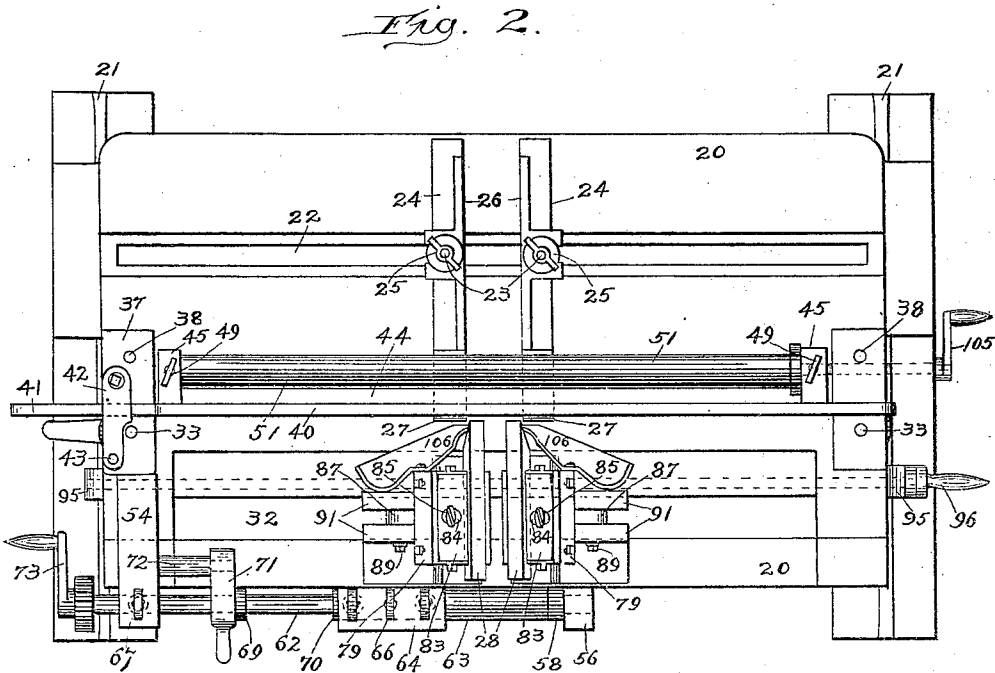
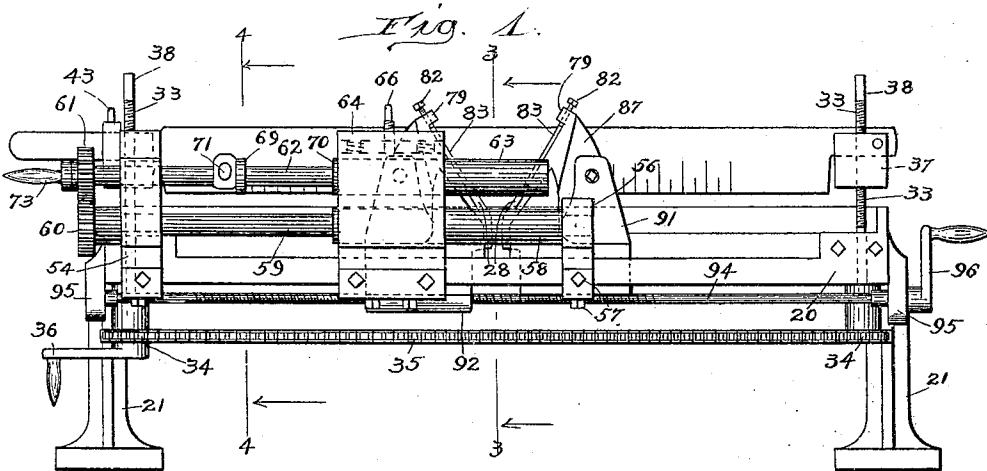


P. STEIN.
LEATHER STRIPPING AND TRIMMING MACHINE.
APPLICATION FILED JAN. 10, 1910.

979,219.

