(No Model.)

W. A. POLMATEER.

TRIMMING ATTACHMENT FOR SEWING MACHINES.

No. 561,813. Patented June 9, 1896.

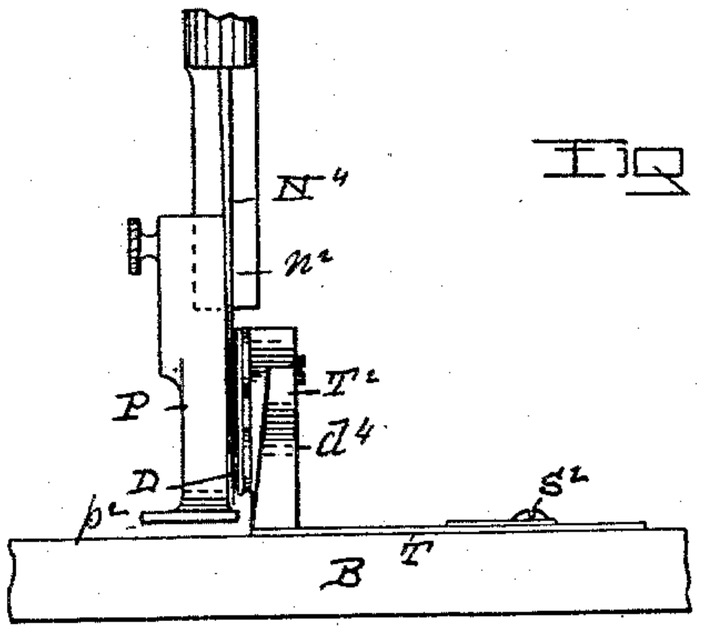

Fig 1

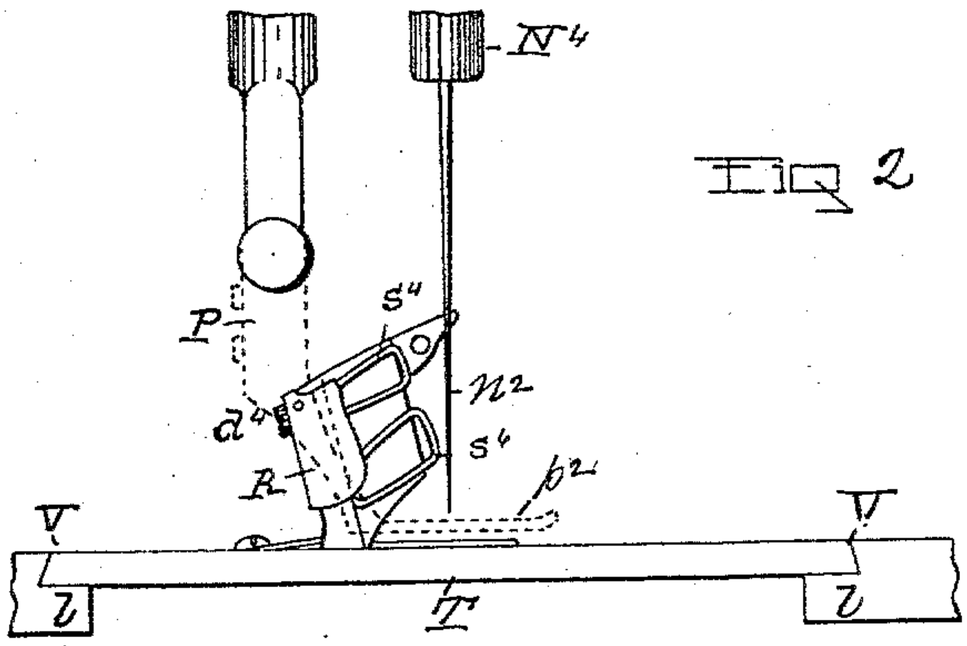

Fig 2

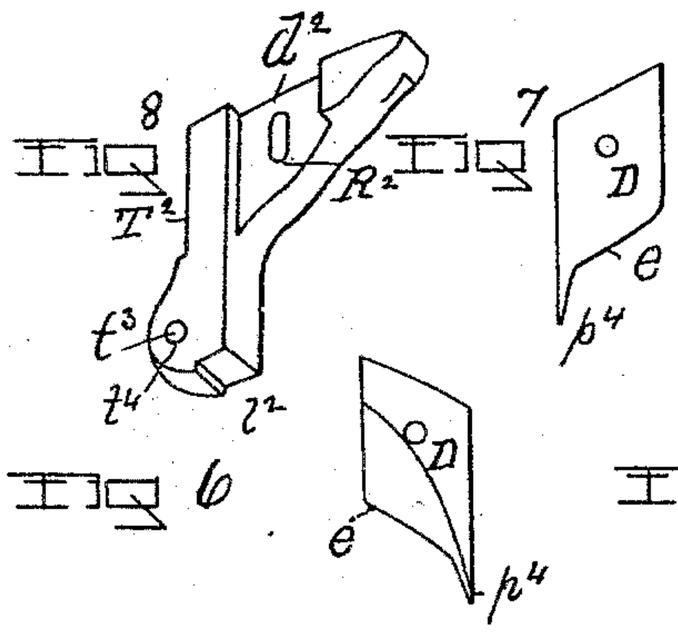

Fig 8 Fig 7 Fig 6

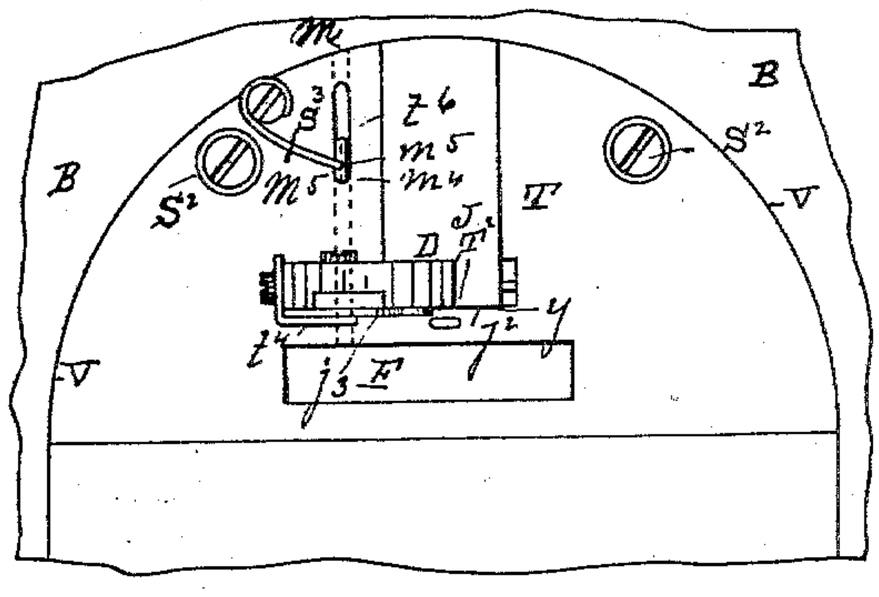

Fig 4

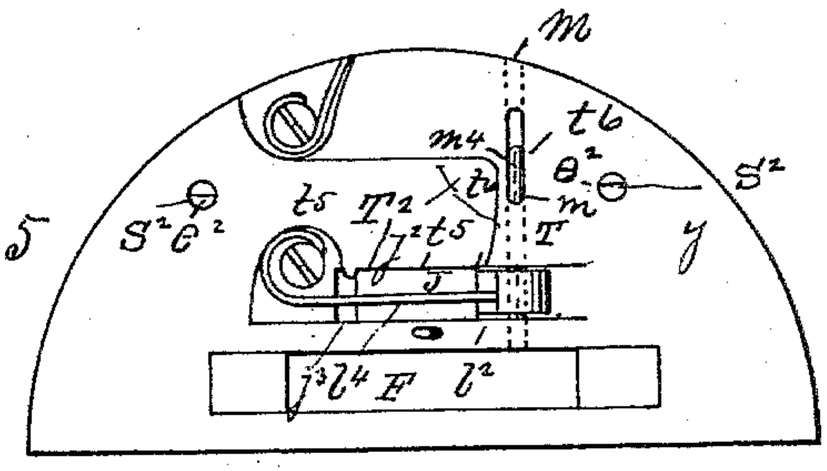

Fig 5

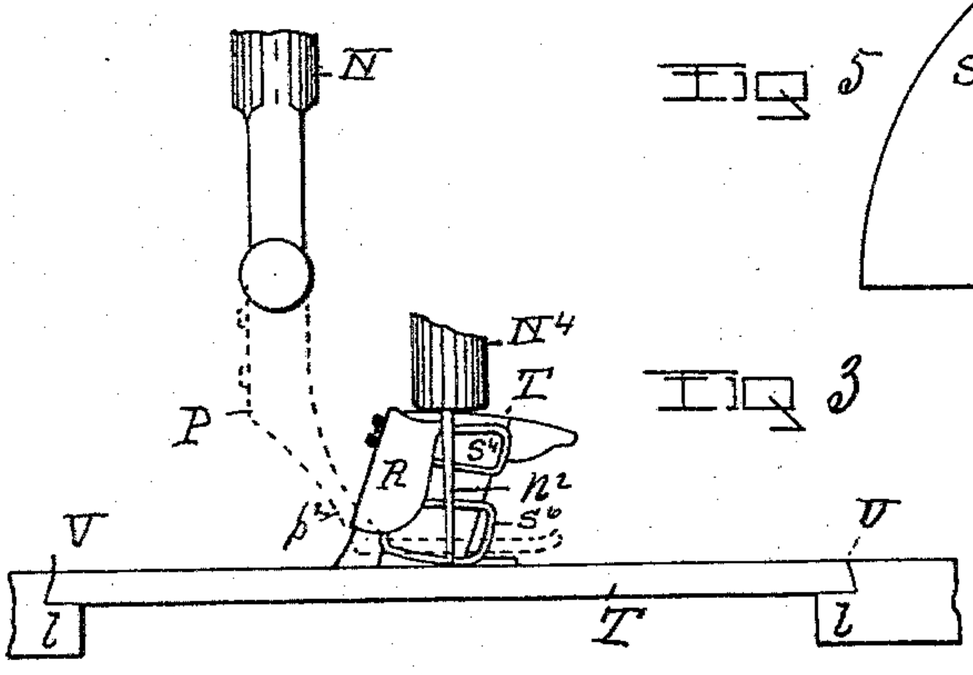

Fig 3

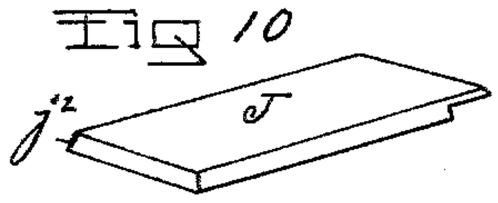

Fig 10

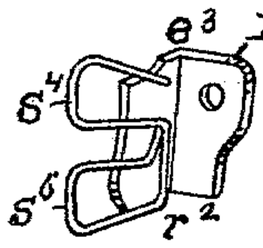

Fig 9

WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM A. POLMATEER, OF JOHNSTOWN, NEW YORK.

TRIMMING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 561,813, dated June 9, 1896.

Application filed April 3, 1895. Serial No. 544,274. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. POLMATEER, of Johnstown, Fulton county, State of New York, have invented new and useful Improvements in Trimming Attachments for Sewing-Machines, of which the following is a specification.

My invention relates to that class of attachments to sewing-machines which are used to trim the edges of material that is being sewed; and my invention has for its object to better adapt this class of devices to the uses for which they are designed.

My invention consists, as will be more detailed hereinafter in the claims, in the combination, with a shearing edge formed in the table-plate of a sewing-machine, of a cutting-blade, which at one of its ends, by means of a carrier or holder, has a hinged connection with the table-plate, by which it is adapted to be moved on its hinged connection so as to make a shearing engagement with the edge of the slot formed in the table-plate, so as to trim off the edges or articles being sewed.

