

W. H. BANZETT.  
 PROCESS OF MAKING WINDOW ENVELOP BLANKS.  
 APPLICATION FILED JULY 31, 1912.

1,123,659.

Patented Jan. 5, 1915.

Fig. 1.

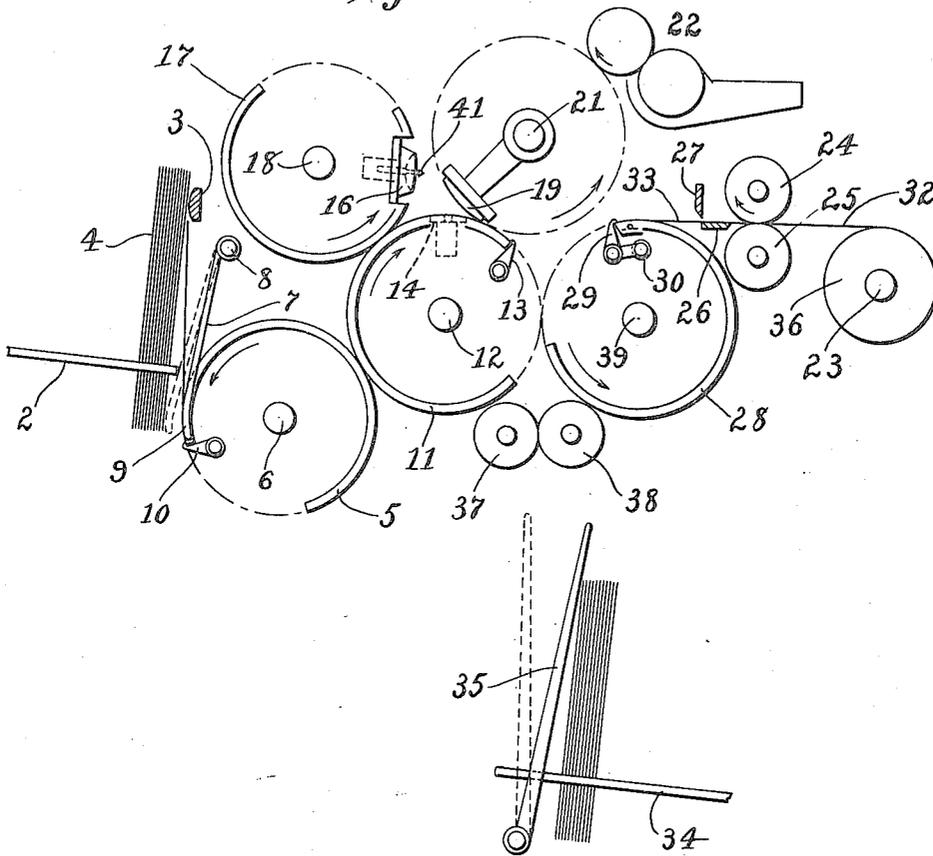
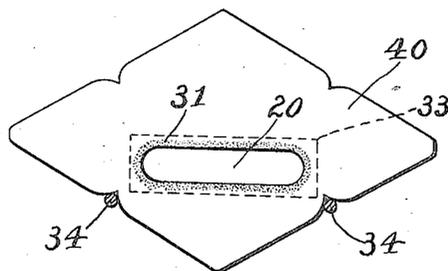


Fig. 2.



Witnesses:

Arthur Frisch  
 Chas. W. La Rue

Inventor:

William H. Banzett  
 by Wilbur M. Stone  
 Attorney.

# UNITED STATES PATENT OFFICE.

WILLIAM H. BANZETT, OF BERGENFIELD, NEW JERSEY, ASSIGNOR TO MERCANTILE CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## PROCESS OF MAKING WINDOW-ENVELOP BLANKS.

1,123,659.

Specification of Letters Patent.

Patented Jan. 5, 1915.

Application filed July 31, 1912. Serial No. 712,411.

*To all whom it may concern:*

Be it known that I, WILLIAM H. BANZETT, a citizen of the United States, and a resident of Bergenfield, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in the Process of Making Window-Envelop Blanks, of which the following is a specification.

This invention relates to the art of making envelop blanks, with a display opening therethrough provided with a transparent covering.

The object of my improvements is to provide a process for forming the opening, for applying a patch of transparent paper thereover and for affixing that patch against the borders of the window opening, all during the continuous movement of the envelop blank.

With these ends in view my improved process comprises several steps which may commence with curving the blank, at least that portion thereof adjacent to the window opening area thereof, then forming a window opening therein, if such opening has not previously been formed, then applying gum to the borders of the window opening, on the outwardly curved face of the blank, then delivering a patch of transparent material against the gummed window border, the delivery of such patch being commenced at one edge of said gummed window border and continued across to the opposite edge thereof. Also preferably, I curve the patch of transparent material outwardly away from the blank as I deliver it onto the blank so that the two pieces of paper, the blank and the patch, are caused to approach each other with a rolling motion, and after they have come into contact along the gummed surface I advance them in a plane so that they lie in parallelism thus preventing buckling or puckering of one piece of paper relatively to the other. After the restoration of said sheets to parallelism, with one gummed to the other they may be laid aside in their flat condition to dry. While all these several steps in the process may well be carried out by hand, in the commercial practice of my invention I may employ some suitable apparatus and that illustrated in the drawings has been found to give satisfactory results.