Patented Dec. 20, 1910.

3 SHEETS—SHEET 1.



Witnesses:

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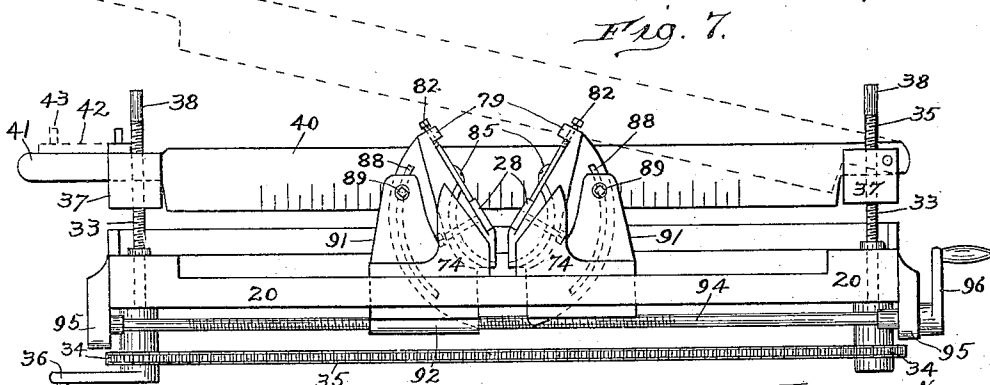
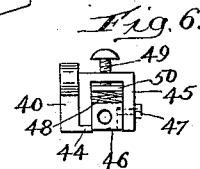
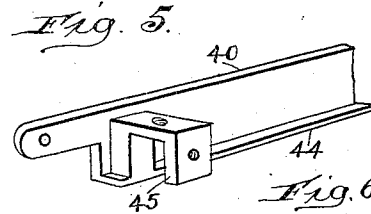
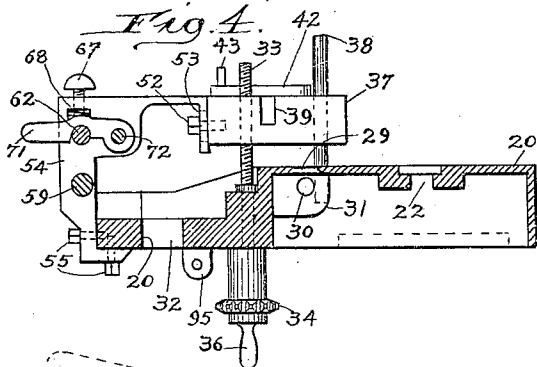
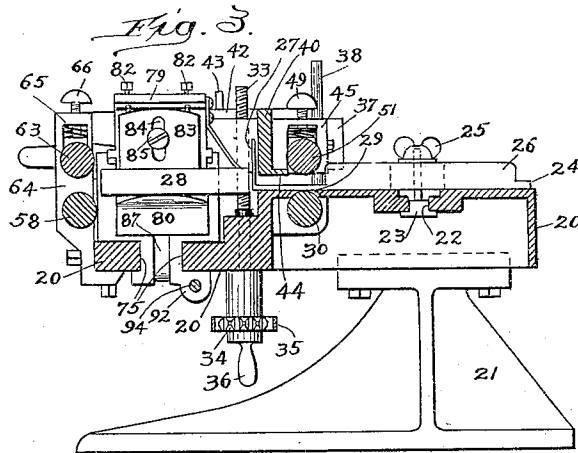
By *Chas. C. Pittman*
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

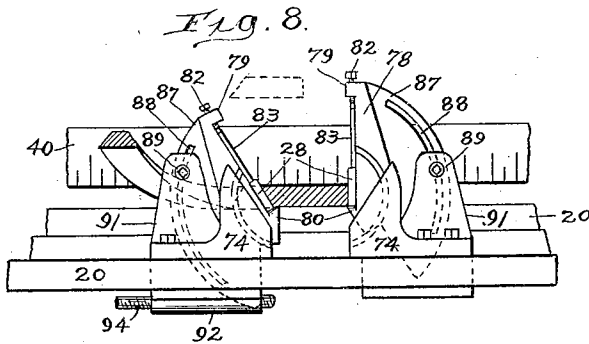


Fig. 9.

