

No. 693,045.

Patented Feb. 11, 1902.

C. MILLHISER & C. L. A. DOEPPE.

POUCH MAKING MACHINE.

(Application filed Dec. 8, 1899.)

(No Model.)

4 Sheets—Sheet I.

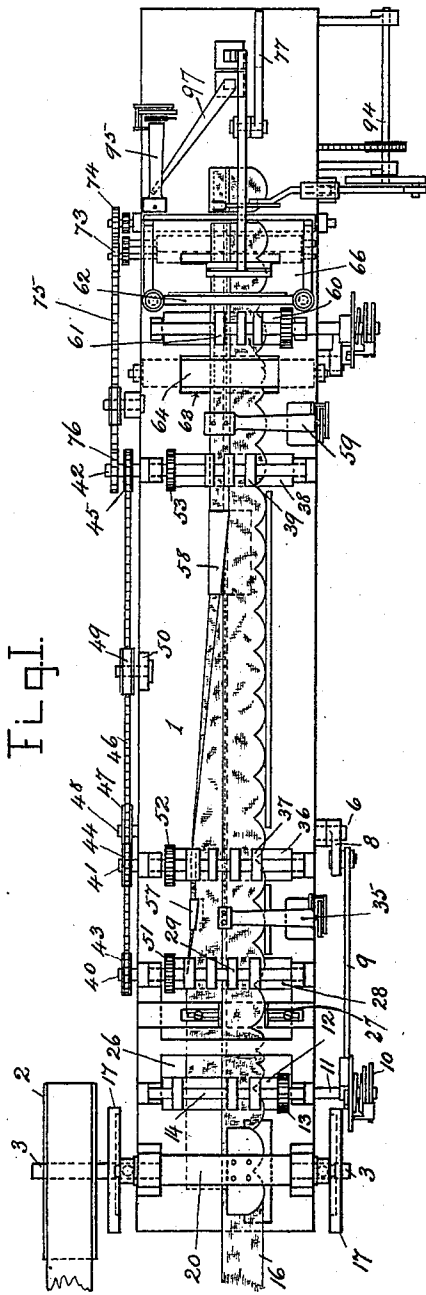


Fig. I.

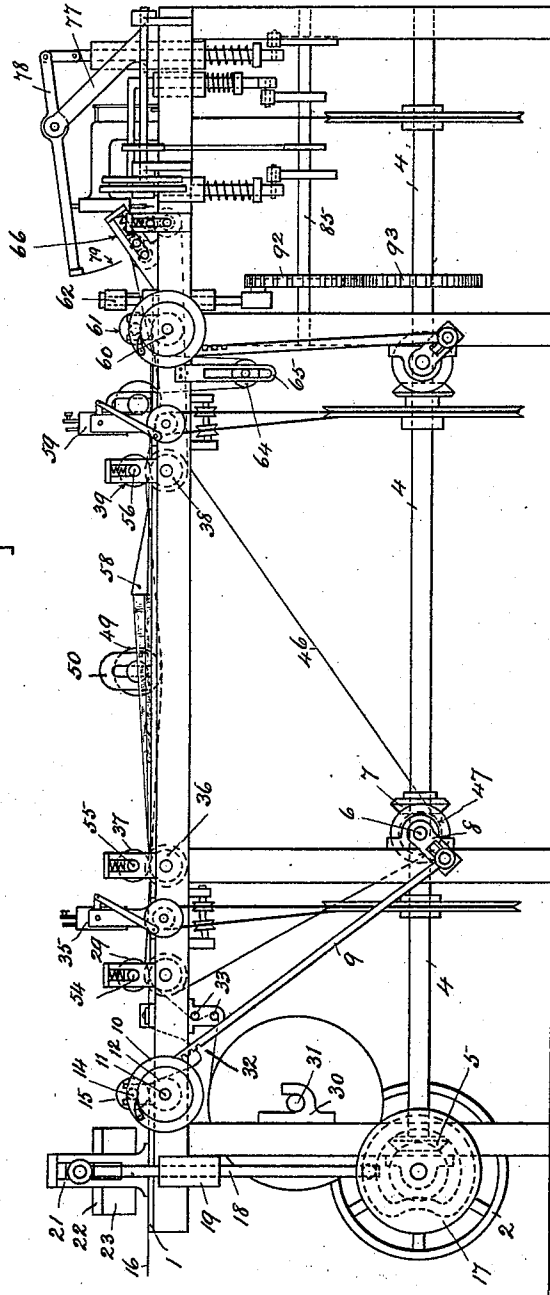


Fig. II.

WITNESSES:

Wm. Nelson
R. L. Packard

INVENTORS.

Clarence Millhiser, &
Charles L. A. Doeppe.

BY

Stewart Stewart
 their ATTORNEYS.

