

Aug. 30, 1938.

A. PRATI

2,128,758

CLAMPING PIN DEVICE FOR SMOOTHING AND TIGHTENING
FABRICS FOR CUTTING GOODS FOR CLOTHING
Filed Sept. 22, 1937

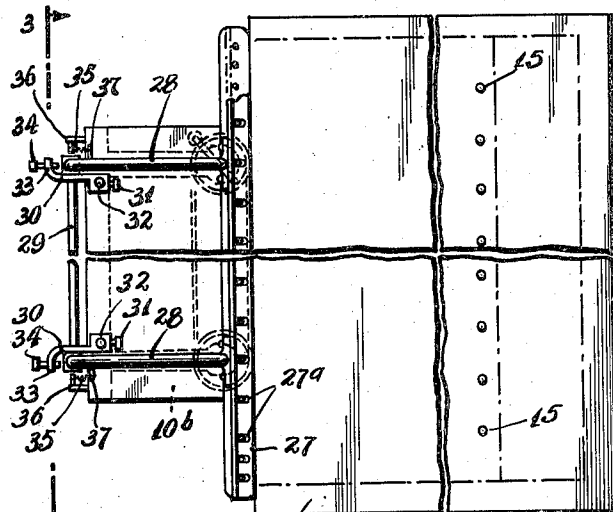


Fig. 1.

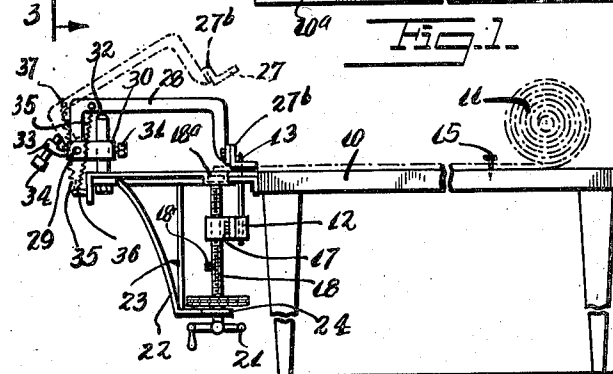


Fig. 2.

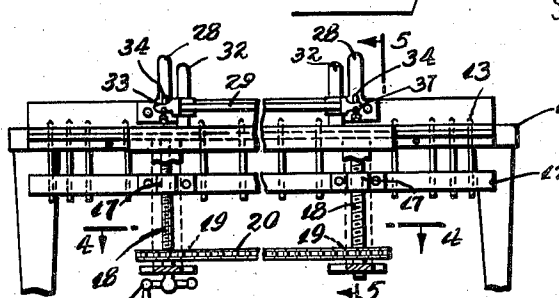


Fig. 3.

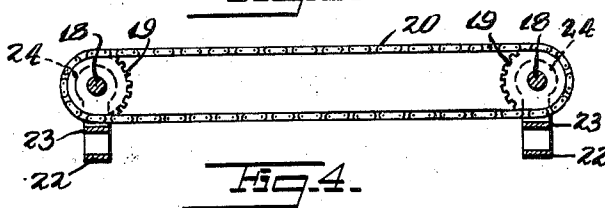


Fig. 4.

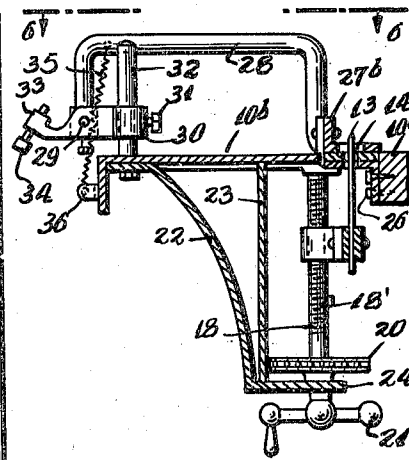


Fig. 5.

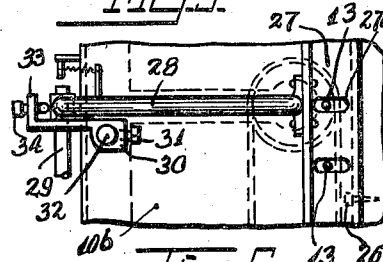


Fig. 6.

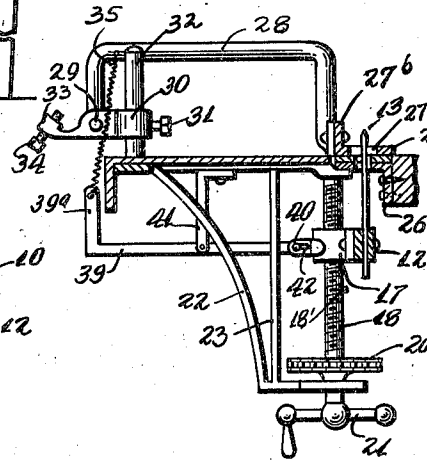


Fig. 7.

