

No. 841,480.

PATENTED JAN. 15, 1907.

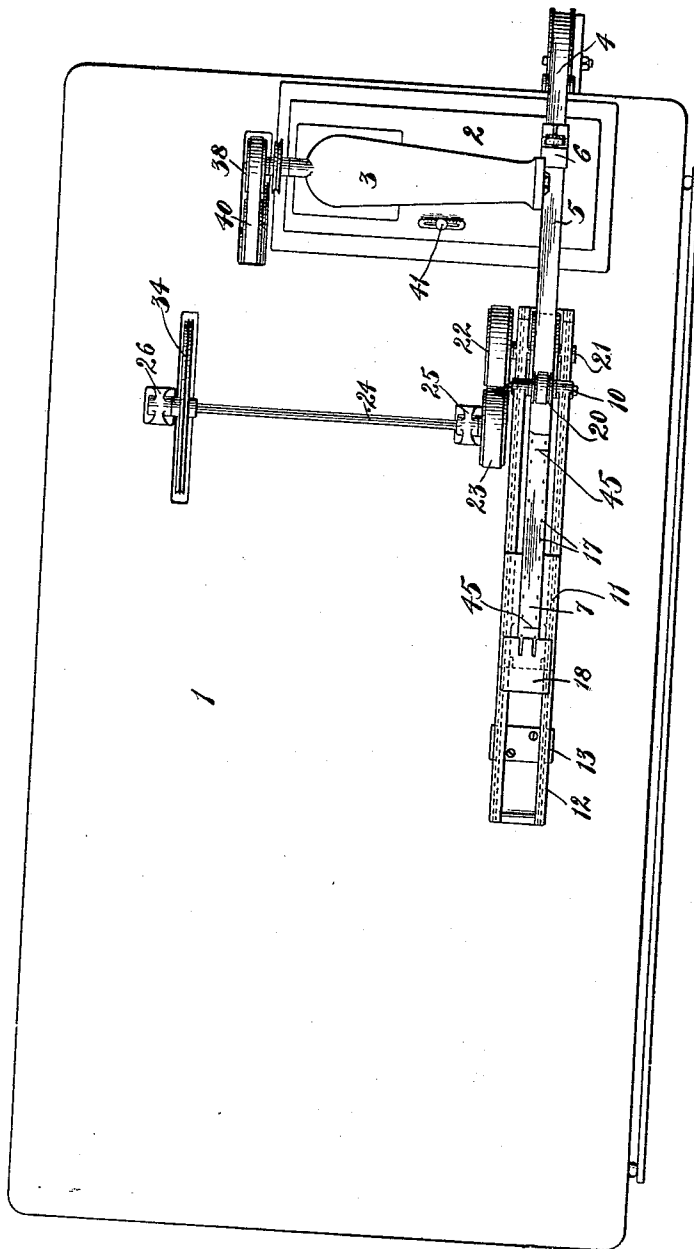
H. H. BATES.

FABRIC WITHDRAWING OR FEEDING MEANS FOR SEWING MACHINES.

APPLICATION FILED MAY 13, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:

F. G. Hackenberg,
Henry Thiesse

Inventor:

Henry H. Bates
by attorneys
Brown & Howard

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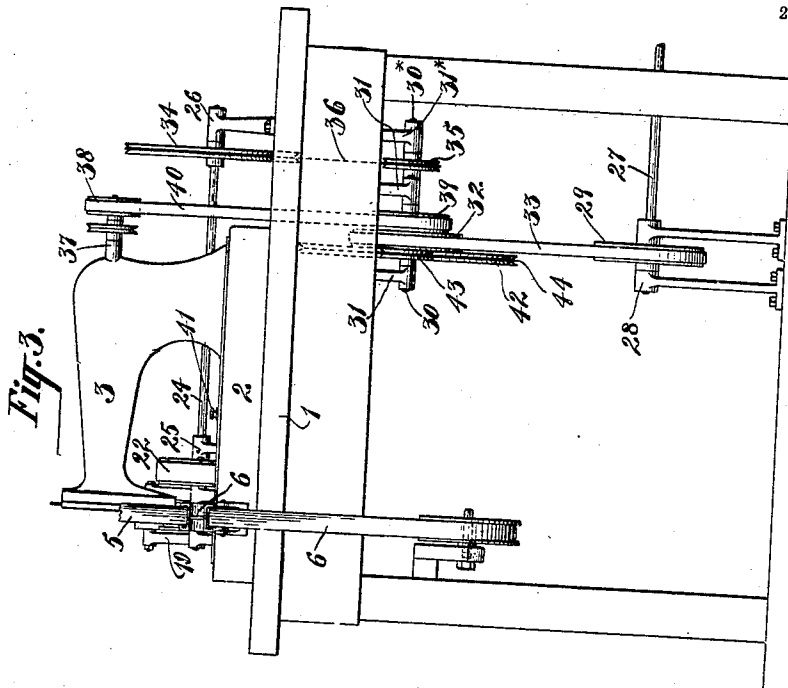