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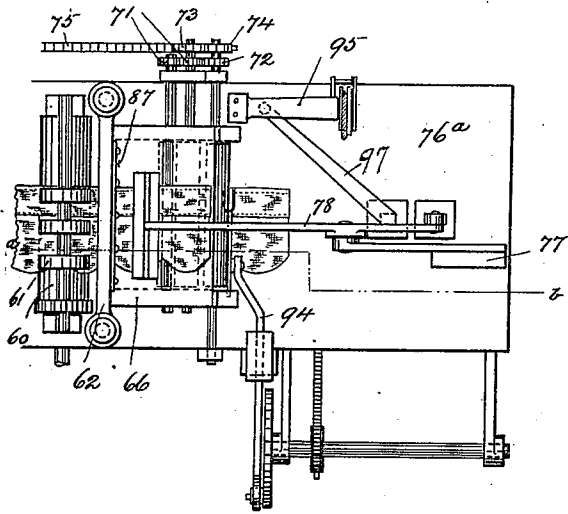


Fig. III.

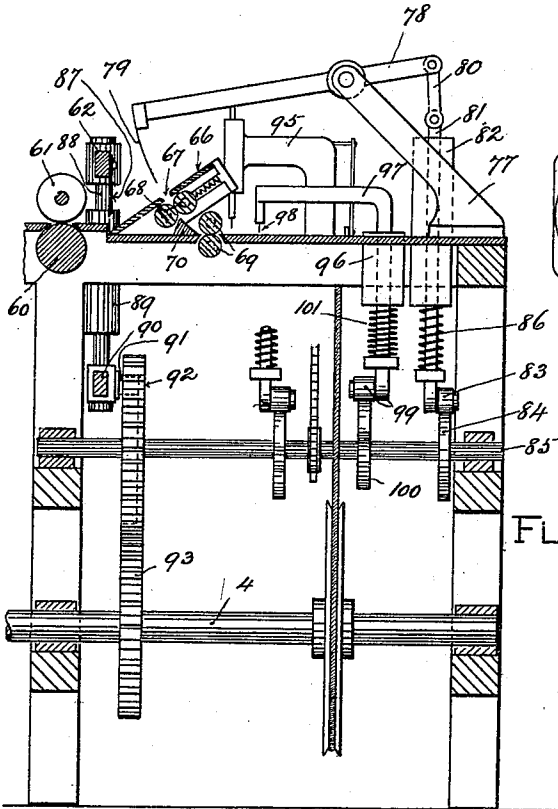


Fig. IV.

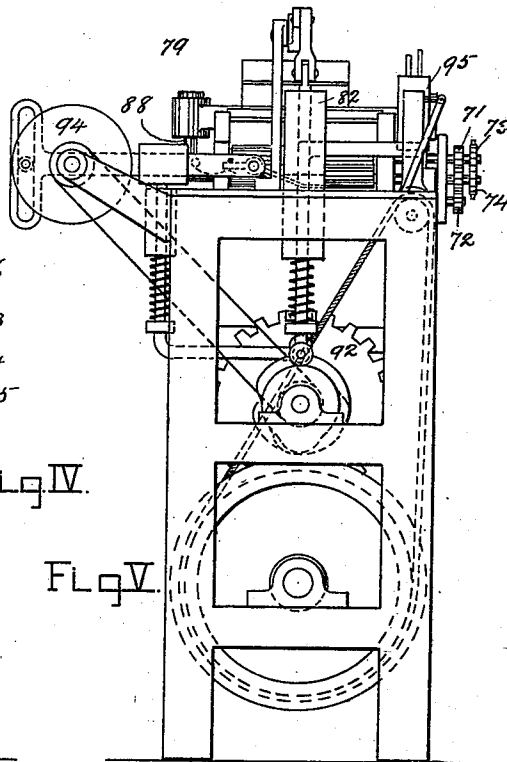


Fig. V.

WITNESSES:

W. C. Kiland
R. L. Packard

INVENTORS:

Clarence Millhiser, &
Charles L. A. Doeppe.

BY

Stewart & Stewart.
 their ATTORNEYS.

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4 Sheets—Sheet 3.

