

July 31, 1934.

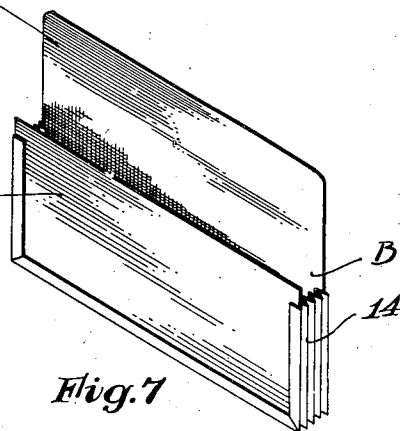
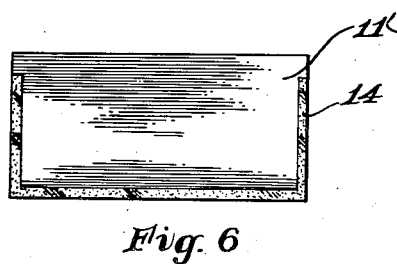
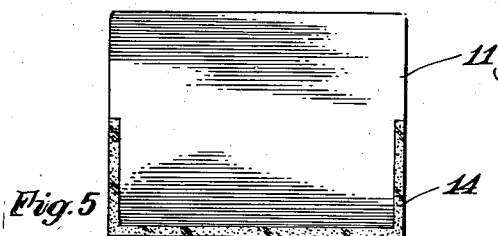
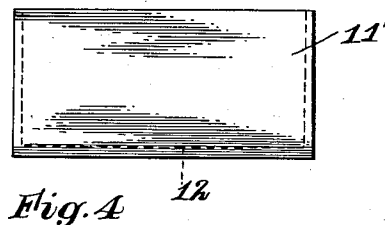
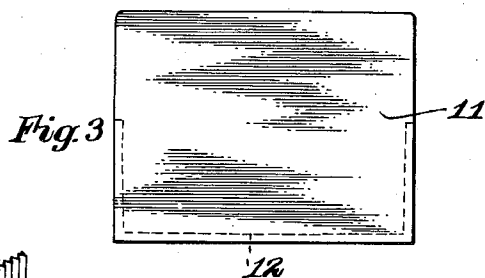
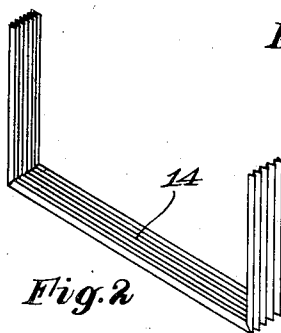
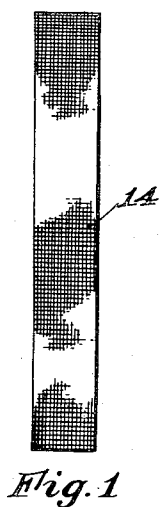
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1,968,165