Fig. 2.

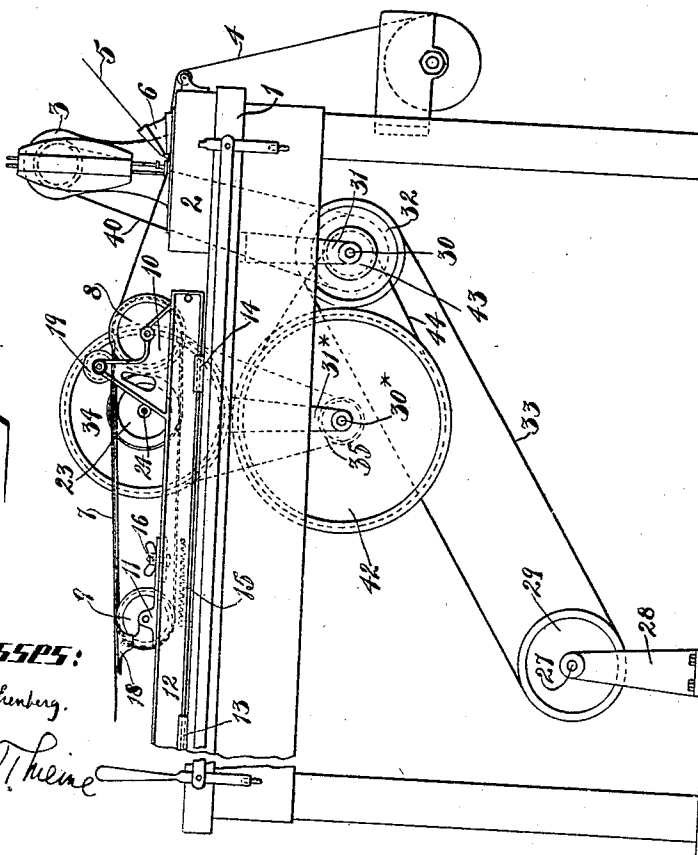
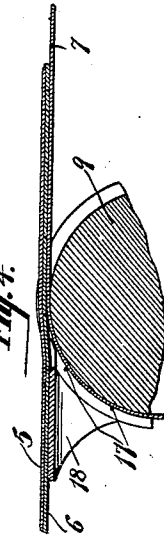


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY H. BATES, OF NEWBURGH, NEW YORK.

FABRIC WITHDRAWING OR FEEDING MEANS FOR SEWING-MACHINES.

No. 841,480.

Specification of Letters Patent.

Patented Jan. 15, 1907.

Application filed May 13, 1904. Serial No. 207,726.

To all whom it may concern:

Be it known that I, HENRY H. BATES, a citizen of the United States, and resident of Newburgh, in the county of Orange and State of New York, have invented a new and useful Improvement in Fabric Withdrawing or Feeding Means for Sewing-Machines, of which the following is a specification.

The object of this present invention is to provide certain improvements in the construction, form, and arrangement of the several parts of a sewing-machine whereby a slip connection is provided between the means for positively withdrawing the material after it has been sewed and the driving mechanism therefor.

A further object of my invention is to provide certain improvements in sewing-machines of that class which are used for uniting two strips to form the straps for use in connection with suspenders.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents in top plan so much of a suspender-sewing machine as is necessary to give a clear understanding of my invention. Fig. 2 is a side view of the same. Fig. 3 is a front view, and Fig. 4 is an enlarged detail view showing the suspender-carrying belt, one of its supporting-rollers, and a portion of the suspender-webbing engaged with the belt.