INVENTOR
Armando Prati
BY *Jottan H. Holschitz*
ATTORNEY

UNITED STATES PATENT OFFICE

2,128,758

CLAMPING PIN DEVICE FOR SMOOTHING
AND TIGHTENING FABRICS FOR CUTTING
GOODS FOR CLOTHING

Armando Prati, Brooklyn, N. Y.

Application September 22, 1937, Serial No. 165,157

5 Claims. (Cl. 164-79)

This invention relates to new and useful improvements in a clamping pin device for smoothing and tightening fabrics for cutting goods for clothing.

5 The invention has for an object the construction of a device as mentioned which is characterized by a table upon which a roll of fabric may be placed, a pin support member beneath said table having projecting pins extending through
10 apertures in said table to the top thereof and adapted to hold the end of said roll of fabric.

It is proposed that another portion of the roll of fabric be held down by the use of tacks. The area between these held portions is held tight and
15 is used for cutting out the patterns of garments.

Still further the invention contemplates the provision of a means for holding said pin support member in various vertical positions so that it is possible to control the extent to which the pins
20 project from the top of the table.

Still further the invention proposes the provision of a clamp strip with slots for the projecting pins movably supported on the top of said table to clamp down on the table and over the
25 pins.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:—

Fig. 1 is a fragmentary plan view of a table
35 with a clamping pin device constructed according to this invention.

Fig. 2 is an elevational view of the device shown in Fig. 1.

Fig. 3 is an end view taken on the line 3—3 of
40 Fig. 1.

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is a fragmentary enlarged sectional view taken on the line 5—5 of Fig. 3.

45 Fig. 6 is a fragmentary plan view looking in the direction of the line 6—6 of Fig. 5.

Fig. 7 is a sectional view similar to Fig. 5 but illustrating a modification of the invention.

The clamping device, according to this invention, is used in conjunction with a table 10 adapted to receive a roll of fabric 11, the end portion of which is extended over the table. A pin support member 12 is arranged beneath the table and is provided with a plurality of projecting pins
55 13 extending through apertures 14 in the table

to the top thereof. The free end of the fabric 11 is engaged on the projecting pins 13 so that it is held firmly. The fabric is secured by a line of transverse tacks 15. The area between the tacks 15 and the pins 13 is used for cutting out patterns of garments and the like.

A means is provided for holding the pin support member 12 in various vertical positions and includes a pair of follower bushings 17 mounted on the side of the pin support member 12 and threadedly engaged by screws 18. These screws 18 are rotatively supported at their upper ends 18^a and extend downwards. These screws are connected for unitary rotation. Each screw 18 is provided with a gear 19, and these gears are
15 connected together by a chain 20. One of the gears 19 has a handle 21 associated with one side thereof by which it may be turned.

The screws 18 are provided with stop pins 13' to limit the lower motions of pins 13.
20

A means is provided for rotatively holding the lower ends of the screws 18. This means includes rigid straps 22 and 23 mounted upon the underside of the table top and connected with bearings 24 coaxially of the gears and rotatively supporting the screws 18. Rotations transmitted to the screws 18, cause the follower bushing 17 to move upwards or downwards and so lift or lower the pin support member 12.

The table 10 comprises a main portion 10^a upon
30 which the roll of fabric is positioned. At one side the table has an extension portion 10^b. It is this extension portion which is provided with and supports the screws 18. The extension portion 10^b is secured upon the edge of the table portion 10^a by the use of fastening elements 26 (see Fig. 5).

A clamp strip 27 is provided, which is adapted to engage along the edge of the table portion 10^a and is formed with a plurality of slots or openings 27^a through which the pins 13 may project. This clamp strip has a flange portion 27^b by which it is attached to a pair of parallel arms 28 extending at right angles thereto. Each of these arms is substantially of inverted U-shape. At their rear ends these arms 28 are secured to a shaft 29 which is rotatively supported on standards 30. These standards 30 are clamped by screws 31 upon a pair of vertical posts 32 which are mounted on the table portion 10^b.
50

From each of the standards 30 there projects a finger 33, extended over into the path of pivoting of the arms 28. Each of these fingers has an adjustment screw 34 adapted to be adjusted to limit the amplitude through which the arm 28
55

may pivot. Tension springs 35 are secured at one of their ends to lugs 36 mounted upon the end of the table portion 10^b. These lugs are arranged in a vertical line with the shaft 29. The upper end of each of the springs 35 is attached to a pin 37

mounted on the arm 38. These pins 37 are so positioned that normally, with the clamp strip 27 in its lowered position, as shown in full lines in Figs. 2 and 5, the springs 35 act to urge the clamp strip downwards. But if the clamp strip is manually moved to pivot the arms 28 anti-clockwise as viewed in Fig. 2, the springs 35 will pass the dead center of a plane extended through the axis of the shaft 29 and the lugs 36. Now the springs 35 will act to hold the arms 38 in their lifted or raised positions as shown by the dot and dash lines in Fig. 2.