METHOD OF MAKING EXPANDING WALLETS, FILES, AND PORTFOLIOS

Filed March 17, 1930

4 Sheets-Sheet 1



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METHOD OF MAKING EXPANDING WALLETTS, FILES, AND PORTFOLIOS

Filed March 17, 1930

4 Sheets-Sheet 2

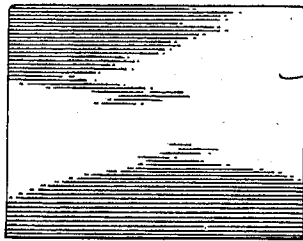


Fig. 8

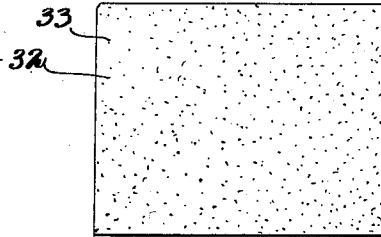


Fig. 9

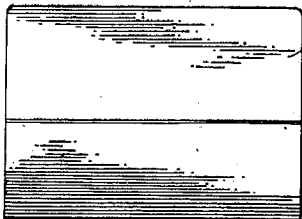


Fig. 11

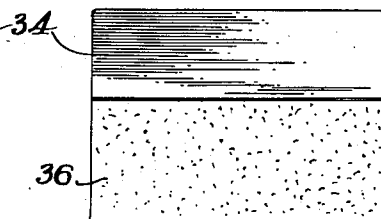


Fig. 12

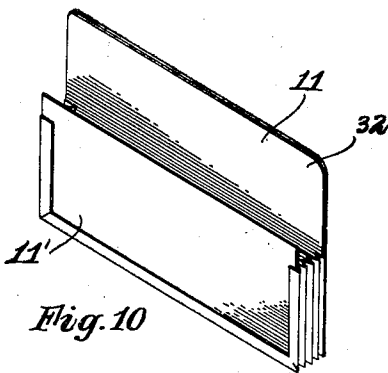


Fig. 10

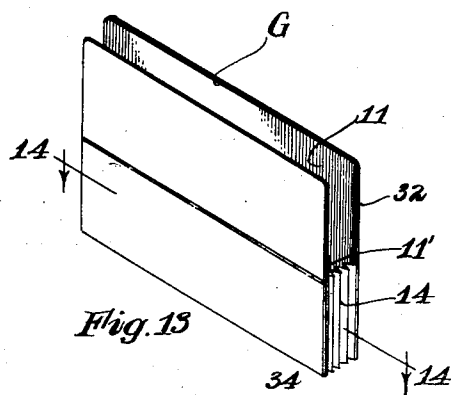


Fig. 13



Fig. 14

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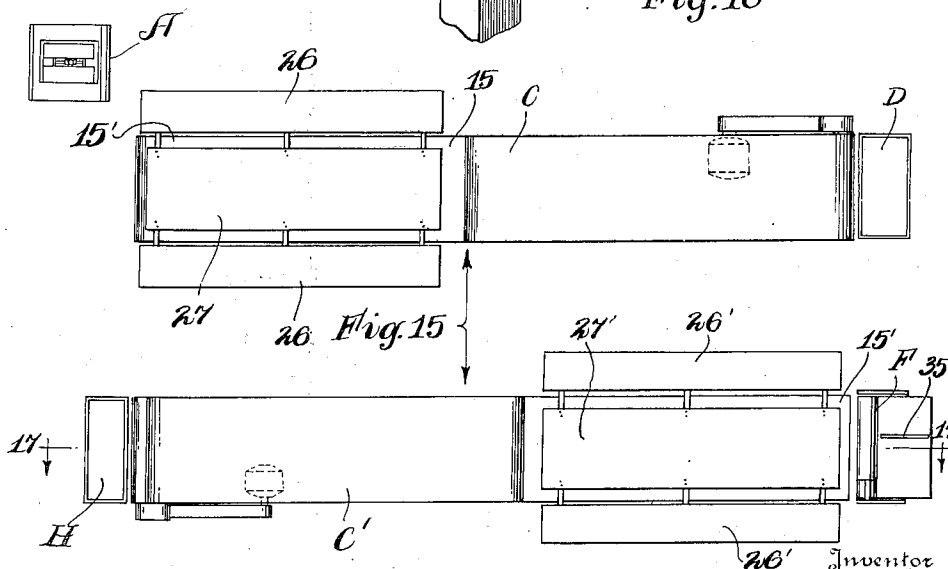
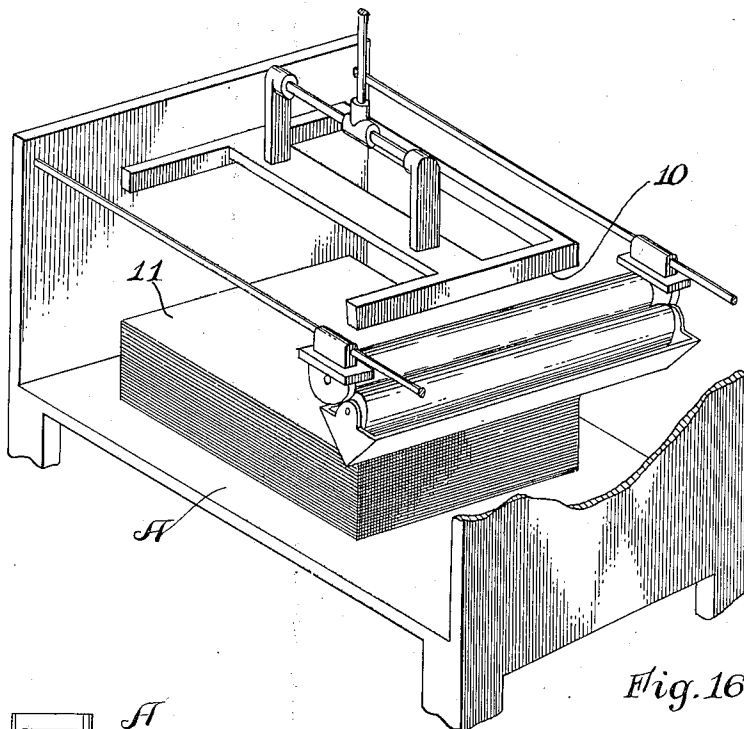
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METHOD OF MAKING EXPANDING WALLETS, FILES, AND PORTFOLIOS

