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TAPE TENSION DEVICE FOR SEWING MACHINES.

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914,769. Patented Mar. 9, 1909.

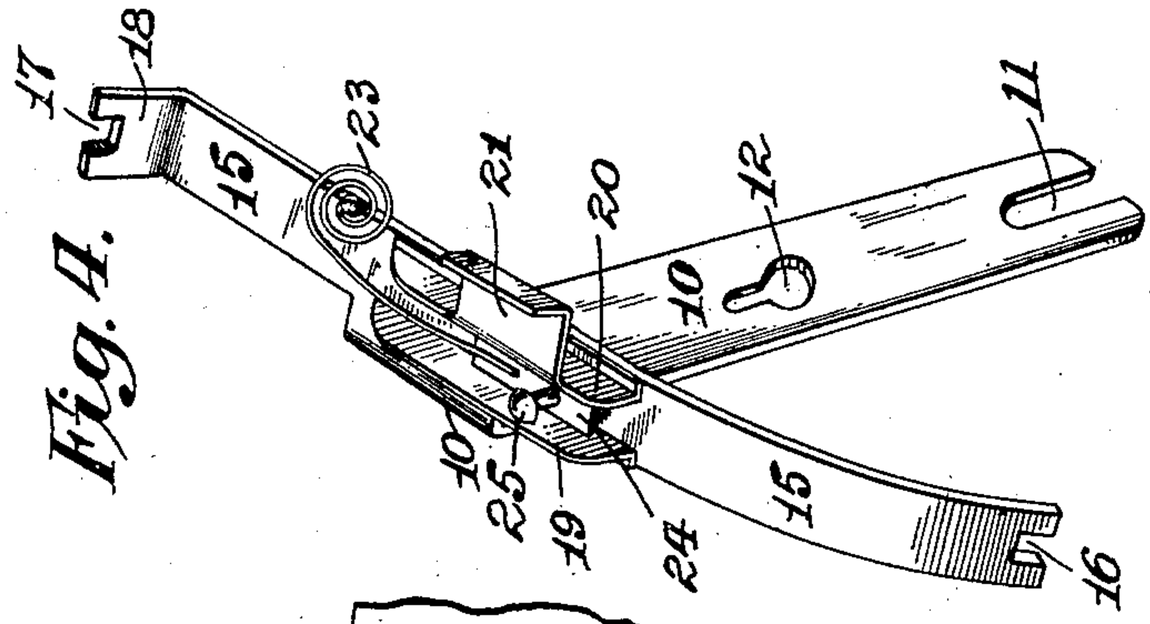

Fig. 4.