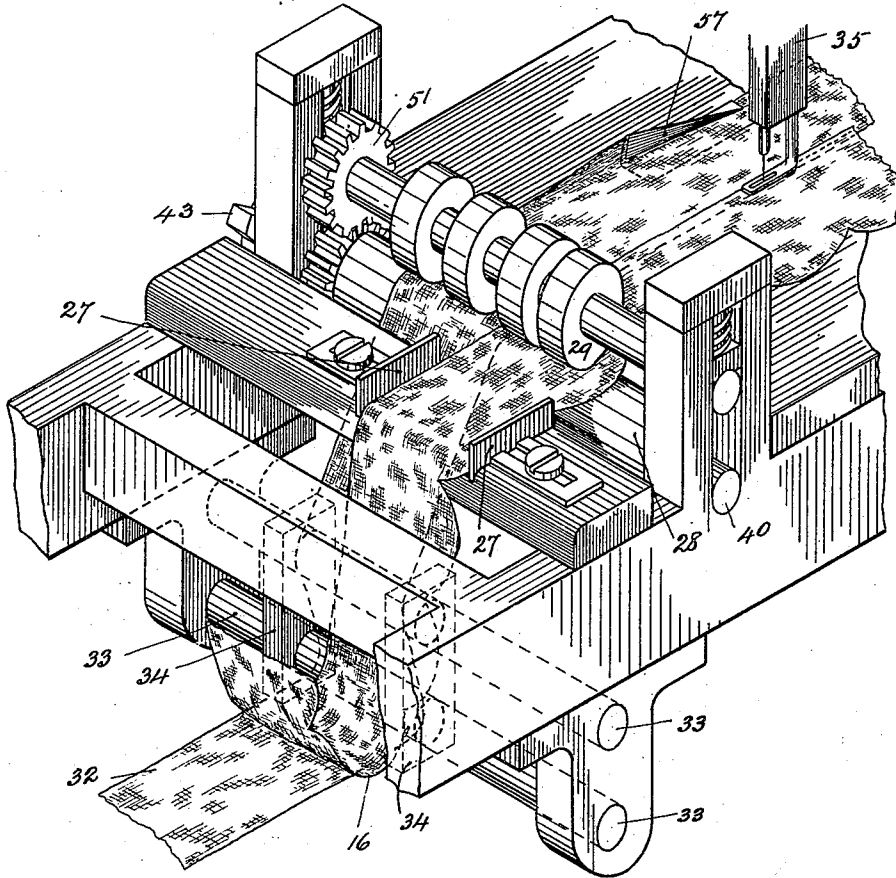


FIG. VI.

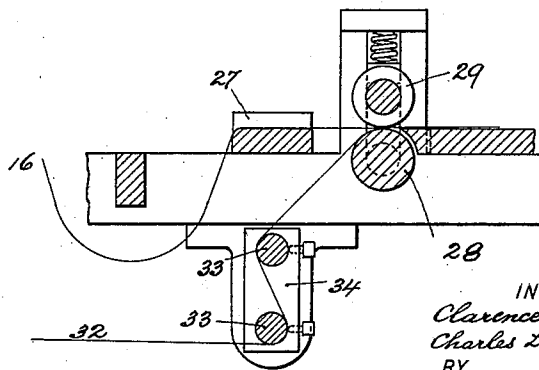


FIG. VII.

WITNESSES:

McKendall
R. L. Beckert

INVENTORS.

Clarence Millhiser, &
Charles L. A. Doeppe.

BY

Stewart & Stewart
 their ATTORNEYS

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4 Sheets—Sheet 4.

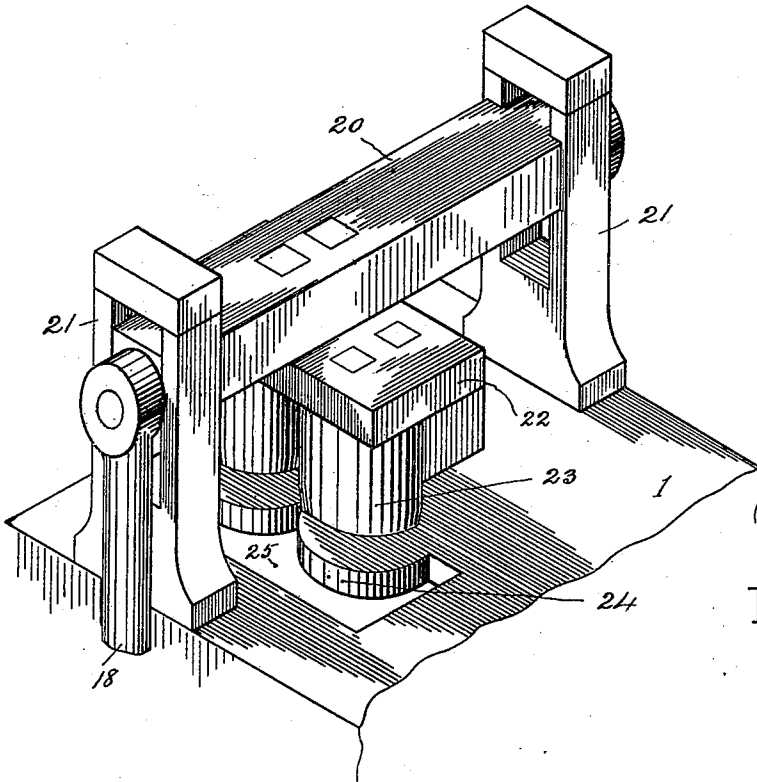


Fig. VII.

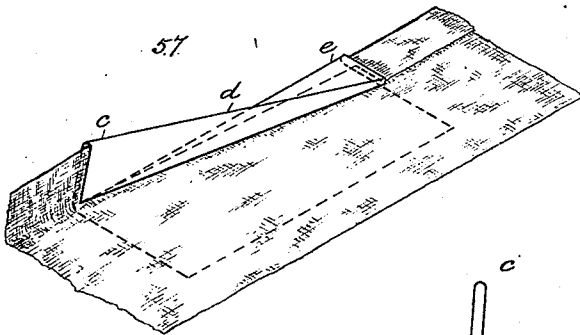


Fig. IX.

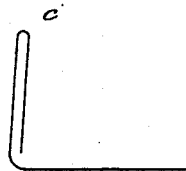


Fig. X.



Fig. XI.



Fig. XII.

