Feb. 24, 1942. C. A. BERGSTEN 2,274,355

METHOD OF PRODUCING CARD ASSEMBLIES

Filed Aug. 26, 1936

Fig. 1.

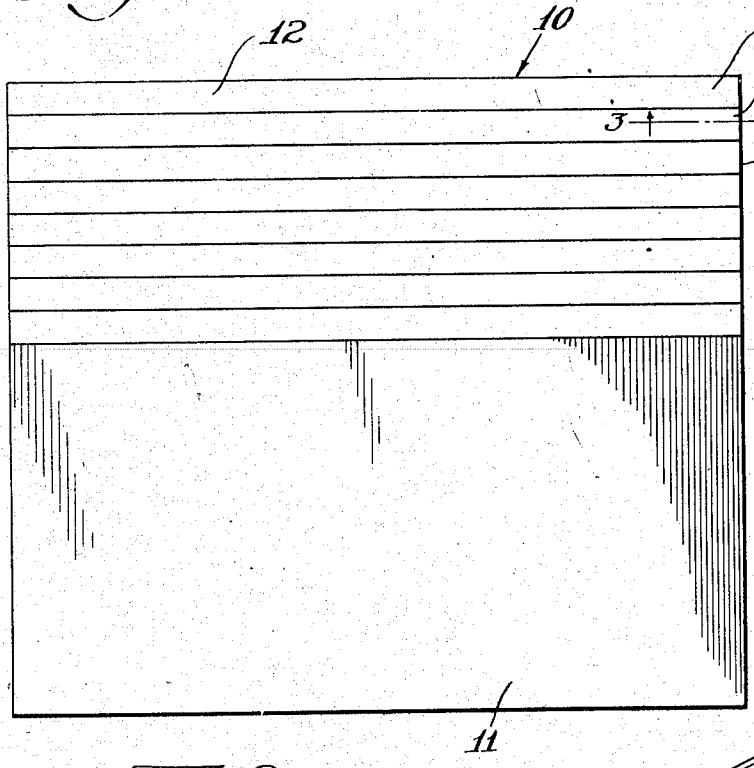


Fig. 3.



Fig 6.

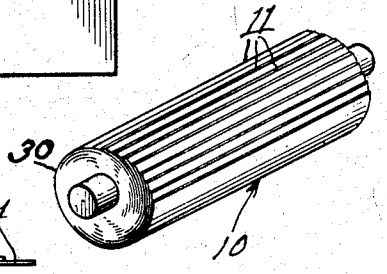


Fig. 2.

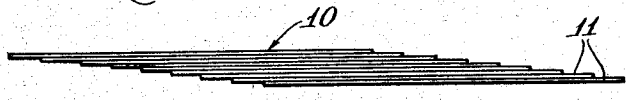


Fig. 4.

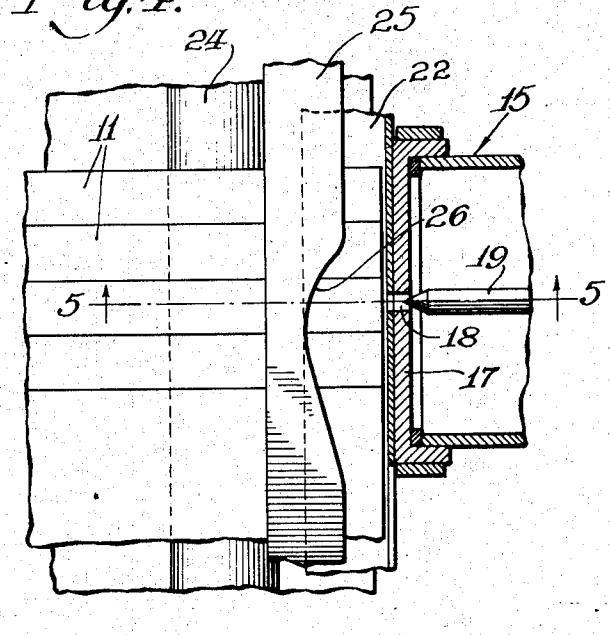
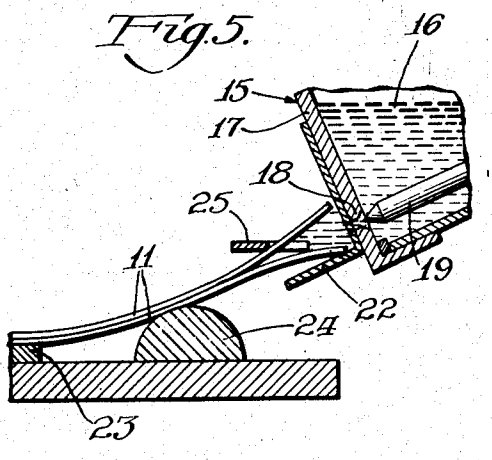