A suitable table 1 is herein represented upon which is located the sewing-machine proper, the base of which is denoted by 2 and the overhanging arm by 3. The two parts or strips which are to be united to form the suspender-webbing are denoted by 4 and 5, respectively, and they are led in the usual manner through a guide 6 to a point between the needle presser-foot and feed, which parts are not definitely illustrated herein, as they may be of well-known or approved construction.

Back of the sewing-machine I provide an endless suspender-carrying belt 7, which passes around a front pulley 8 and a rear pulley 9, mounted in brackets 10 and 11, respectively, on an adjustable support 12, which in turn is mounted in suitable guides 13 14 on the table 1.

A spring 15 is attached at one end to the table 1 and at its other end to the support 12, tending to draw the support and the belt carried thereby away from the sewing-ma-

chine. The bracket 11 is adjustable upon its support 12 for the purpose of adjusting the tension of the belt 7, which bracket may be locked in its different adjustments by a suitable set-screw 16. The face of the belt 7 is provided with teeth 17 for engaging and retaining the suspender-webbing as it leaves the sewing-machine.

A stripper 18 is carried by the bracket 11 for the purpose of stripping the webbing from the teeth 17.

A friction-roller 19 is mounted in a stationary bracket 10 in position to receive the webbing between it and the face of the belt as the webbing leaves the sewing-machine. This roller may be provided with peripheral grooves 20 therein for permitting the passage of the teeth of the belt beneath the said roller.

The roller 8 is used as the drive-roller of the suspender-carrying belt 7, the shaft 21 of said roller being provided with a friction driven pulley 22, which in turn engages a friction drive-pulley 23 on a cross-shaft 24, mounted in suitable bearings 25 26 on the table 1. This shaft 24 is positively driven from the main drive-shaft 27, as follows: The main drive-shaft 27 is mounted in suitable bearings 28 and is provided with a drive-pulley 29. An intermediate cross-shaft 30 is mounted in brackets 31, depending from the table 1. A pulley 32 on the shaft 30 is driven from the pulley 29 by a band 33. A pulley 34 on the shaft 24 is driven from a pulley 35 on the shaft 30* by a band 36. The shaft 30* is mounted in suitable brackets 31*, depending from the table 1. A pulley 42 is fixed on the shaft 30* and is driven from a pulley 43 on the shaft 30 by a band 44. The sewing-machine-operating shaft 37 is provided with a pulley 38, which is driven from a pulley 39 on the shaft 30 through a band 40.

The feed-adjusting device for controlling the speed with which the webbing is fed through the sewing-machine is denoted by 41. As the intermediate parts for controlling the feed may be of any well-known and approved construction and as they do not form any part of the present invention, they are not illustrated herein.

The relative sizes of the several pulleys herein described are such that the suspender-carrying belt 7 is normally driven without any slip between the pulleys 22 23 at as great a speed as the speed with which the

material is fed through the sewing-machine. If the material is fed through the sewing-machine at a slower rate of speed, the friction drive-pulley 23 is permitted to slip on the driven pulley 22, thus reducing the speed of the suspender-carrying belt 7 sufficiently to remove any undue strain in withdrawing the material from the sewing-machine. This slip connection works automatically, and thus requires no positive adjustment of the driving speed of the driving mechanism of the suspender-carrying belt with respect to the feeding mechanism.

The carrier-belt 7 is provided with marks thereon indicating units of length, so that the suspender-webbing may be separated accurately into the desired lengths for use by cutting mechanism in the hand of the operator, the free end of said webbing being taken, for instance, as it leaves the belt, while a cutter—shears, for example—is held in the right hand of the operator, and as the indicated mark for length appears on the belt the webbing is severed by the shears directly over said mark.

It is evident that various changes in the

connections between the several parts may be made without departing from the spirit and scope of my invention, the gist of the invention lying in the slip connection between the main drive of the machine and the suspender-carrying belt for permitting the automatic reduction of the speed of the belt with relation to the feed of the material through the machine. Hence I do not wish to limit myself strictly to the structure herein shown; but

What I claim as my invention is—

In combination, a sewing-machine, an endless belt for leading the material therefrom, a common drive for the two, and a slip connection between the drive and belt comprising a friction drive-pulley and a friction driven pulley.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 9th day of May, 1904.

HENRY H. BATES.

Witnesses:

W. H. WHITEHILL,
A. D. McCANN.