

M. MEHLE.

MACHINE FOR MAKING CONICAL OR THREE CORNERED BAGS OF PAPER OR LIKE MATERIAL.

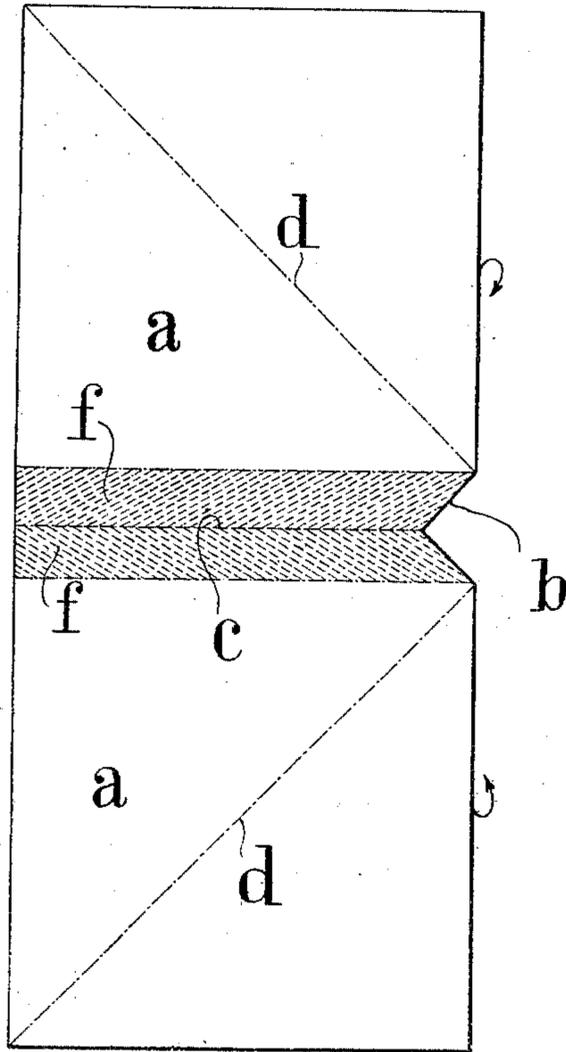
APPLICATION FILED MAR 12, 1908.

917,094.

Patented Apr. 6, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses.

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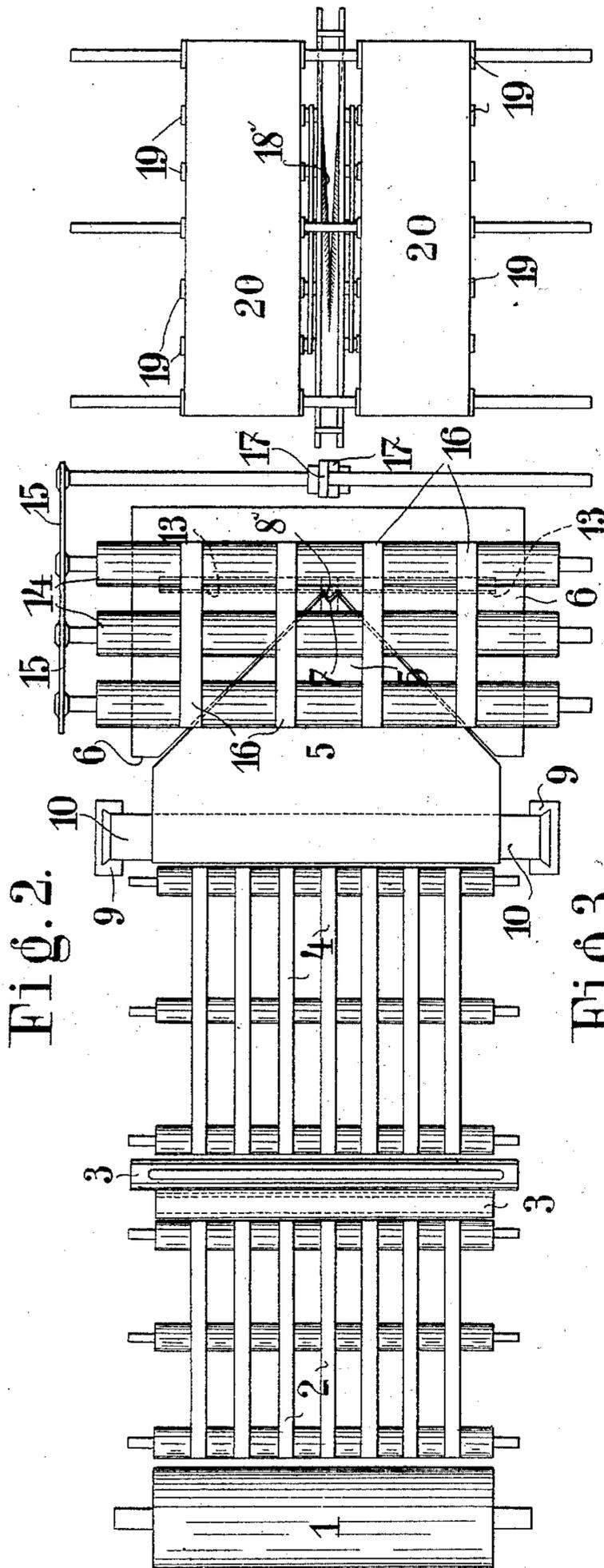


FIG. 2.