In Fig. 7 a modified form of the invention has been disclosed in which a means is provided for automatically changing the tension of the springs 35 when the position of the pin support member 12 is varied. This means includes a lever 39 for each of the followers 17. Each lever 39 is connected by a pintle 40 to one of the followers 17. Each lever 39 is pivotally supported intermediate of its ends by a bracket 41 which is mounted on the table portion 10^b.

The outer end of each lever 39 has an upward extending portion 39^a and the lower end of the spring 35 is connected to this portion 39^a. The arrangement is such that when the screws 18 are turned to move the followers 17 and consequently the pin support member 12 downwards so as to retract the pins 13, the levers 39 will pivot to reduce the tension of the springs 35 and so reduce the downward pressure of the clamp strip 27. Vice versa, when the screws 18 are turned to further extend the pins 13 the levers 39 will pivot to increase the tension of the springs 35. The front ends of the levers 39 are provided with slots 42 in which the pins 40 work so that it is possible for the followers 17 to move in the vertical direction while the ends of the levers 19 move in arcuate paths.

The operation of the device is as follows:—

When the arms 28 are in their raised positions the clamp strip 27 will be off the pins 13. The free end portion of the roll of fabric 11 is engaged on the pointed end of the pins. The clamp strip 27 is then moved downwards to engage over the pointed ends of the pins and hold the fabric against coming off. The springs 35 will hold the arms 28 in either their lowered or raised positions. In their lowered positions resilient pressure is being applied on the cloth portion over the pins 13. In their raised positions they are arranged and held substantially as shown in Fig. 2 by the set screws 34. The roll of fabric 11 is then rolled over the table 10 and has a portion adjacent the roll that is secured down by the line of tacks 15. The fabric is now made tight and it is possible to cut out the fabric according to patterns to make garments.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. A clamping pin device for smoothing and tightening fabrics for cutting goods for clothing

comprising a pair of posts vertically mounted on a table, collars adjustably mounted on said posts, a rod turnably mounted between said collars, radial fingers on said rods and having free ends, a clamp strip with slots for projecting pins supported upon the free ends of said radial fingers, a pin support member beneath said table and having projecting pins extending through apertures in the table to the top thereof, and means for holding said pin member in various vertical positions, comprising a pair of followers mounted on said pin member, a pair of rotatively supported screws threadedly engaging said followers, and means for turning said screws in unison.

2. A clamping pin device for smoothing and tightening fabrics for cutting goods for clothing comprising a pair of posts vertically mounted on a table, collars adjustably mounted on said posts, a rod turnably mounted between said collars, radial fingers on said rods and having free ends, a clamp strip with slots for projecting pins supported upon the free ends of said radial fingers, a pin support member beneath said table and having projecting pins extending through apertures in the table to the top thereof, and means for holding said pin member in various vertical positions, comprising a pair of followers mounted on said pin member, a pair of rotatively supported screws threadedly engaging said followers, and means for turning said screws in unison, comprising gears mounted upon the screws, a chain connecting said gears, and a handle for turning one of the gears.

3. A clamping pin device for smoothing and tightening fabrics for cutting goods for clothing, comprising a pin support member beneath a table and having projecting pins extending through apertures in said table to the top thereof, means for holding said pin support member in various vertical positions, and a clamp strip with slots for said projecting pins movably supported on the top of said table to clamp down on the table and over said pins, arms supporting said clamp strip, resilient means connected with the clamp strip and urging it downwards over the projecting pins, and an arrangement whereby when said arms are raised the resilient means will act to hold them in their raised position.

4. A clamping pin device for smoothing and tightening fabrics for cutting goods for clothing, comprising a pin support member beneath a table and having projecting pins extending through apertures in said table to the top thereof, means for holding said pin support member in various vertical positions, a clamp strip with slots for said projecting pins movably supported on the top of said table to clamp down on the table and over said pins, a pair of parallel arms supporting said clamp strip, each of said arms being of inverted U-shape with the clamp strip mounted on one of the ends thereof, a shaft supporting the other of the ends of said arms, springs connected between portions of said arms and said table top to urge the arms downwards and when the arms are pivoted to hold the arms upwards, and stops for holding said arms in said raised positions.

5. A clamping pin device for smoothing and tightening fabrics for cutting goods for clothing, comprising a pin support member beneath a table and having projecting pins extending through apertures in said table to the top thereof, means for holding said pin support member in various vertical positions, a clamp strip with slots for said projecting pins movably supported on the top of said table to clamp down on the table and over

said pins, a pair of parallel arms supporting said clamp strip, each of said arms being of inverted U-shape with the clamp strip mounted on one of the ends thereof, a shaft supporting the other 5 of the ends of said arms, springs connected between portions of said arms and said table top to urge the arms downwards and when the arms are pivoted to hold the arms upwards, and stops for holding said arms in said raised positions, each of said springs being connected with a lever pivotally mounted, and means connecting said lever indirectly with said pin support so that when the pin support is moved upwards the tension of said 5 springs are increased, and when moved downwards the tension of said springs is slackened.

ARMANDO PRATI.