one side of the material. In order to overcome this, I have shown a second pair of feed-wheels, as shown at 2^a, fixed upon the vertical shafts 9, upon the upper ends of which shafts the feed-wheels 2 are fixed. By the

use of these intermeshing wheels 2^a the outer shaft is driven with a positive movement, and thus both of the feed wheels or rollers are equally driven and no distortion or twist of the tube will take place.

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

1. A device of the character described including a supported tube having a slot in its side, a segment of smaller diameter than the interior of the tube adapted to fit therein, said segment having a plate projecting radially between the separated edges and having an offset portion to fit the slot of the supported tube, a feed mechanism for advancing the fabric through the space between the tube and segment whereby the edges are folded inwardly, and stitch-forming mechanism for uniting the meeting edges of the fabric.

2. A device for the formation of flexible tubes, said device comprising a supported tube having a slot in the upper side at one end, a segment of smaller diameter than the interior of the tube adapted to fit therein, a plate fixed in the segment projecting radially between its separated edges, said plate having an offset and shoulder adapted to fit the slot in the tube, a feeding device whereby the fabric is advanced between the tube and the segment and its edges folded into the segment upon each side of the plate, and a reciprocating needle by which the meeting edges of the fabric are stitched together.

3. The combination with a sewing-machine having a reciprocating needle of a tube supported approximately in the plane of reciprocation of said needle, and having a slot in the upper side at one end, a segment of smaller diameter than the interior of the tube, a plate fixed in the lower side of the segment projecting through the space between the separated edges of the segment, said plate having an offset and shoulder which abuts against the end of the slot in the tube, and a feed device whereby the fabric to be stitched is drawn through the space between the segment and

the tube and its raw edges folded inwardly against the plate.

4. A device for the formation of flexible tubular fabric, said device comprising an exterior tube slotted at the top, a segment of smaller diameter than the interior of the tube, said segment having a vertical plate projecting radially between the separated edges of the segment and adapted to fit within the tube, vertical revoluble shafts having feed-wheels between which the material passes, a pair of intermeshing gears, whereby both feed-wheels are driven in unison to engage and advance both sides of the tube equally, and a sewing-machine having a transversely-reciprocating needle to unite the meeting folded edges of the tubular fabric.

5. A device for forming flexible tubular fabric, said device comprising an exterior tube, a segment of smaller diameter than the interior of the tube, a plate standing radially between the edges of the segment against which edges of the fabric are inturned, the lower part of said plate forming with the segment a channel for the transmission of a cord to form a core, and a sewing mechanism to unite the infolded parts of the fabric.

6. A device for forming a tubular flexible fabric and inserting a continuous core at a single operation, said device comprising a fixed exterior tube, a segment of smaller diameter than the interior of the tube, a radially-disposed plate projecting between the edges of the segment said plate having a divergent lower end forming a channel for a core-cord, a mechanism to advance the material and inturn its edges, and stitch-forming mechanism for uniting the meeting edges of the material.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES A. BURNS.

Witnesses:

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