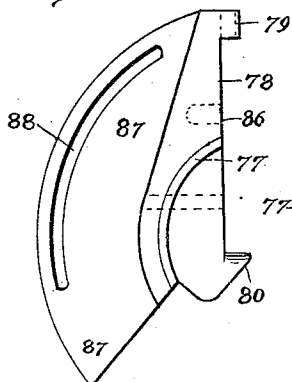


Fig. 10.

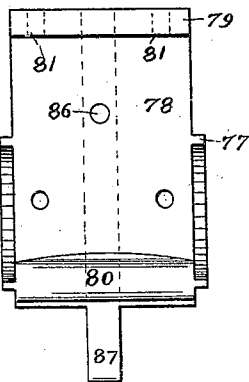


Fig. 11.

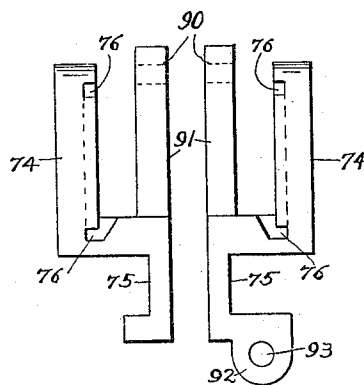


Fig. 12.

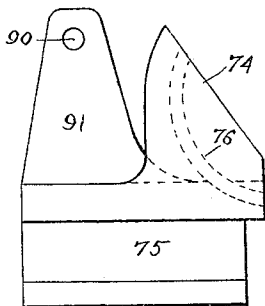


Fig. 13.

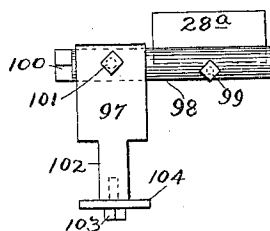
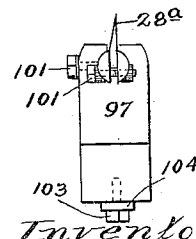


Fig. 14.



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UNITED STATES PATENT OFFICE.

PETER STEIN, OF CHICAGO, ILLINOIS.

LEATHER STRIPPING AND TRIMMING MACHINE.

979,219.

Specification of Letters Patent.

Patented Dec. 20, 1910.

Application filed January 10, 1910. Serial No. 537,291.

To all whom it may concern:

Be it known that I, PETER STEIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Leather Stripping and Trimming Machines, of which the following is a specification.

This invention relates to improvements in a machine to be used for cutting pieces of leather into strips of various sizes and for trimming the edges of strips of leather so as to give them the desired contour or shape, and while it is more especially intended for use in the manufacture of leather belts of the endless type, yet it is applicable for producing strips of leather, trimming the edges thereof, or shaving the strips to be used for other purposes, and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide a leather stripping and trimming machine which shall be simple and inexpensive in construction, strong, durable and efficient in operation, and so made that the widths of the strips to be produced can be readily and accurately regulated and the edges of the strips trimmed by means of suitable tools to give them the desired form or shape.

Another object of the invention is to provide a machine of the above-named general character, which shall be so constructed that strips of leather having their ends connected to form endless belts, may be passed through said machine and acted upon by means of the parts thereof to properly trim the edges of the belts while they are in their endless form.