Fig. 5.



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METHOD OF PRODUCING CARD ASSEMBLIES

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Application August 26, 1936, Serial No. 98,077

2 Claims. (Cl. 281—21)

The invention relates to a method of producing assemblies of cards or sheets.

One form of the invention is embodied in an assembly of rectangular cards or sheets of paper which are of any desired thickness and are preferably of the same dimensions. The cards or sheets are arranged in regular overlapping sequence so that a strip of each card is exposed and may be printed upon in a duplicating machine, or by any other suitable apparatus. The cards are secured detachably to each other by an adhesive applied to the lateral edges of the cards along one side of the assembly. In the preferred form of the invention, the adhesive extends from the lateral edges a short distance between the cards. The cards may be separated from each other readily, but are secured to each other with sufficient tenacity to permit them to be run as an assembly through a duplicating machine whereby data may be duplicated upon the exposed strips of the cards from a master sheet. Of course, the assemblies may also be run through printing devices, such as typewriting machines, to have data printed upon the exposed strips. At times, it is necessary to curve the assembly partly around a roller or a duplicating drum. This may be done without causing the cards to become detached from each other.

In practicing the improved method, the cards are assembled in overlapping relationship and the lateral edges to which the adhesive is applied are slightly separated so that when the adhesive is applied, a small amount of it will flow between these lateral edges.

For convenience in shipping and handling, as well as storing the improved assemblies, they may be rolled around a mandrel, or the equivalent. Thus, an assembly may be made of any desired number of cards and then wound around a mandrel so that an assembly of a lesser number of cards may be unwound and separated from the remainder of the roll at any time.

Other objects and advantages of the invention will become apparent as the following description progresses, reference being had to the accompanying drawing, wherein—

Fig. 1 is a face view of an assembly of cards or sheets of paper, which assembly embodies the invention.

Fig. 2 is a side elevation of the assembly shown in Fig. 1.

Fig. 3 is an enlarged fragmentary section taken on line 3—3 of Fig. 1.

Fig. 4 is a fragmentary plan elevation of mechanism for applying adhesive to the lateral edges of a series of cards to produce the assembly shown in Fig. 1.

Fig. 5 is a section taken on line 5—5 of Fig. 4, and

Fig. 6 is a perspective view of an assembly of cards or sheets of paper, embodying the invention, which assembly is wound around a mandrel.

While it has been pointed out above that the improved assemblies of cards or sheets are particularly adapted to be employed in connection with duplicating machines employing master sheets, or the equivalent, it is to be understood that the exposed strips of the cards may be written or typewritten upon and that the invention is limited to the uses set forth only to the extent indicated in the appended claims.

In this disclosure, the words cards and sheets are employed interchangeably.

Referring for the present to Figs. 1 to 3, inclusive, of the drawing wherein a preferred embodiment of the invention is disclosed, it will be noted that the assembly 10 of cards 11 shown in Figs. 1 to 3, inclusive, has the individual cards 11 superimposed upon each other in overlapping relationship so that the relatively narrow strip 12 of each of the cards is exposed and may have data duplicated, written or otherwise imprinted thereon. In the use of the assembly as shown in Fig. 1, the typing or other printing may be placed on the top edges of the cards as shown; alternatively, the assembly may be turned around transversely for receiving the printing at the bottom edges of the cards.