My invention also consists, as will be more fully set forth in the claims, in subcombination of the parts of my attachment where they perform specific function.

Accompanying this specification to form a part of it there is one plate of drawings, containing ten figures, illustrating my invention, with the same designation of parts by letter-reference used in all of them.

Of the illustrations, Figure 1 is a side elevation of a part of the needle-bar and part of the table of a sewing-machine, showing also the needle and my trimmer, with the parts connected to the table. Fig. 2 is an end elevation of the parts shown at Fig. 1, with the trimmer shown as raised on its hinged connection. Fig. 3 is another end elevation of the parts shown at Fig. 2, with the trimmer shown as moved down on its hinged connection into a cutting position by the needle-bar clamp. Fig. 4 is a top view of the apparatus. Fig. 5 is a view of the under side of the table part to which my improved trimmer attaches. Figs. 6 and 7 show in elevation opposite sides of the cutting-blade. Fig. 8 is a perspective of the blade-carrier shown as detached. Fig. 9 is a perspective of the cutting-blade carrier and the spring by which the apparatus when being operated bears upon the fabric or material being cut. Fig. 10 is a perspective of a plate which when in position forms one side of the slot in which the cutting-blade enters when in operation.

The several parts of the apparatus thus described are designated by letter-reference, and the function of the parts is described as follows:

The letter B designates a part of the machine-table, P the presser-leg, and p^2 the presser-foot, the latter being shown by a dotted line at Fig. 2. The letter N designates the needle-bar, n^2 the needle, and n^4 the needle-clamp, all of which parts are of the usual and ordinary construction, and by which the needle-bar and needle are operated to be vertically reciprocated through the ordinary and usual means, which are not shown.

The letter v designates an opening cut out of the table base or plate part for the inserting of the plate or base part T, to which my improved attachment is connected, and the letter F designates a slot made in the said plate T for the operation of the usual form of rotating feed mechanism. This table part T attaches to a shelf or ledge l, formed in the table-plate proper where cut out at v, and this table-plate part T connects with the ledge l by means of screws S^2, which have the sockets for the screw-heads made slightly larger than the latter, and with the shank-passages o^2 for the screw-shanks also made a little larger than the screw-shanks, so as to make the connection between the plate T and the bed proper slightly adjustable laterally.

The letter T^2 designates the trimmer-blade carrier, which is provided with a downwardly-extended leg t^3, having on its lower end a pintle-shaft passage t^4, and the letter t^5 designates a slot made in the table-plate part T for the reception of the journaled lower end of the trimmer-carrier.

The letter m designates a horizontal passage made through the plate part T (represented by a dotted line) for the insertion of the pintle-shaft m^4, on which the trimmer-carrier oscillates as therein journaled or hinged. This shaft-passage extends clear through the plate at one side of the slot t^5, so as to pass through the passage t^4 of the carrier to extend into said plate into the other side of the slot, and thus

form a bearing for the holder on which it may swing up and down.

The letter t^6 designates a vertical slot made in the table-plate part T in line with the pintle-shaft passage m, so as to expose the face of the latter where within said passage.

The letter m^5 designates a keeper-spring opening or passage formed in the pintle-shaft m^4, and S^3 a coil-spring having its outer end bent downwardly at right angles to its body part to enter the passage m^5, formed in the shaft m, and the function of this spring is to retain the pintle-shaft in journaled engagement with the trimmer-carrier, as shown at Fig. 4. This trimmer-carrier is made with a slot d^2, by which the trimmer-blade D may be adjustably secured therein.

The trimmer or blade D has its cutting edge e pointed at p^4, so that its pointed end will enter the material being trimmed in advance of the rest of the blade. This blade or trimmer D connects with the holder or carrier T^2 by means of a recess R^2, formed in the latter, and a set-screw d^4, passing through the slot d^2, made in the holder or carrier, and by which means of adjustment the blade can be retained in a cutting position after having become dulled and shortened by sharpening.