WITNESSES:

Wm. McLean
R. L. Packard

INVENTORS.

Clarence Millhiser, &
Charles L. A. Doeppe.

BY

Stewart & Stewart
their ATTORNEYS.

UNITED STATES PATENT OFFICE.

CLARENCE MILLHISER AND CHARLES L. A. DOEPPE, OF RICHMOND, VIRGINIA, ASSIGNORS TO THE MILLHISER MANUFACTURING COMPANY, OF RICHMOND, VIRGINIA.

POUCH-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 693,045, dated February 11, 1902.

Application filed December 8, 1899. Serial No. 739,598. (No model.)

To all whom it may concern:

Be it known that we, CLARENCE MILLHISER and CHARLES L. A. DOEPPE, citizens of the United States of America, and residents of Richmond city, State of Virginia, have invented certain new and useful Improvements in Pouch-Machines, of which the following is a specification.

Our invention relates to pouch-making machines, and particularly to machines for making pouches which consist of more than one piece of fabric. In the following specification we shall describe a machine for making pouches of two different fabrics, such as are commonly used for tobacco, but which machine can with slight modifications, which we will indicate hereinafter, be used for the manufacture of pouches consisting of more than two different fabrics.

In pouches made of two different fabrics the said fabrics are usually so arranged that one forms the "upper" and the other the "bottom" of the pouch. This is the usual form of two-piece pouches, though they may be constructed so that one fabric forms one side and the other fabric the other side of the pouch. We will first treat of the manufacture of pouches in which one fabric forms the upper and the other fabric the bottom, and also in which the upper is double.

The manner in which our machine operates to make pouches is, briefly stated, as follows: Two continuous strips of fabric are fed to a sewing mechanism, with their inner edges overlapping just so much that they may be sewed together. If it be desired that no raw or unturned edges shall appear in the finished pouch, the outer edge of the strip of fabric which is to form the upper is then turned over, so that its outer edge lies upon the overlap between the two strips of fabric, and the fold is then creased. The united strips of fabric then pass to a double-headed sewing mechanism, which sews the outer edge of the upper to the overlap and at the same time runs a line of stitches at a short distance from the fold in the upper to provide a narrow channel for the draw-string. The united strips of fabric then pass to cutters which

sever from them portions each sufficient for the making of one pouch. The portions are now doubled so that the severed edges of the strips are brought together, and the doubled portion is fed to a sewing mechanism or sewing mechanisms, which sew up one side and the bottom, the latter being either straight or rounded. The pouch is then ready for turning. The term "doubling" is here applied to the operation of folding the severed sections after they are severed from the strips simply to avoid confusing this operation with the operation of folding one of the strips to form the upper. Now it is evident that in making certain grades of pouches some of the above-mentioned steps may be omitted. For instance, the outer edge of the upper need not be turned if appearances are not to be taken into consideration, and in many cases the selvage edge of the fabric will afford sufficient finish. Again, it is not absolutely necessary that the sewing together of the overlapped inner edges of the strips of fabric should be the first and a separate operation, for the said edges can be sewed together by the double-headed sewing mechanism at the same time that the said sewing mechanism sews the outer edge of the upper to the overlapped inner edges, one stitching sewing the overlapped edges and the outer edge of the upper together. Again, if the upper is to have but little depth the line of stitches to form a channel for the draw-string would not be absolutely necessary, as the whole folded upper might then be used as the channel. Then, again, when a pouch having what is termed a "single" upper is desired all that is necessary is that the upper strip of fabric shall when it is folded over be folded far enough to form a channel for the draw-string and not necessarily as far as the overlapped edges of the two strips of fabric. In this case it is preferable to use one single-headed sewing mechanism to sew together the overlapped edges of the strips of fabric and another single-headed sewing mechanism to sew down the fold of the upper to form the channel for the draw-string, and the folder for folding the upper would be so arranged as to fold under instead of over, in order that the edge folded might lie on the

inside of the finished pouch, and consequently out of sight. Another way in which pouches having either double or single uppers may be made in our machine is to feed the strips of fabric to the sewing mechanism lying one upon the other instead of merely having the inner edges overlapping. The superimposed edges on one side of the strips are then sewed together. The upper one, which may form the upper of the pouch, is then lifted away from the lower strip of fabric, then folded longitudinally, creased, the creased fold being finally sewed down. The strips are then ready to be fed to the cutters.

In the drawings which accompany and form a part of this specification, and in which like numerals indicate like parts in the different views, Figure I is a plan of the pouch machine. Fig. II is a side elevation of the same. Fig. III is a broken view showing in plan on a larger scale one end of the machine. Fig. IV is a broken view in section, taken on line *a b* in Fig. III. Fig. V is an end elevation of the part of the machine shown in Fig. III. Fig. VI is a broken view in perspective showing one method of feeding the two strips of fabric to the sewing mechanism, of sewing together their overlapped edges, and of turning the outer edge of one of the strips. Fig. VII is a sectional diagram showing the paths of the two strips of fabric as they come together. Fig. VIII is a broken view in perspective, showing the punch for punching the fabric for making round-bottomed pouches. Fig. IX is a view in perspective of the edge turner or folder. Figs. X, XI, and XII are diagrams showing the approximate cross-sections of the turner or folder at the points *c*, *d*, and *e* in Fig. IX.