Numerous other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains, to make and use the same, I will now proceed to describe it, referring to the accompanying drawings in which:—

Figure 1, is a front view in elevation of a machine embodying the invention. Fig. 2, is a plan view thereof; Fig. 3, is a cross-sectional view taken on line 3—3 of Fig. 1, looking in the direction indicated by the arrows; Fig. 4, is a similar view taken on line

4—4 of Fig. 1; Fig. 5, is a fragmental perspective view of the rear portion of the gage-bar; Fig. 6, is an end view thereof showing the spring-pressed bearing-block for one of the feed rollers; Fig. 7, is a front view in elevation of the machine with the front pair of feed rollers omitted; Fig. 8, is a front view in elevation of a portion of the bed-plate of the machine showing the tool-holders mounted thereon for forming leather into strips as well as for beveling the edges of said strips as they are formed; Fig. 9, is a side view of one of the tool-holders; Fig. 10, is a face view thereof; Fig. 11, is a similar view of the bracket members for the tool-holder; Fig. 12, is a side view of one of the said members; Fig. 13, is a face view of a modified form of the tool holder and bracket therefor; and Fig. 14, is an end view of the same.

Like numerals of reference, refer to corresponding parts throughout the different views of the drawings.

The reference numeral 20, designates the bed-plate of the machine which is mounted at each of its ends on an upright 21, and is provided near its rear portion with a longitudinally disposed slot 22, to receive the lower ends of set bolts 23, which are passed through suitable openings at about the middle of guides 24, which are transversally disposed on the upper surface of the bed-plate, and are adjustably held thereon by means of the bolts 23, and wing-nuts 25, with which each of said bolts is provided on its upper end. As is clearly shown in Figs. 2, and 3, of the drawings, each of the guides 24, has on its inner edge an upwardly extended flange 26, each of which is cut away near its front end to permit of the movement of the presser-roller and gage-bar, as will be presently explained. The front end of each of the guides 24, is upturned as at 27, just in front of the gage-bar to form guides on each side of the piece of leather as it is forced forwardly through the cutters or tools, 28, which may have their cutting surfaces of any desired form to give the proper shape to the edges of the leather strips when the tools are being used for trimming the edges. In front of the slot 22, in the bed-plate 20, is another longitudinally disposed slot 29, which is for the purpose of permitting the upper portion of a roller 30, to protrude slightly therethrough which roller is journaled at its ends on suit-

able extensions 31, on the lower portion of the bed-plate. The front part of the bed-plate is provided with a longitudinally disposed slot or way 32, for the reception and operation of the brackets which carry the tool holders.

Vertically journaled near each end of the bed-plate and between the slots 29, and 32, thereof is a screw-shaft 33, each of which has mounted on its lower end a sprocket wheel 34, around which is extended a sprocket chain 35, to cause the screw-shafts 33, to turn in unison. One of the sprocket wheels 34, may be provided with a crank handle 36, by means of which it is apparent that said sprocket wheels may be turned so as to transmit motion to the other sprocket wheel, as well as to the screw-shaft on which said wheels are mounted. Mounted on each of the screw shafts 33, is a block 37, in screw engagement therewith and each of which has extended through a suitable opening therein a vertical standard 38, mounted on the upper surface of the bed-plate. Each of the blocks 37, is provided on its upper surface with a transverse recess 39, to receive portions of the gage-bar 40, which is pivotally secured at one of its ends in one of said recesses, as is clearly shown in Figs. 1, and 7, of the drawings, and has its other end reduced to form a handle 41, by means of which it may be raised. The block 37, at the handled end of the gage-bar 40, has pivotally secured on its upper surface one end of a dog 42, which may be provided at its other end with a knob or handle 43, to be used for turning the dog from over the gage-bar, thus releasing the same and permitting it to be turned on its pivot.