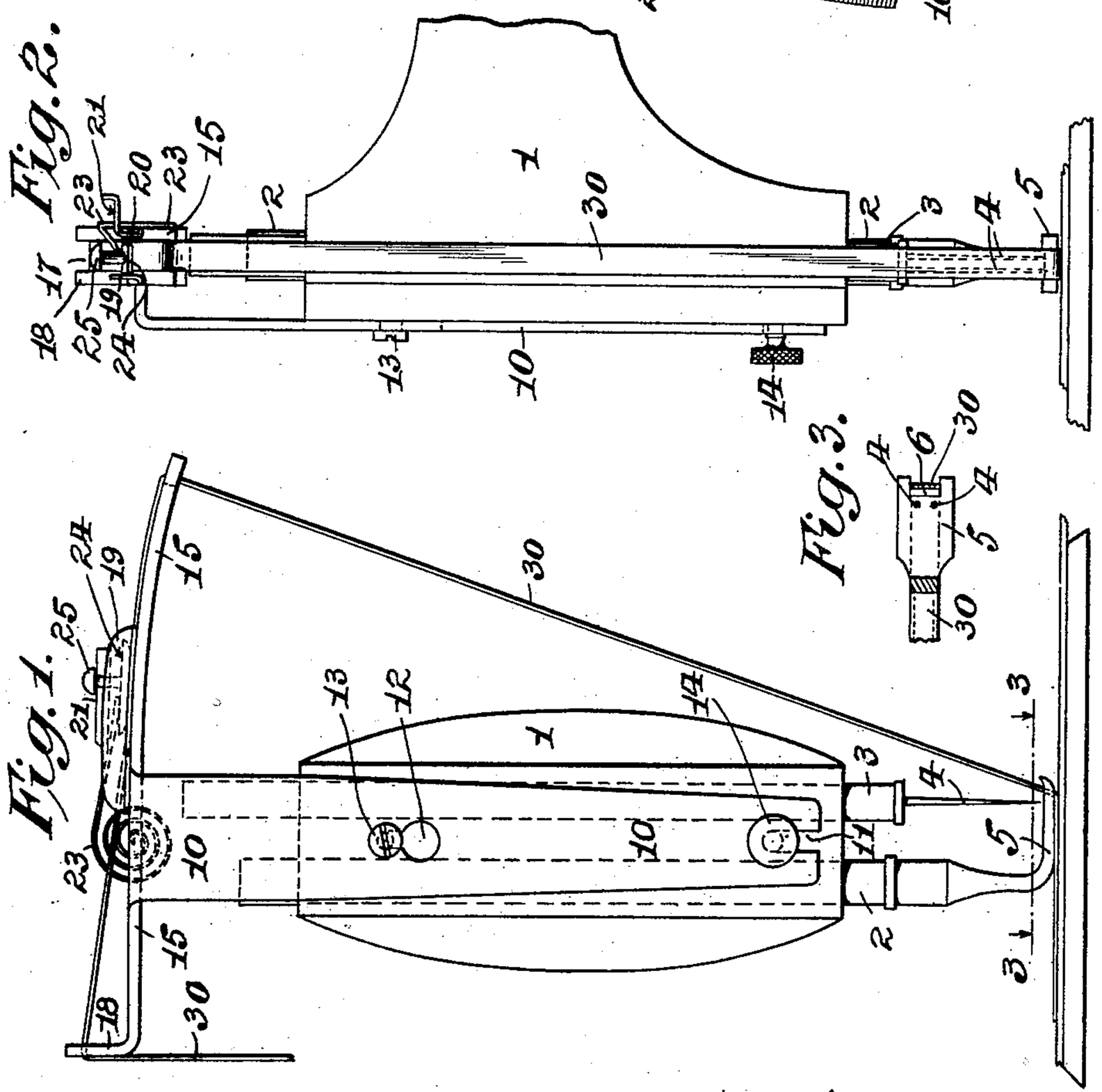

Fig. 2.

Fig. 3.

Fig. 1.

Attest:
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UNITED STATES PATENT OFFICE.

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TAPE TENSION DEVICE FOR SEWING-MACHINES.

No. 914,769. Specification of Letters Patent. Patented March 9, 1909.

Application filed June 27, 1908. Serial No. 440,684.

To all whom it may concern:

Be it known that I, CORNELIUS WEISS, a citizen of the United States, and resident of Brooklyn, Kings county, New York, have invented certain new and useful Improvements in Tape Tension Devices for Sewing-Machines, of which the following is a specification.

This invention has relation to sewing machines and has for its object to provide, for ready attachment to and detachment from the head of an ordinary sewing machine, a removable tension device for feeding tape to the ordinary presser foot, the latter being a permanent part of the machine for use in the ordinary work for which the machine is adapted, such removable tension device to be readily adapted for use on machines of any of the ordinary patterns, using either a single, or more than one needle.

My invention consists in a tension guide for tape, readily attachable to and removable from the head of any ordinary sewing machine, and adapted for use with any of the known forms of machine without in any wise affecting their usual function, the only requirement being that the head be provided with threaded holes to receive ordinary attaching screws such as are well known in the art, the improved construction, arrangement and combination of the parts of such a tape tension device being hereinafter fully described and afterward specifically claimed.

In the drawings, Figure 1 is a side elevation of the head of a sewing machine embodying my invention; Fig. 2 is a front elevation of the same; Fig. 3 is a top plan view of the presser foot beneath the plane of the line 3—3 in Fig. 1, and Fig. 4 is a perspective of the detached tension device.

In the drawings, 1 is a part of the frame or head of a sewing machine, 2 is a presser foot bar and 3 is a needle bar to which are secured two needles 4. A presser foot 5 at the lower end of bar 2 serves to coöperate in this instance with the pair of needles and it is transversely slotted at 6 to receive the tape hereinafter mentioned. It will be understood that these parts are all arranged to be moved and coöperate together in the usual manner.