In Figs. I and II, 1 is the table, upon which the different operations are conducted. 2 is the main driving-pulley, mounted on the shaft 3, which is carried in bearings attached to the framework of the table. 4 is a shaft which receives its motion from the main shaft 3 by means of the bevel-gears 5. 6 is a counter-shaft which receives its motion from the shaft 4 by means of the bevel-gears 7. At the outer end of the counter-shaft 6 is a crank 8, having an adjusting device whereby its throw may be regulated with accuracy and operating the connecting-rod 9, which by means of a rack cut at its farther end operates the intermittent silent feed mechanism 10, mounted on the shaft 11, which silent feed mechanism in its turn gives an intermittent motion by means of the shaft 11 to the lower feed-roll 12. On the shaft 11, which carries the lower feed-roll 12, is a gear which gears into another gear of similar pitch and diameter 13, which is mounted on the shaft 14, which carries the upper feed-rolls 15. The motion of the upper feed-rolls 15 will consequently be also intermittent and will be equal to the motion of the lower feed-roll 12. 16 is one of the strips of fabric, and it is being fed to the

machine by means of the above-mentioned feed-rolls 12 and 15. Now when a round-bottomed pouch is desired it is necessary to cut or punch the fabric, so that when the pouch is finished it may have a bottom of the desired shape. This cutting or punching may be effected at almost any stage of the operations—for instance, after the severed compound portion of fabric has been doubled, before the said portions are severed from the strips, or before the strips are brought together. For the sake of convenience we prefer the first or last named stages, and in the drawings we have shown the punching as being effected in the latter stage.

Mounted on the shaft 3 are the cams 17, whose paths engage rollers attached to the lower ends of the rods 18, which slide in vertical sleeves 19. The upper ends of the rods 18 (see Fig. VIII) are connected with pins extending from the cross-bar 20, which cross-bar slides in vertical grooves or guides 21. To the cross-bar 20 is attached a plate 22, which carries the punch or knife 23. Below the punch is a die 24, let into or forming a part of the table 1 and having around it an opening 25 to allow the pieces punched from the strip of fabric to fall from the table. Every time the feed-rolls 12 and 15 operate they feed forward enough of the strip of fabric 16 for the manufacture of one pouch. As soon as the said rolls cease revolving the cams 17 cause the punch 23 to descend and to punch the edge of the strip of fabric to the desired shape, the punch immediately returning to its original position. After leaving the feed-rolls 12 and 15 the strip of fabric 16 passes through a slot 26 in the table 1 and is drawn up again, passing between the guides 27 by means of the continuously-revolving feed-rolls 28 and 29. (See Figs. I, II, VI, and VII.) The strip of fabric is allowed to pass through the slot 26 to accommodate the "slack" which must necessarily exist between the intermittent feed-rolls 12 15 and the continuous feed-rolls 28 29.

Hanging in bearings 30, which are attached to the frame of the machine, is a shaft 31, which carries a roll of fabric which we will designate by the numeral 32. This fabric leaving the roll is drawn around the rods 33 33 and between the guides 34 34, which are carried by the said rods 33, (see Figs. VI and VII,) and thence to the table 1 by means of the feed-rolls 28 29. The roll of the fabric 32 is so situated on the shaft 31 and the guides 34 are so placed on the rods 33 that the inner edge of the strip 32 will when it reaches the feed-rolls 28 29 be overlapped by the inner edge of the strip of fabric 16. The two strips of fabric 16 and 32 pass from the feed-rolls 28 29 to the sewing mechanism 35, which sews together their overlapped edges, and the said strips of fabric are then drawn from the said sewing mechanism by the continuous feed-rolls 36 37, and from them they are drawn by

the continuous feed-rolls 38 39. The continuous feed-rolls 28 29 and 36 37 and 38 39 are operated in the following manner:

The rolls 28, 36, and 38 are respectively mounted on the shafts 40, 41, and 42, which shafts respectively carry the sprocket-wheels 43, 44, and 45. Around these sprocket-wheels is passed a chain 46, which also passes around a sprocket-wheel 47, mounted on a counter-shaft 48, which receives its motion from the shaft 4 through the agency of bevel-gears.

49 is a tightening-pulley adjustably attached to the bracket 50 and by means of which the sprocket-chain 46 can be tightened. As the shaft 4 revolves the sprocket-chain 46 will impart an equal motion to the roll-shafts 40, 41, and 42. Mounted on the said rolls are gear-wheels which gear with other gear-wheels of similar pitch and diameter, 51, 52, and 53, mounted, respectively, on the shafts 54, 55, and 56, which carry the rolls 29, 37, and 39, respectively. Consequently all of the rolls 28, 29, 36, 37, 38, and 39 will have a uniform and continuous motion.