As is clearly shown in Figs. 2, 3, 5, and 6, of the drawings, the gage-bar 40, is provided at its lower edge with a rearwardly extended horizontal flange 44, and near each of its ends with a rearwardly extended bracket 45, in each of which is fitted a bearing block 46, which are prevented from falling out by means of set screws 47, passed through openings in the rear portions of the brackets 45, and engaging with their inner ends grooves in said block so as to permit vertical movement thereof. Located on each of the bearing blocks 46, is a spring 48, the tension of which is regulated by means of a set screw 49, and a washer 50, the latter resting on the upper portion of the spring 48, and the screw being seated in the upper portion of the bracket. Journaled in the bearing blocks 46, is a presser roller 51, the lower surface of which is about flush with the lower surface of the flange 44, and will rest on the upper surface of the leather as it passes between the guides 34, on the bed-plate of the machine. Movably secured at one of its ends by means of a set screw 52, passing through a slot 53, therein to the front end

of one of the blocks 37, and preferably to that one at the handled end of the gage-bar, is a bracket 54, which has its lower portion secured by means of set screws 55, to the front portion of the bed-plate 20, near one of its ends. Vertically mounted on the front portion of the bed-plate 20, at a suitable point, but herein shown near its middle, is a bracket 56, which may be adjustably secured on the bed-plate by means of set screws 57, and has in its upper portion a transverse opening or bearing for one end of the draw-feed-rollers 58, the shaft 59, of which, is journaled at its other end in the bracket 54, and has mounted on its outer end a gear 60, to mesh with a gear 61, on the outer end of the shaft 62, which is also journaled at one of its ends on the bracket 54, and carries on its other end a draw-feed-roller 63, located above the roller 58, and in parallelism therewith. Vertically mounted on the front portion of the bed-plate 20, between the brackets 54, and 56, is another bracket 64, through suitable openings in which the rollers 58, and 63, are extended. The opening for the roller 63, in said bracket is vertically elongated (see Fig. 3) and has fitted therein a spring-actuated block 65, which rests on the roller and may have its tension regulated by means of a set-screw 66, located in the upper portion of the bracket.

That portion of the shaft 62, which is journaled in the bracket 54, is spring-adjusted by means of a set-screw 67, and a spring 68, located in a suitable opening in the said bracket. The spring-adjustments in the brackets 54, and 64, for the roller 63, and shaft 62, are similar to that shown in Fig. 6, and above described. The shaft 62, is provided with collars 69, and 70, the latter of which normally rests against one side of the bracket 64, while the collar 69, will rest against one side of a dog 71, which is pivotally secured on the inner surface of the bracket 54, by means of a pivot 72, and is adapted to engage the shaft 62, outwardly from the collar 69, as is clearly shown in Figs. 1, 2, and 4, of the drawings. By raising the dog 71, it is apparent that the shaft 62, may be drawn outwardly by means of a crank-handle 73, thereon, until the collar 69, strikes the inner surface of the bracket 54, thus removing the inner end of the roller 63, from over the rollers 58, to permit the leather strip or endless belt being placed in position or removed.

Mounted on the front portion of the bed-plate are two brackets for the tool-holders, which brackets are exactly alike with the exception that one of the members of one of the brackets is provided with a screw-threaded extension to engage a screw-threaded rod used for adjusting the position of the bracket on the bed-plate with respect to the other bracket. Each of these brackets con-

sists of two upright members 74, having on their lower portions oppositely disposed recesses 75, to engage the sides of the slot 32, in the front portion of the bed-plate. Each of the members 74, has on its inner surface an arcuate groove 76, to receive a similarly shaped rib 77, on each side of the tool holder 78, which has a flat face provided at its upper end with an overhanging ledge 79, and at its lower end with a curved ledge or rest 80, for the lower edge of the tool. The ledge 79, of each of the holders 78, is provided with one or more vertical openings 81, to receive set screws 82, used for adjustably holding a plate 83, against the upper edge of the tool 28, which plate is provided with a vertical slot 84, to receive a screw 85, which is seated in an opening 86, in the holder. Each of the holders 78, is provided with a rearward extension 87, which is formed with an arcuate slot 88, to receive a screw or bolt 89, passed through suitable transverse openings 90, in the upward extensions 91, with which each of the upright members 74, is provided at their rear parts.