My tension device comprises a bracket plate 10 provided with a notch 11 at its lower edge and a key hole slot 12 a little above its center. A screw or pin provided with a head 13 is permanently or temporarily secured to the head 1 and is adapted to engage in the key hole slot and a second screw or pin preferably threaded and provided with a milled head 14 is adapted to engage in the recess 11. By this means the bracket plate 10 is readily put on and taken off of the machine. Secured to or made integral with the plate 10 is a long guide member 15 which, when in position for use, occupies a substantially horizontal position, as in Fig. 1, above the head of the machine, extending to the front and rear of the head. This guide member is notched at 16 at its forward end and is turned up at its rear end forming a vertical flange 18, a notch 17 being formed in the top of said flange. Arranged at one side of the member 15 is an upwardly projecting flange 19 and at the opposite side a second upwardly projecting flange 20, the latter being bent twice to form a substantially horizontal shelf 21.

At any convenient place along the guide 15 there is secured a coiled spring 23 to the outer end of which is secured a flat pressing foot or tension block 24, provided with a finger piece or handle 25, by which the pressure block may be lifted and placed upon shelf 21 when desired, for manipulating the tape. The spring 23 is shown in this instance, as a wire spring which will permit of the movement laterally of the block 24 to place it upon the shelf 21 when raised from between the flanges 19 and 20 of the guide, or when raised off the shelf 21 to place it on the tape on the guide.

The tape 30 is placed along on the guide 15, through the notches 16 and 17, and led down through the slot in the presser foot and under the latter beneath the needles. The pressing block 24 is then raised, or taken from the supporting shelf 21, and placed on top of the tape between the guide flanges 19 and 20. The tape is thus by the pressure of the block 24, kept under substantially uniform tension, whether it is unrolled from a reel or fed from a loose mass into the guide. The tape 30 in passing to the guide member, is guided in notch 17, between its vertical walls, so that it is properly laid between the flanges 19 and 20 of the guide, and when it passes from the forward end of the guide member 15, it must be turned downward and inward toward the presser foot. To facilitate this, the tape passes through notch 16 and is guided by

the horizontal walls of that notch to prevent it slipping off the side, or being slid back on the guide member.

By simply slipping the bracket plate 10 off the pins or screws 13 and 14, the whole tension guide may be removed from the machine, and the machine, whether employing one or a plurality of needles, used for its ordinary purposes without alteration.

A special advantage attending the use of this invention is that the tape may be taken from a loose pile, it being only necessary to pass the end through the notches and between the side walls of the guide and thence down to the presser foot, the guide serving to feed it properly from such pile without the necessity of feeding it from a spool in order to deliver it properly to the work point.

What I claim as new is:—

1. A tape tension device for sewing machines and the like comprising a bracket adapted to be detachably secured to the head of the machine, a substantially horizontal guide secured to the bracket to receive the tape and along which the tape is adapted to travel, and a pressure member adapted to press upon and hold the tape in the guide while permitting it to travel, in combination with means for holding the pressure member against the tape, and a separate support for the pressure member when not in use.

2. A tape tension device for sewing machines and the like comprising a bracket adapted to be detachably secured to the head of the machine, a substantially horizontal guide secured to the bracket to receive the tape and along which the tape is adapted to travel, and a pressure member adapted to press upon and hold the tape in the guide while permitting it to travel, in combination with means for holding the pressure member against the tape, comprising a coiled wire spring secured to the bracket and the member at its opposite ends, and a separate support for the pressure member when not in use.

3. A tape tension device for sewing machines comprising a substantially horizontal tape guide attachable to the top of the head of the machine to project to the rear and front thereof, said guide being provided with a vertical flange at its rear end having a notch in the top edge thereof with vertical side walls, and a notch in its forward end having horizontal side walls.

4. A tape tension device comprising a vertical bracket adapted to be removably attached to the head of a sewing machine, a substantially horizontal guide plate secured upon the top of the bracket notched at one end and having the other end bent upwardly and notched, vertical side flanges upon the guide to prevent lateral deflection of the tape, one of said flanges being bent over horizontally to form a shelf, a pressure or tension block adapted to rest upon the guide between the flanges, and a spring securing the pressure block and causing it to yieldingly press upon the guide.

Witness my hand this 24th day of June 1908, at New York, N. Y.

CORNELIUS WEISS.

Witnesses:
HERMAN MEYER,
WILLIAM R. BAIRD.