As the strips of fabric pass through the sewing mechanism 35 the outer edge of that one of them which is intended for the upper of the pouch is turned down by means of the hem-turner 57, (see Fig. VI,) the turned hem being creased by the roll 36 and one of the rolls 37, and as the strips of fabric pass from the feed-rolls 36 37 to the feed-rolls 38 39 that one of them which is intended for the upper of the pouch is drawn through the folder 58, which folds the strip of fabric over, so that its turned outer edge lies on the overlapped inner edges of the two strips, the roll 38 and one of the rolls 39 creasing the fold. The form of the hem-turner 57 and of the folder 58, which are similar, the latter being only larger than the former, is clearly shown in Figs. IX, X, XI, and XII, Figs. X, XI, and XII being cross-sections taken, respectively, at the points *c*, *d*, and *e* in Fig. IX. From the feed-rolls 38 39 the strips of fabric pass to the double-headed sewing mechanism 59, one needle of which sews the turned edge of the upper strip to the overlapped inner edges of the two strips, the other needle running a line of stitches at a short distance from the fold of the upper strip to provide a narrow channel for the draw-string. After leaving the sewing mechanism 59 the strips of fabric are fed by means of the intermittent feed-rolls 60 and 61 to the cutters 62; but before reaching the said intermittent feed-rolls the strips of fabric fall through a slot 63 in the table 1 and form a bight which is kept tight by means of the loose roller 64, whose shaft runs loosely in the guides 65. The function of the roller 64 is to take up the slack which must necessarily exist in the fabric between the continuous rolls 38 39 and the intermittent rolls 60 61. A similar roller may be hung in the bight of the strip of fabric 16 after it leaves the intermittent feed-rolls 28

29. The intermittent feed-rolls 60 and 61 (which are constructed and operated in a manner similar to that in which the intermittent feed-rolls 28 29 are constructed and operated) feed the strips of fabric under the blade of the shutters 62 and upon the doubling-table 66. (See Figs. III, IV, and V.) In this doubling-table there is a narrow slot 67, whose length is a little greater than the width of the united strips of fabric. Immediately beneath the slot are two rolls 68 and beyond these rolls two more rolls 69. Between these two sets of rolls is a block or guide 70, whose function it is to guide the portions of fabric as they pass through the rolls 68 to the grip of the rolls 69. The rolls 68 and 69 are operated in the following manner: The shafts on which the rolls 68 are mounted are geared together by means of gears of similar pitch and diameter 71, and the shafts which carry the rolls 69 are geared together in a similar manner by the gears 72. One shaft belonging to each of the sets of rolls is extended and carries a sprocket-wheel numbered 73 and 74, respectively. Over these sprocket-wheels there passes a chain 75, which also passes over and receives its motion from a sprocket-wheel 76, mounted on the shaft 42, which carries the continuous feed-roll 38. (See Fig. I.)

Above the sewing-table 76^a a bracket 77 supports a lever 78, which carries at one end of it a blade 79. The other end of the lever 78 is connected by means of a link 80 to a rod 81, which slides in a vertical sleeve 82, the rod 81 carrying at its lower end the roller 83, which bears upon the cam 84, mounted on the shaft 85. As the cam 84 revolves the rod 81 is given an upward and the blade 79 a downward movement. The return movement of the blade 79 is assisted by the spring 86.

The cutters 62 may be operated in any of the usual ways, a suitable one being that shown in the drawings. The cutting-blade 87 is attached to a cross-bar which is carried by rods 88, which slide in vertical sleeves 89. To the lower ends of the rods 88 is attached another cross-bar 90, which carries a roller 91, which engages in the path of the cam 92, mounted on the shaft 85. The outside edge of this cam has teeth which mesh with the teeth of the gear-wheel 93, which is mounted on the shaft 4. The gear-wheel 93 not only imparts motion to the cutters, but also to the shaft 85 and the cams, &c., mounted thereon. As soon as the intermittent feed-rolls 60 and 61 have fed a sufficient length of the strips of fabric for the formation of one pouch past the cutters and upon the doubling-table 66 the cutters sever the said length from the strips of fabric. The center of this compound length or portion of fabric will lie immediately over the slot 67 in the doubling-table 66. The blade 79 now descends and pushes the center of the compound portion of fabric into the grip of the revolving rolls 68, which, pulling the fabric between them, double the two

halves of the compound portion of fabric together. The doubled compound portion of fabric is then fed by the rolls 69 to the sewing-table 76^a, where it is engaged by the transferring device 94 and advanced to the sewing mechanism 95. We have not more fully described the details and operation of the transferring device 94, as we think they will be readily understood from the drawings, and also as they are fully described in an application filed by us on October 11, 1899, and bearing Serial No. 733,260.

Sliding in a vertical sleeve 96 is a rod 97, which has a horizontal extension, carrying at its farther end a point or needle 98. The rod 97 carries at its lower end a roller 99, which bears against a cam 100, which cam gives to the rod 97 a vertical reciprocating motion, the downward movement of the rod being assisted by the spring 101. Now as soon as the sewing mechanism 95 has completed the sewing up of the side of the doubled compound portion of fabric the point or needle 98 descends and, piercing the fabric, arrests its progress. The feed-dogs of the sewing mechanism continue to feed the fabric onward, but since the fabric is held at one point this point becomes a pivot around which the feed-dogs of the sewing mechanism turn the portion of fabric. Consequently the portion of fabric turning on a circle whose center is the point 98 the sewing mechanism will sew a line of stitches in a curve whose radius is equal to the distance between the point 98 and the needle of the sewing mechanism. By varying this distance a varying curvature may be given to the bottom of the pouch.