The cards 11 are secured to each other by a coating 12*a* of any suitable adhesive applied to the lateral edges of the cards 11 along one side of the assembly. As best illustrated in Fig. 3, the coating 12*a* of adhesive penetrates between overlapping cards a slight distance to insure that the cards will adhere to each other even though they are handled somewhat roughly.

Referring now to Figs. 4 and 5 wherein the improved method of applying the adhesive to the cards 11 to form the assembly 10 is illustrated, the reference character 15 designates a receptacle for holding a supply of adhesive 16. The bottom wall 17 of the receptacle 15 is apertured as at 18 so that the adhesive 16 may flow therethrough. The flow of adhesive through the aperture 18 is controlled by a needle valve 19, or the equivalent. Secured to the wall 17 is an L-shaped guide 22 upon which the aligned lateral edges of a series of cards 11 may be advanced,

the remaining portions of the cards being supported upon a table 23 and a second guide member 24, which guide member 24 engages the bottom surfaces of the cards while they are being advanced. Disposed adjacent the L-shaped guide member 22 and engageable by the cards 11 while they are being advanced is a guide member 25 having a relatively long notch 26 formed in it.

The construction shown in Figs. 4 and 5 is such that when the cards 11 have been assembled to occupy the positions wherein they are shown in Fig. 1 and are advanced as a unit over the table 23 and the second guide member 24 as illustrated in Figs. 4 and 5 so that adhesive may flow through the aperture 18 against the adjacent edges of the cards, the guide member 24 will co-operate with the guide member 22 to flex the cards 11 as illustrated in Fig. 5 so that as they pass the aperture 18 they will separate slightly to permit the adhesive 16 to flow a slight distance between them. The distance the cards separate from each other is controlled by the shape of the notch 26 in the guide member 25.

After the adhesive coating 12 has been applied to the cards, they are permitted to dry. In the preferred form of the invention, the adhesive coatings 12 are subjected to heat to hasten the drying step.

Any suitable adhesive 16 may be employed, it being preferable, however, to employ an adhesive of a quick drying type.

It will be noted that in the preferred embodiment of the invention, the cards 11 of the assembly 10 are secured to each other solely by the adhesive coating 12*a* which, in this instance, extends a slight distance between the cards.

It will be noted that in the preferred embodiment of the invention illustrated in the drawing, the cards 11 are of substantially identical dimensions. However, it is to be understood that in some forms of the invention, cards of unequal dimensions may be superimposed over each other in overlapping relationship.

Referring to Fig. 6, the reference character 30 designates a mandrel, such as a roller of wood, around which an assembly 10 of cards is wound. There may be any desired number of cards 11 in the assembly 10 wound upon the mandrel 30 and it will be readily understood that any lesser number of cards may be unwound from the roll thereof and detached therefrom for use as desired. The wound assembly shown in Fig. 6 provides a convenient method of storing, shipping and handling the improved assemblies.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claims, in which it is my intention to claim all novelty inherent in my invention as broadly as possible, in view of the prior art.

I claim:

1. The method of forming an assembly of cards secured together in superposed overlapping relationship which comprises: assembling the cards in said relationship with one edge of each in alignment at one edge of the assembly; causing relative movement between said edge of the assembly and a source of adhesive while causing slight separation of said edges at the progressively changing portion of said edges opposite said source; and causing adhesive to flow from said source to penetrate slightly between the separated edges.

2. The method of forming an assembly of cards secured together in superposed overlapping relationship which comprises: assembling the cards in said relationship with one edge of each in alignment at one edge of the assembly; moving the aligned edges of the assembly past and closely adjacent a source of adhesive; causing slight separation of the cards at their edges by virtue of the resilience thereof and promptly restoring contact therebetween as the cards are moved; said separation being produced at the location of said source of adhesive; and causing adhesive to flow from said source to penetrate slightly between the cards at their edges.

CHARLES A. BERGSTEN.