Filed March 17, 1930

4 Sheets-Sheet 3



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1,968,165

METHOD OF MAKING EXPANDING WALLETTS, FILES, AND PORTFOLIOS

Filed March 17, 1930

4 Sheets-Sheet 4

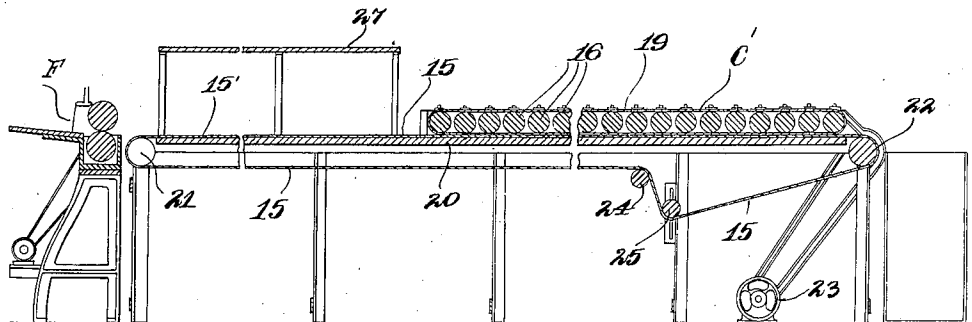


Fig. 17

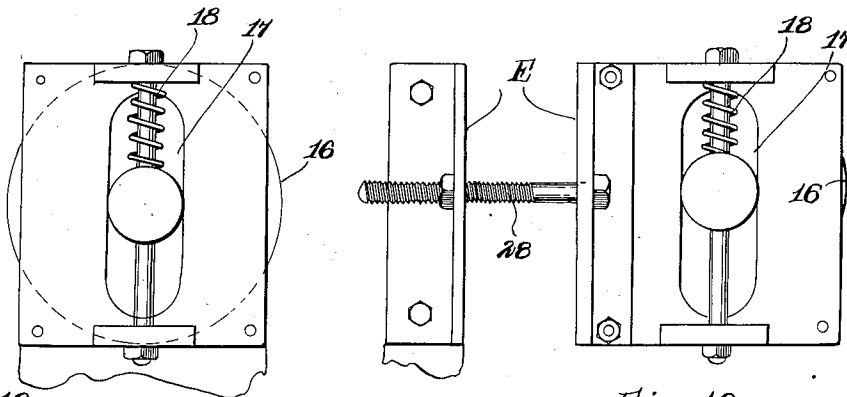


Fig. 18

Fig. 19

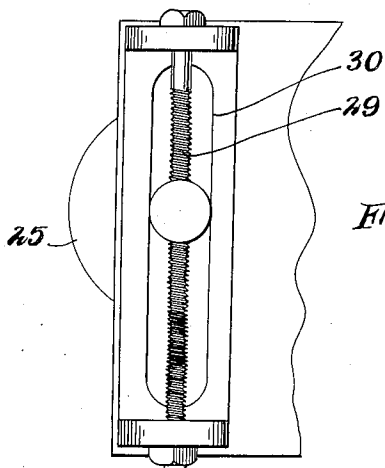


Fig. 20

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UNITED STATES PATENT OFFICE

1,968,165

METHOD OF MAKING EXPANDING WAL-
LETS, FILES, AND PORTFOLIOSOscar J. Olm, Minneapolis, Minn., assignor to
Quality Park Envelope Co., St. Paul, Minn., a
corporation of Minnesota

Application March 17, 1930, Serial No. 436,633

11 Claims. (Cl. 93—1)

My invention relates to the method of making expanding wallets, files, or portfolios, where the bottom and end walls are made in an accordion plait structure having a bellows-like nature to be expandable into different sizes for use.

The expanding wallets or files are made with an inner wall of paper or a sheet material, and these are adapted to be covered by a reinforcing side wall of other material. The structure of the files or wallets is of a reinforced nature where the inner walls are first attached to the expanding gusset which forms the bottom and ends of the same, and then the outer reinforcing walls of a very tough and long-wearing material which are usually of a paper construction, are attached to the outer surface of the inner walls and which cover the outer edges of the accordion plaited gusset.

Heretofore these files, wallets or portfolios, have been made by hand and it is difficult to have them folded and pasted uniformly together. The purpose of my invention is to provide a method of making these files and wallets by a certain defined method which will make each wallet uniform in design and paste the parts together in unity so that all of the articles are of the same general uniform construction.

My method consists of first placing the sheets which form the inside of the file or wallet in a paster which is adapted to place the paste on a defined marginal edge on three sides of the sheet. When the marginal paste or adhesive is applied to the sheet it is then placed inside the outer folds or edges of the accordion plaited gusset and it is then placed upon an endless carrier which carries the same into a compressor made up of a series of compressing rollers which extend over the table over which the endless carrier travels. When the file or portfolio comes out of this compressor on the carrier it is then picked up, and