Having now described our invention, what we claim, and desire to secure by United States Letters Patent, is—

1. In a pouch-machine, the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism the said strips overlapping one another, sewing mechanism to sew together the overlapped edges of the strips of fabric, cutting mechanism to sever from the united strips portions each sufficient for the formation of one pouch, mechanism for doubling the severed portions of fabric so that the severed edges are brought into juxtaposition, sewing mechanism to sew two adjacent open edges of the doubled portions of fabric, and means for turning the doubled portions of fabric after the sewing mechanism has sewed one of the open edges so that the said sewing mechanism continuing to sew may sew the second open edge.

2. In a pouch-machine, the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism the said strips overlapping one another, sewing mechanism to sew together the overlapped edges of the strips of fabric, mechanism for folding longitudinally that strip of fabric which is to form the "upper" of the

pouch, sewing mechanism to sew the folded edge to the underlying fabric, cutting mechanism to sever from the united strips portions each sufficient for the formation of one pouch, mechanism for doubling the severed portions of fabric so that the severed edges are brought into juxtaposition, sewing mechanism to sew two adjacent open edges of the doubled portions of fabric, and means for turning the doubled portions of fabric after the sewing mechanism has sewed one of the open edges so that the said sewing mechanism continuing to sew may sew the second open edge.

3. In a pouch-machine, the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism the said strips overlapping one another, sewing mechanism to sew together the overlapped edges of the strips of fabric, a turning device for turning in the outer edge of that strip of fabric which is to form the "upper" of the pouch, mechanism for folding the said strip longitudinally, sewing mechanism to sew the folded edge of the said strip to the underlying fabric, cutting mechanism to sever from the united strips portions each sufficient for the formation of one pouch, mechanism for doubling the severed portions of fabric so that the severed edges are brought into juxtaposition, sewing mechanism to sew two adjacent open edges of the doubled portions of fabric, and means for turning the doubled portions of fabric after the sewing mechanism has sewed one of the open edges so that the said sewing mechanism continuing to sew may sew the second open edge.

4. In a pouch-machine, the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism, the said strips overlapping one another, sewing mechanism to sew together the overlapped edges of the strips of fabric, a turning device for turning in the outer edge of that strip of fabric which is to form the "upper" of the pouch, means for securing the turned outer edge of the said strip to form a hem, cutting mechanism to sever from the united strips of fabric portions each sufficient for the formation of a pouch, mechanism for doubling the severed portions of fabric so that the severed edges are brought into juxtaposition, sewing mechanism to sew two adjacent open edges of the doubled portions of fabric, and means for turning the doubled portions of fabric after the sewing mechanism has sewed one of the open edges so that the said sewing mechanism continuing to sew may sew the second open edge.

5. In a pouch-machine, the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism the said strips overlapping one another, hemming mechanism located in advance of the sewing mechanism to turn the overlapping edge or edges under before the said edge or edges are sewed to the underlying fabric, sewing mechanism to sew together the over-

lapping edges of the strips of fabric, mechanism for folding longitudinally that strip of fabric which is to form the "upper" of the pouch, sewing mechanism to secure the free edge of the said folded strip, cutting mechanism to sever from the united strips of fabric portions each sufficient for the formation of one pouch, mechanism for doubling the severed portions of fabric so that the severed edges are brought into juxtaposition, sewing mechanism to sew two adjacent open edges of the doubled portions of fabric, and means for turning the doubled portions of fabric after the sewing mechanism has sewed one of the open edges so that the sewing mechanism continuing to sew may sew the second open edge.

6. In a pouch-machine the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism the said strips overlapping one another, hemming mechanism located in advance of the sewing mechanism to turn the overlapping edge or edges under before the said edge or edges are sewed to the underlying fabric, sewing mechanism to sew together the overlapping edges of the strips of fabric, cutting mechanism to sever from the united strips of fabric portions each sufficient for the formation of one pouch, mechanism for doubling the severed portions of fabric, sewing mechanism to sew two adjacent open edges of the doubled portions of fabric, and means for turning the doubled portions of fabric after the sewing mechanism has sewed one of the open edges so that the said mechanism continuing to sew may sew the second open edge.

7. In a pouch-machine, the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism the said strips overlapping one another, mechanism for folding longitudinally that strip which is to form the "upper" of the pouch, sewing mechanism to sew together the overlapping edges of the strips of fabric and to secure the free edge of the folded strip, cutting mechanism to sever from the united strips portions each sufficient for the formation of one pouch, doubling mechanism to double the severed portions, sewing mechanism to sew two adjacent open edges of the doubled portions of fabric, and means for turning the doubled portion of fabric after the sewing mechanism has sewed one of the open edges so that the said sewing mechanism continuing to sew may sew the second open edge.