Figure 1 is a diagrammatic sectional elevation of a machine suitable for performing

the several steps in my improved process. Fig. 2 is a plan view of a window envelop blank made in accordance with my improved process.

Mounted on supports as 2 and resting against rail 3 is a pile of ordinary envelop blanks 4. In front of and near the lower edge of said pile, transfer cylinder 5 is rotatably mounted on shaft 6. Above said cylinder 5, take-off finger 7 is oscillatably mounted at 8. Said finger 7 may be provided at its lower end 9 with some suitable well-known means, not shown, for engaging the front blank of the pile and for delivering the same into the grip of clips as 10 on cylinder 5. To the right of cylinder 5 and coacting therewith is platen cylinder 11 on shaft 12. Said cylinder is provided with clips as 13 for gripping the blank. Said cylinder may also be provided with one member 14 of a pair of cutting dies. The other member 16, of said pair of cutting dies may be mounted in cylinder 17 on shaft 18 above cylinder 11. Said dies 14, 16 are efficient for cutting the window opening as 20 in the blanks as 40, Fig. 2.

For removing the severed window blank from the envelop I provide die 16 with spear 41 which, as dies 14, 16 coact, pierces the window blank portion of the envelop blank and when that window blank portion is severed from the envelop blank, conveys it upwardly around cylinder 17 where it may be removed from said spear by some convenient means not shown. Above and to the right of cylinder 11 rotary gummer 19 is mounted on shaft 21 and adjacent to the upper portion of the path of travel of said gummer is gum delivery mechanism 22. To the right of cylinder 11 is the mechanism for delivering consecutively to the gummed faces of the blanks respectively, patches of transparent paper. This mechanism comprises a shaft 23 for holding a roll as 36, of transparent paper in an endless strip, upper and lower feed rolls 24, 25, fixed cutter 26 below the path of said strip and oscillating cutter 27 above the path of said strip for coaction with lower cutter 26. Patch delivery cylinder 28, mounted on shaft 39, is provided with grippers as 29, and which grippers may be mounted as at 30, for retraction below the periphery of said cylinder 28. Below cylinders 11 and 28 are co-acting delivery rolls 37, 38.

The practice of my improved process in connection with the apparatus described, is as follows: A quantity of envelop blanks of suitable profile being placed upon rods 2, and against bar 3, finger 7 is oscillated to its dotted position where it engages the lower end of the foremost blank. Said finger then swings to the right into a channel provided therefor in the periphery of cylinder 5 and delivers the lowermost end of that blank into the grip of clips as 10. Said cylinder 5 then rotating in anti-clockwise direction carries said blank downwardly and then upwardly to engagement with cylinder 11, whereupon grippers as 13 of that cylinder, grip the leading end of the blank. Grippers as 10 then release their hold and the blank is carried around upwardly on cylinder 11. Said blank extends over cutting die 14 on said cylinder and as it passes under cutting die 16 on cylinder 17 a window opening as 20 will be cut therein. As said dies roll into engagement spear 41 will pierce the window blank portion of said envelop blank and as die 16 travels upwardly on cylinder 17, said window blank portion will be removed from the envelop blank. The blank now moves onwardly with cylinder 11 under gummer 19 which deposits gum 31 thereon around the border of window opening 20, Fig. 2. During this operation web 32 of transparent paper roll 36 has been advanced by feed rolls 24, 25, over lower knife 26 in position to be gripped by clips as 29 of delivery cylinder 28. Just as said clips reach the position shown in Fig. 1 knife 27 descends and cuts from web 32 a patch portion 33 which is simultaneously gripped to said delivery cylinder 28 by clips as 29 and carried downwardly and delivered by that cylinder against the gummed border of window opening 20 of blank 40 on cylinder 11. Said blank with its window patch then passes between coacting cylinders 11 and 28 and into the grip of delivery rolls 37, 38 by which it is discharged onto receiving rods as 34 and in front of reciprocating blade 35. In some cases I prefer to cut the window opening in the blanks at the time or just subsequent to the time of cutting the profiles of the blanks. In that case I dispense with cutters 14, 16 and cylinder 17. Then

the first step in the operation of my improved process after delivering the blank to cylinder 11, is applying the gum about the window opening.

I claim:

1. The art of making window envelop blanks from blanks having window openings therethrough which consists in curving said blank adjacent the window opening, then applying gum to the outwardly curved face of the envelop blank about the borders of the said window opening, and then delivering a patch of transparent material against the said gummed window border, the delivery of such patch being commenced at one edge of the said gummed window border and continued across the same to the opposite edge thereof.

2. The art of making window envelop blanks from blanks having window openings therethrough which consists in curving said blank, then applying gum to the outwardly curved face thereof adjacent to the window opening and then placing the patch in position upon such gummed surface by a rolling motion.

3. The art of making window envelop blanks which consists in forming a window opening in the blank, then applying gum to the surface of the blank about the margin of the window, and then placing a patch in position upon such gummed margin and during such application curving said blank and said patch relatively each toward the other.

4. The art of making window envelop blanks from blanks having window openings therethrough which consists in curving said blank, then applying gum to the outwardly curved face thereof adjacent to the window opening, then placing the patch in position upon such gummed surface by a rolling motion, and then causing the product to assume a plane position.

Signed at New York, N. Y., this 29 day of July, 1912, before two subscribing witnesses.

WILLIAM H. BANZETT.

Witnesses:

STANLEY M. COAT,  
FRANCIS J. BOYD.