The letter R designates a retaining-plate, which attaches to the back of the holder with its side r^2 embracing the side of the blade, and, while I have shown the carrier formed with the recess R^2, if desired the latter may be omitted and the blade caused to rest against the side face of the holder and be held in place by the retaining-plate and set-screw.

The letter S^4 designates an **S**-form spring, which, at its upper end e^3, is connected to the inner face of the retaining-plate R, with the lower lobe of the spring (indicated at s^6) made to project downwardly below the cutting edge of the trimmer or blade D to engage with the material being trimmed in advance of the blade, the function of this spring being to press upon the material being trimmed while being sewed and to prevent its adhering to and being drawn up by the blade when the latter rises.

The letter l^2 designates a lug projected laterally from the journaled end of the carrier T^2, and the letter l^4 designates a spring connected to the bottom of the table-plate part T, with its free end adapted to press upon the lug l^2, so as to throw up the cutting-blade after it has been moved downwardly by the engagement of the needle-bar clamp and the holder or carrier, as shown at Fig. 5.

The letter J designates a plate which on its edge j^2 is slightly rounded off, and where thus constructed the inner edge of this plate forms with the edge j^3 of the table-plate part T a cutting-slot y for the descent of the cutting-blade and its passage through the material.

The parts as thus constructed are operated as follows: As the needle-bar descends its needle-clamp N^2 makes a cam engagement with the top of the trimmer holder or carrier, causing it to swing down on its journaled connection and so that its cutting edge e will pass through the material being sewed close up to the line of stitching, and, after passing through the material and the slot y, the needle-bar, as it rises, allows the spring l^4 to move upwardly the carrier and cutting-blade. As the carrier and cutting-blade descend the spring l^4 bears on the material in advance of the cutting and also after the holder commences to rise, thus freeing the material from the blade when the latter rises and engaging with the material to hold it before the cutting of the blade commences. While I have shown an **S**-form spring as applied for the functions herein stated, any well-known form of spring which will perform these same functions in the same manner may be used.

I am aware that a blade has been hinged to a plate made adjustable to a sewing-machine table with the blade actuated by a lever operated by the needle-bar, and that a trimming-blade has also been operated by the latter. These constructions differ from mine in the fact that I operate the blade-carrier by direct contact with the needle-bar clamp and combine with the pointed blade a spring which engages with the material being cut in advance of the pointed and puncturing blade, by the action of which latter thus constructed glove material and thin elastic kid or leather, as well as elastic knit material, are held in place while being cut and prevented from crawling away from the blade.

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

1. The combination with a sewing-machine having a table-plate B, with a cutting-slot therein, a vertically-reciprocating needle-bar N, provided with a needle-clamp N^4, of a trimming attachment comprising the carrier T^2, at its lower end pivoted to the said table-plate, a cutting-blade D, mounted on the carrier and having a pointed lower end p^4, to puncture the material and hold it in position before trimming, and a spring S^4, also mounted on the said carrier, whereby, as said needle-bar descends, its clamp will engage with and force downwardly the carrier, the spring operating to engage and hold the material being trimmed in advance of the blade, and also to give the carrier its upward motion, substantially as described.

2. The combination with the carrier T^2, having the downwardly-projected leg t^3 the knife D, having the pointed end p^4, and cutting edge e, and having the spring S^4, both mounted in said carrier, and provided with means to be operated by the needle-bar N, substantially as described; of the table-plate T, having the horizontal shaft-passage slot t^5, for the carrier-leg; the passage m, at right angles with said slot t^5, and in the table-plate part; the pintle-

shaft m^4, passing through the leg t^3, and passage m the keeper-spring S^3, having its resilient end connected to the pintle-shaft m^4, within the slot t^6, constructed and arranged to operate substantially in the manner as and for the purposes set forth.

Signed at Troy, New York, this 22d day of February, 1895, and in the presence of the two witnesses whose names are hereto written.

WM. A. POLMATEER.

Witnesses:
W. E. HAGAN,
CHARLES S. BRINTNALL.