8. In a pouch-machine, the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism the said strips overlapping one another, mechanism for turning the outer edge of that strip of fabric which is to form the "upper" of the pouch and for folding the said strip longitudinally, sewing mechanism to sew together the overlapped edges of the strips and to secure the free edge of the folded strip, cutting mechanism to sever from the united

strips of fabric portions each sufficient for the formation of one pouch, mechanism for doubling the severed portions of fabric so that the severed edges are brought into juxtaposition, sewing mechanism to sew two adjacent open edges of the doubled portions of fabric, and means for turning the doubled portions of fabric after the sewing mechanism has sewed one of the open edges so that the said sewing mechanism continuing to sew may sew the second open edge.

9. In a pouch-machine, the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism the said strips overlapping one another, hemming mechanism to turn the overlapping edge or edges under, mechanism for folding longitudinally that strip of fabric which is to form the "upper" of the pouch, sewing mechanism to sew together the overlapped edges and to secure the free edge of the folded strip, cutting mechanism to sever from the united strips of fabric portions each sufficient for the formation of one pouch, mechanism for doubling the severed portions of fabric so that the severed edges are brought into juxtaposition, sewing mechanism to sew two adjacent open edges of the doubled portions of fabric, and means for turning the doubled portions of fabric after the sewing mechanism has sewed one of the open edges so that the said sewing mechanism continuing to sew may sew the second open edge.

10. In a pouch-machine, the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism the said strips overlapping one another, mechanism for turning the outer edge of that strip which is to form the "upper" of the pouch and for folding the said strip longitudinally, sewing mechanism to sew together the overlapped edges of the strips of fabric and to secure the turned outer edge of the folded strip of fabric and also to run a line of stitches at a short distance from the fold of the folded strip of fabric to form a channel for the draw-string, cutting mechanism to sever from the united strips of fabric portions each sufficient for the formation of one pouch, mechanism for doubling the severed portions of fabric so that the severed edges are brought into juxtaposition, sewing mechanism to sew two adjacent open edges of the doubled portions of fabric, and means for turning the doubled portions of fabric after the sewing mechanism has sewed one of the open edges so that the said sewing mechanism continuing to sew may sew the second open edge.

11. In a pouch-machine, the combination of a sewing-machine to sew two adjacent open edges of a folded portion of fabric, a movable pivot adapted and arranged to engage the folded portion of fabric, means for imparting to the pivot an intermittent vertical reciprocating motion and feed mechanism of the sewing-machine, the said feed mechanism turning

the folded portion of fabric on the pivot so that the sewing mechanism may sew a curved line of stitches on one of the open edges of the folded portion of fabric.

5 12. In a pouch-machine, the combination of folding mechanism to fold a portion of fabric, a punch to punch an edge of the folded portion of fabric in such a manner that the finished pouch may have a bottom of the desired
10 shape, means for operating the punch, a sewing-machine to sew two adjacent open edges of the folded portion of fabric, a movable pivot adapted and arranged to engage the folded portion of fabric, means for imparting to the
15 pivot an intermittent vertical reciprocating motion, and feed mechanism of the sewing-machine, the said feed mechanism turning the folded portion of fabric on the pivot so that the sewing mechanism may sew a curved line
20 of stitches along the punched edge of the folded portion of fabric.

13. In a pouch-machine, the combination of intermittently-acting feed mechanism to feed
25 a strip of fabric intermittently to punching mechanism, punching mechanism to punch one edge of the continuous strip of fabric in such a manner that the finished pouch may have a bottom of the desired shape, mechanism for feeding the punched continuous strip
30 of fabric and another strip of fabric to sewing mechanism the unpunched edge of the punched strip and one of the edges of the other strip overlapping, sewing mechanism to sew together the overlapping edges of the
35 strips of fabric, cutting mechanism to sever from the united strips of fabric portions each

sufficient for the formation of one pouch, mechanism for doubling the severed portions of fabric so that the severed edges are brought
40 into juxtaposition, a sewing-machine to sew two adjacent open edges of the doubled portions of fabric, a movable pivot adapted and arranged to engage a folded portion of fabric, means for imparting to the pivot an intermittent vertical reciprocating motion, and feed
45 mechanism of the sewing-machine, the said feed mechanism turning the folded portion of fabric on the pivot so that the sewing mechanism may sew a curved line of stitches along the punched edge of the folded portion of
50 fabric.

14. In a pouch-machine, the combination of mechanism for feeding two or more independent continuous strips of fabric to sewing mechanism the said strips overlapping one another,
55 sewing mechanism to sew together the overlapped edges of the strips of fabric, cutting mechanism to sever from the united strips portions each sufficient for the formation of a pouch, mechanism for doubling the severed
60 portions of fabric so that the severed edges are brought into juxtaposition, and mechanism for sewing two adjacent open edges of the doubled portions of fabric.

Signed by us at Richmond this 9th day of 65
November, 1899.

CLARENCE MILLHISER.
CHARLES L. A. DOEPPE.

Witnesses:

ARTHUR SCRIVENOR,
EUGENE JONES.