It will be understood that when the members 74, are in position on the bed-plate one of the recesses 75, will engage one side of the slot 32, of the bed-plate and the other recess 75, will engage the other side of said slot, thus leaving the extensions 91, at a sufficient distance apart to receive therebetween the rearward extension 87, on the tool-holder 78, and that as the extension 87, is secured to the extensions 91, by means of the bolt 89, which is extended through the openings 90, and slot 88, the holder 78, can be adjusted so as to give its face or front portion any desired inclination, and by tightening one of the screws 82, and loosening the other, the tool 28, will be suitably adjusted on the ledge or rest 80, the upper surface of which is preferably curved as shown in Figs. 3, and 10, of the drawings. One of the members 74, of one of the tool holder brackets, is provided on its lower portion with an extension 92, which has a screw-threaded opening 93, to receive and engage a screw-rod 94, which is journaled in suitable bearings 95, on each end of the front part of the bed-plate, and has on one of its ends a crank handle 96, to turn the same. By this arrangement it is apparent that by turning the rod 94, in the proper direction, the tool holding bracket which engages said rod will be advanced or retracted on the bed-plate or in other words, will be suitably adjusted with respect to the other tool holding bracket, which may be fixed on the bed-plate or adjusted thereon by hand.

In Figs. 13, and 14, of the drawings is shown a modification in the construction of the tool holder, as well as in the construction of the bracket therefor, which consists in employing a bracket consisting of an up-

right piece 97, having in its upper portion a horizontally disposed opening in which the tool holder 98, is located, which holder consists of a rod having one of its ends split to receive the tool 28^a which is held in place by means of a set screw 99, seated in the holder on one side of the slot therein. One end of the holder 98, is formed angular as at 100, to engage a wrench or other instrument by means of which the holder may be turned so as to give the tool the proper inclination, in which position the holder will be held by means of a set screw 101, located in one side of the upper portion of the bracket. The lower portion of the bracket 97, is reduced as at 102, to fit in the slot 32, of the bed-plate and has secured on its lower end, by means of a set screw 103, a plate 104, which may be turned transversally of the slot when it is desired to secure the bracket in position on the bed-plate.

From the foregoing, and by reference to the drawings, it will be readily understood and clearly seen that by placing a piece of leather on the bed-plate between the guides 24, with one of its ends under the presser-roller 51, and flange 44, of the gage-bar, it may be caused to approach the rear or cutting ends of the tools 28, which ends may be of such shape as to give the desired form to the edges of the leather, and said tools may be adjusted in their respective holders to the proper inclination so as to furnish the leather strip with one or more beveled edges. As the piece of leather is forced between the tools 28, which may be done by turning the roller 30, through the instrumentality of a crank-handle 105, thereon, it is apparent that its front end will be interposed between the draw-feed rollers 58, and 63, when by turning the crank 73, on one side of said rollers, the piece will be drawn forwardly between the tools, thus allowing them to act on the entire strip. When it is desired to trim the edges of an endless belt, the gage-bar 40, may be raised on its pivot, and the draw feed roller 63, slid outwardly which operation will permit the belt to be placed in position between the upturned ends 27, of the guides 24, as well as between the tools 28, when by lowering the gage-bar 40, which carries the presser-roller 51, and by replacing the roller 63, to its normal position, it is apparent that the belt will be clamped both by the force feed rollers 51, and 30, and the draw feed rollers 58, and 63, when by turning the latter roller it is evident that the belt will be forced forwardly between the tools and both sides thereof trimmed.