sheets which are pasted over a defined surface to equal the area of the sides already attached inside of the plaited gusset are placed on the outside of the same so as to form the front outside walls of the file, wallet or portfolio, and the same is then placed on an endless carrier which carries the same into a compressor over a table and upon emerging from this carrier the files or wallets are complete with ends and the bottom accordion plaited portions and inside and outside walls pasted together so that the edges of the accordion plaited ends of the bottom are pasted between the inner and outer side walls. This method makes the envelopes, files or portfolios, uniform throughout and causes the parts to adhere to

each other the same as if they were individually held in a compressing press, but they are made in a much more rapid manner because the former method of making them was by hand and was a very slow and undesirable method because it did not only take a long time to make these articles, but they were not uniform when they were completed. It will be apparent that such articles as this must be made uniform and also must be made up comparatively rapid, otherwise the cost of the same is prohibitive. Articles of this nature are used widely for holding papers and as files and as reinforced paper wallets for holding valuable papers and things of that kind where they are subjected to hard usage.

To assist in describing the carrying out of my invention I have illustrated in the drawings diagrammatically parts of the gluing apparatus and endless carrier and compressor together with the work tables and position of the same in relation to the gluing apparatus and also the segmental parts of the articles, files, envelopes, wallets or portfolios.

In the drawings:

Figure 1 illustrates the flat formation of the gusset.

Figure 2 illustrates the gusset accordion plaited and folded into the proper shape.

Figure 3 illustrates the enlarged inside wall of the expanding file.

Figure 4 shows the small inside wall of the expanding file.

Figure 5 shows the expanding file with the large inside wall attached to the gusset.

Figure 6 shows the small inside wall attached to the gusset.

Figure 7 shows a perspective of the expanding file with the large and small inside walls attached in place.

Figure 8 shows the enlarged outside wall before the paste is applied to the same.

Figure 9 illustrates the enlarged outside wall showing the paste over the entire surface of the same and before it is applied to the enlarged inner wall of the expanding file.

