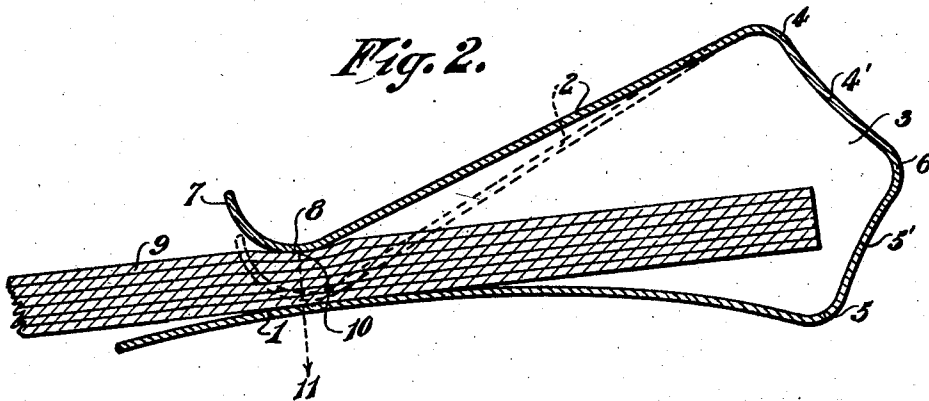
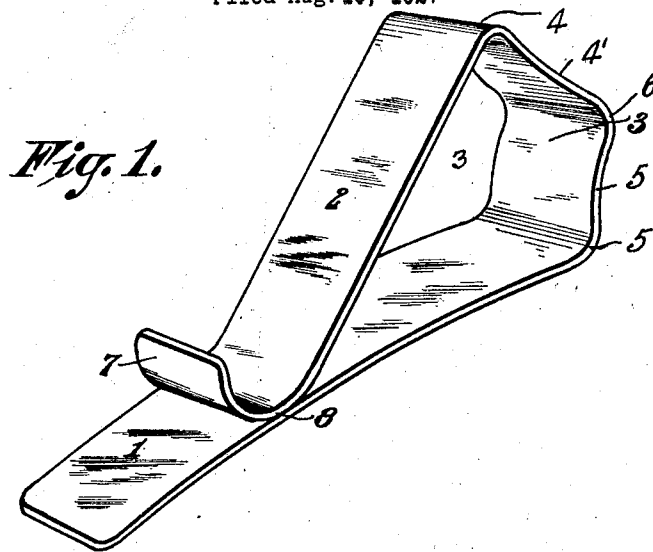


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SPRING CLIP FOR HOLDING LEATHER

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# UNITED STATES PATENT OFFICE.

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## SPRING CLIP FOR HOLDING LEATHER.

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This invention relates to improvements in spring clips.

An object of the invention is to provide a clip for temporarily securing together a large number of articles, as leather, cloth and articles of other like material. The present construction of spring clip has been found to be very useful in firmly securing or holding together pieces of leather for articles that are in the course of manufacture, as for example in the boot and shoe industry.

One of the purposes of the spring clip is to provide a device which will exert a firm pressure substantially along a straight line, or, in other words, the frictional resistance is applied on a very small surface of the material that is being clamped, with the result that a stack of leather, paper, or other like material is firmly secured against displacement when the pile of leather, rubber cloth, or paper is undergoing the cutting, sewing, or other operation. Heretofore, spring clips have been devised in which long or extended clamping or pinching surfaces are employed. This form of clip has been found to be inefficient for the reason that the frictional resistance is distributed over a too large surface. The present spring clip is designed to effectively remove this objectionable feature.

The present spring clip comprises, in general, two spring arms that are normally in contact with each other. This normal position of the spring arms is brought about by forming the clip from one piece of sheet steel that is highly tempered, the arms of which are connected by forming the material into substantially an angular shaped loop, the sides of which have imparted thereto a "set" which always operates to cause the arms to move towards each other. One of the arms is made very much shorter than the other with an upturned curved end of short radius. This short arm normally rests upon the other or longer arm. By means of this construction a very efficient spring clip construction is provided.

Further objects and nature of the invention will be set forth in the body of the description with reference to the drawings and specifically pointed out in the claim.

Referring to the drawings:

Fig. 1 is a perspective view of the spring

clip, showing the two spring arms in contact, and

Fig. 2 is a view showing the clip in use for securing a stack of material in place.

Referring to the drawings in detail: 1 and 2 designate the two clamping arms of the clip, the arm 1 being much longer than the arm 2. These arms are connected together by means of the bent loop portion 3 having the flat sides 4 and 5, these sides are given a permanent "set" when formed as indicated by the depressions 4' and 5'. Point 6 designates the apex portion of the loop. The arm 2 is formed at its lower end with an upwardly extending curve 7 of short radius, the lower part 8 of this curved portion normally rests directly upon the upper surface of the arm 1 as shown in Fig. 1.

As shown in Fig. 2 in use, the layers of material 9 that are being clamped are inserted between the two arms. The sharply curved part 7 rests directly upon the upper surface of the pile of material. It will be observed that this curved part of the arm 2 at its point of contact 8 forms depressions in the layers of the material being clamped, as indicated at 10, in other words the pressure of the arm 2 is transmitted downwardly through all of the layers to the upper surface of the arm 1, as indicated by the line 11. The point of contact is therefore confined to a single transverse line by means of the small point of contact 8, of the curved portion 7 of the arm 2. The material is, therefore, held very firmly against lateral or sliding movement between the arms. It is of course obvious that the greater distance that the arms are separated the greater the pressure exerted on the material.

The upwardly curved end 7 permits the material to be readily inserted between the arms.

It is to be understood that I do not limit myself to the exact dimensions shown, but it is to be understood that the broad idea of utilizing in a spring clip having two clamping arms with one arm shorter than the other and formed with an upwardly curved end of small radius which normally engages the other arm is new as far as I am aware.

The advantages of the present spring clip among others, are that layers of leather or cloth may be firmly held in place by gripping them at one line of contact, also, they

may be readily inserted and removed. The loop 3 permits the arms being separated a wide distance.

What I claim is:

- 5 A spring clip comprising an integral member having two arms of unequal length and connected by a loop portion with inwardly set sides, the shorter arm being curved sharply upward at its end and formed on a

curve of such a radius as to exert downward 10 pressure along a single line of contact only on the material which is inserted between the arms, the inwardly set connecting loop of the arms operating for permitting the arms to be separated a substantially wide 15 distance.

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