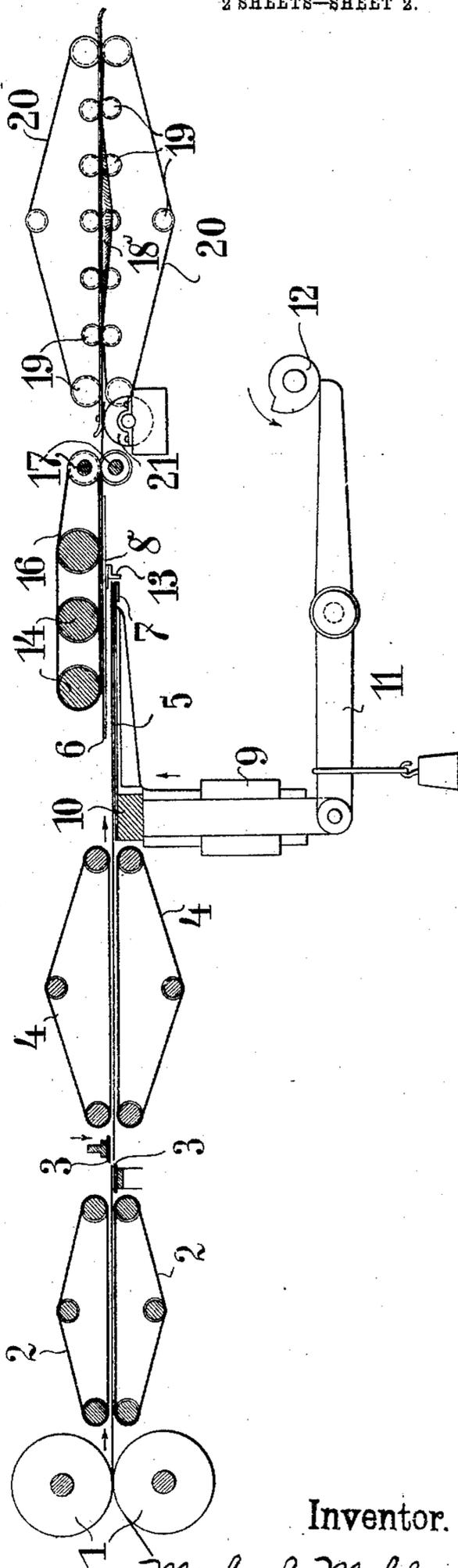


FIG. 3.

Witnesses.

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# UNITED STATES PATENT OFFICE.

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MACHINE FOR MAKING CONICAL OR THREE-CORNERED BAGS OF PAPER OR LIKE  
MATERIAL.

No. 917,094.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed March 12, 1908. Serial No. 420,640.

To all whom it may concern:

Be it known that I, MICHAEL MEHLE, a subject of the Emperor of Austria-Hungary, of Laibach, in Carniola, Austria-Hungary, have invented certain new and useful Improvements in Machines for Making Conical or Three-Cornered Bags of Paper and Like Material; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to a machine by means of which conical or three-cornered bags of all sizes can be made from an endless band of paper or like material without any adjustment of the coating parts of the machine. The size of the bag depends upon the width of the paper and the length into which the paper is cut.

The essential feature of this machine consists in that the paper cut off in suitable sizes from the paper band is fed between two folding plates, of which the lower, provided with folding edges standing at an angle, is movable vertically relatively to the upper stationary plate and completes this latter plate which is provided with a corresponding angular recess. By the raising of one folding plate, an angular notch or recess is first made in the front edge of the sheet of paper by means of knives mounted at the apex of the folding angle and then the bending of the paper along a diagonal line extending rearwardly and outwardly from the recess is effected by each folding edge. In the further raising of the angle-shaped folding plate, the paper is delivered to a feeding device and separated into two parts by a cut along the center line lying in the direction of feed. After the cut edges have been provided with strips of paste or adhesive, a pair of bags is finally formed by folding down the bent over flaps and folding over the pasted edges.

In the drawing Figure 1 is a plan of a sheet of paper serving for the production of a pair of bags. Fig. 2 is a plan of a machine embodying my invention and Fig. 3 is a vertical longitudinal section of the same.

Corresponding and like parts are referred to in the following description and indicated in the several views of the drawings by the same reference characters.