By reference to Fig. 8, it will be seen that when it is desired to cut the leather piece into strips, one of the tool holders 78, may be placed with its face in a vertical line, while the other one may have its face in an

inclined position, so that when its tool cuts the leather, a beveled edge will be furnished to the strip, as well as to the main piece of leather. By turning this piece of leather over to the position shown by dotted lines in Fig. 8, it is apparent that when another strip is cut therefrom, both of its edges will be beveled, thus forming what is known in the trade as a V-shaped strip, which is largely used in the manufacture of small endless belts.

Having thus fully described my invention what I claim as new and desire to secure by Letters-Patent is—

1. In a machine of the character described, the combination with a suitably supported bed-plate, of a pair of tool holders transversally mounted thereon with their faces in opposed relation, means to adjust one of said tool holders, a tool secured on the face of each of said holders, a screw-shaft vertically journaled at each end of the bed-plate rearwardly of the tool-holders, means to turn said shafts, a recessed block mounted on each of said shafts and in screw-engagement therewith, a bar pivotally secured at one of its ends within the recess of one of said blocks and detachably held at its other end in the recess of said other block, a bracket on the rear portion of said bar near each of its ends, a spring-actuated roller journaled in said brackets, a force feed roller journaled on the bed-plate below the first named roller, and means on one of said rollers to turn the same.

2. In a machine of the character described, the combination with a suitably supported bed-plate, of a pair of tool holders transversally mounted thereon with their faces in opposed relation, means to adjust one of said tool holders with respect to the other, a tool adjustably secured on the face of each of said holders, a screw shaft vertically journaled at each end of the bed-plate rearwardly of the tool holders, means to turn said shafts, a recessed block mounted on each of said shafts and in screw engagement therewith, a bar pivotally secured at one of its ends to one of said blocks and detachably connected at its other end to the other of said blocks, a bracket on the rear portion of said bar near each of its ends, a spring adjusted roller journaled in said brackets, a force feed roller journaled on the bed-plate below the first named roller, means on one of said rollers to turn the same, a pair of draw feed rollers journaled one above the other in front of the tools, means to adjustably hold the upper one of the draw feed rollers, and means to turn the same.

3. In a machine of the character described, the combination of a suitably supported bed-plate, with a pair of angularly adjustable tool holders mounted thereon with their faces in opposed relation, means to adjust one of said tool holders with respect to the other, a tool secured on the face of each of said holders, means to hold the strip of material on the bed-plate, and means to cause the strip of material to be passed between the tools.

4. In a machine of the character described, the combination with a suitably supported bed-plate, of a pair of tool holders mounted thereon with their faces in opposed relation, means to adjust one of said tool holders angularly and with respect to the other, a tool adjustably secured on the face of each of said holders, a pair of guides adjustably and transversally mounted on the bed-plate, and a pair of force feed rollers journaled longitudinally on the bed-plate at the rear of the tools to force the strip of material against the tools.

5. In a machine of the character described, the combination of a suitably supported bed-plate, with a pair of adjustable tool holders mounted thereon, means to adjust one of said tool holders angularly and with respect to the other, a tool secured on the face of each of said holders and transversally with respect to the bed-plate, a pair of guides adjustably and transversally secured on the bed-plate, a pair of force feed rollers journaled longitudinally on the bed plate at the rear of the tools, and a pair of draw feed rollers journaled longitudinally on the bed-plate at the front end of the tools.

6. In a machine of the character described, the combination with a suitably supported bed-plate, of a pair of adjustable tool holding brackets mounted on the front part of the bed-plate, means to adjust one of said brackets with respect to the other, a tool holder adjustably mounted on each of said brackets, a tool adjustably secured on each of said holders and transversally with respect to the bed-plate, a pair of guides adjustably and transversally secured on the bed-plate, a pair of force feed rollers journaled longitudinally on the bed-plate at the rear of the tools, a gage-bar pivotally secured at one of its ends on the bed-plate at the rear of the tools, and a pair of draw feed rollers journaled longitudinally on the bed-plate at the front end of the tools.

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