The sheet *a* cut off to the desired size is provided at its edge (the one lying in front in the direction of motion) with an angular notch or recess *b*, the apex of which lies in the center line *c*, along which the sheet is cut into two parts each serving for the formation of a bag. The diagonal folding lines of the bags are indicated at *d*, *d* and the strips of adhesive at *f*, *f*.

Two rollers 1 arranged one above the other draw forward to the desired distance the paper running off from a roll, whereupon the paper is fed by means of conveyer bands 2 to shears 3, which cut through the paper transversely. The cut off paper is delivered by conveyer-bands 4 to the device effecting the diagonal folding. This device consists of a vertically movable table 5 extending out in an angle and of a stationary table 6 provided with a corresponding angular notch or recess. The two tables with their relatively reversed angular edges, form folding plates, which bear knives 7, 8 at the place where these edges join and of these knives that fastened to the table 5 is cut out in the form of an angle, while that mounted on the table 6 has an angular sharpened vertical cutting edge.

The upward and downward motion of the folding plate or table 5, which normally stands lower, is produced as follows: The plate 5 is mounted on a carrier 10 movable in lateral guides 9 and is held in a depressed position by a weighted lever 11, which is pivotally attached to the carrier and is intermittently raised by a rotary cam or eccentric 12, whereby the folding plate 5 is pushed up into the recess in the folding plate 6 and is raised beyond the surface of the latter.

The sheet of paper is fed forward on to the table 5 by the bands 4 and is limited in its forward motion by an abutment strip 13 on the table 6. Where the table 5 is raised a recess *b* (Fig. 1) is formed by means of the knives 7, 8 cutting into the front edge of the paper at the end of the center line *c* of the sheet; and the paper is bent down by the coating folding edges of the two tables along the diagonal lines *d*, *d*. As soon as the table or

plate 5 has been raised above the surface of the table or plate 6, the previously folded sheet of papers comes within the reach of rollers 14 arranged above the folding device. 5 These rollers are rotated by chain gearing 15 and conveyer-bands 16 are placed around them which feed the sheet of paper from the table 5 over the stationary table 6 and press it down on to the latter and thereby effect 10 the complete bending and folding of the paper extending downward into the slit between the folding edges along the diagonal lines *d, d*. While the movable table 5 moves down again, the folded sheet of paper is fed 15 through between two rotary knives 17 and is cut into two parts (along the center line *c*); the edges *f, f* adjacent to the cut are then provided on the underside with paste or adhesive by means of a suitable device, for 20 example, a gumming roller 21. Both bag-blanks are finally fed forward into a double edge-folding device, the folders 18, 18 of which turned or coiled through 180° in opposite directions, bend down the edges 25 coated with adhesive and fold them down to the left and right on to the two folded together pieces of paper, while the latter are moved on by conveyer-bands 20 passed over rollers 19 and are delivered from the ma- 30 chine as two finished conical or three-cornered paper bags.

Claim.

1. In a machine of the character described, a sheet-receiving member having converg- 35 ing sides, a cooperating member having a recess conforming to said sides, means to move the receiving member through said recess to turn down the overlapping portions of a sheet on said receiving member, a cutter, 40 and means to move said sheet from the receiving member and press it onto the cooperating member and into contact with the cutter.

2. In a machine of the character described, 45 a sheet-receiving member having symmetrically converging sides, a cooperating member having a recess conforming to said sides,

a cutter centrally mounted in rear of said members, means to move the receiving member through said recess to turn down the 50 overlapping portion of a sheet on said receiving-member and means to move said sheet from the latter and press it onto the cooperating member and into contact with the cutter. 55

3. In a machine of the character described, a sheet-receiving-member having symmetrically converging sides and a notch formed at the apex thereof, knives mounted in the notch, a cooperating member having a recess 60 conforming to the contour of the receiving member, a knife in the recess cooperating with the aforesaid knife, means to move the receiving-member through the recess to turn 65 down the over-lapping portions of a sheet on said receiving-member, and means to feed said sheet from the latter and press it onto the cooperating member, and a cutter centrally mounted in the path of the sheet 70 behind the feeder.

4. In a machine of the class described, a receiving table having symmetrically converging sides and a notch formed at the apex thereof, a knife mounted in the notch, a stationary table having a recess conform- 75 ing to the contour of the receiving table, a knife in the recess cooperating with the aforesaid knife, feed rolls extending across the tables, means to normally hold the receiving table below the stationary table, means to 80 periodically move the receiving table above the latter into contact with the rolls, cutting members in rear of the stationary table, pasting rolls in rear of the cutting members, folding plates behind the pasting rolls and 85 means to feed a cut and pasted sheet to the folding plates.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

MICHAEL MEHLE.

Witnesses:

JOSEF RUBUSCH,  
ROBERT W. HEINGARTNER.