Figure 10 illustrates the expanding file with the outside wall illustrated in Figures 8' and 9 attached to the enlarged wall of the expanding file.

Figure 11 illustrates the other outside wall of the expanding file before it is pasted.

Figure 12 illustrates the wall illustrated in Figure 11 after the paste has been applied.

Figure 13 illustrates the wall illustrated in

Figures 11 and 12, attached to the smaller inside wall of the expanding file and as complete.

Figure 14 is a section on the line 14—14 of Figure 13.

5 Figure 15 illustrates a plan view of the floor position of the apparatus used in carrying out my method.

Figure 16 is a perspective of the paster used in the first operation for putting on the marginal 10 paste to the inside walls.

Figure 17 is a section on the line 17—17 of Figure 15.

Figure 18 illustrates a detail of one of the bearings for the compressing rollers.

15 Figure 19 illustrates the belt tightener for the compressing rollers.

Figure 20 is the belt tightener for the conveying belt which operates under the compressing roller belt.

20 My method is carried out in a manner to make expanding portfolios, files and the like, so that each will be uniform and in a manner to produce the same rapidly rather than by the hand method where each file or portfolio had to be folded and 25 squeezed into a press.

In carrying out my method the first gluing operation for the sheets is accomplished by the gluing machine A which places a marginal glue strip by the gluer 10 on the sheets 11 about three 30 sides of the same, as illustrated by the dotted marginal lines 12 in Figures 3 and 4. These sheets such as 11 for the large size and 11' for the small size are then placed on the inside of the outer folds of the gusset member 14 and the 35 file or portfolio B in its form illustrated in Figure 7 is laid upon the carrier belt which carries the same into the compressor C.

The compressor C includes a series of compressing rolls 16 which are held on their ends in the slot bearing 17 and by means of the spring 40 18 the rolls 16 are held under tension against the under side of the endless belt 19 which goes around the roll 16. The structure of the sliding bearing for the end of the rolls 16 is illustrated in enlarged view in Figure 18. The belt 15 45 extends under the belt 19 and the rolls 16 and bears against the rigid table top 20. One end of the belt 15 is carried by the roll 21 and the other extreme opposite end is carried by the roll 22. A 50 suitable motor 23 operates the roll 22 so as to operate the belt 15 and the belt 19 operates by friction with the belt 15. An idle roll 24 is provided for the belt 15 and a tightening roll 25 adjacent the idle roll 24 is adapted to take care 55 of the slack or adjustment in the belt 15.

Each spring 18 forces downwardly the opposed end bearings of the rolls 16, pressing these rolls down into contact with the portion of the belt 19 60 beneath the same, and urging this belt against the belt 15 and against the table 20. As the parts of the file or portfolio B are carried between the belts 15 and 19 they raise the rollers 16 directly above the file, compressing the springs 18. The belt 19 is thus retained under spring tension 65 against the portfolio B, continuously compressing the file B and repeatedly accentuating the compression as the file moves directly under one of the rolls 16.

70 Work tables 26 are provided on each side of the starting end 15' for the belt 15 and the girls who place the sides 11 and 11' in the plaited or bellows-like gusset member 14 work on these tables and then place the file B on to the belt 15 when it is ready to be compressed in the com- 75 pressor C. The top table 27 between the tables

26 which are positioned on each side of the starting end 15' of the belt 15, provides a storage for folded bellows or gussets 14 for the workers at the tables 26. The compressor C is of sufficient 80 length to firmly set the glue which holds the parts together of the member B, so that when these articles B come out of the compressor they may drop into a container D where they are stored until the next operation.

A belt tightener E for the belt 19 is illustrated 85 in enlarged detail in Figure 19 which includes an adjusting bolt 28 which operates to draw the end roller 16 in a manner to tighten the belt 19.

The tightening pulley 25 is operated in either 90 direction by the adjusting screw 29, as illustrated in Figure 20, so as to move the roller 25 in the slotted bearing 30 to adjust the slack of the belt 15.

The section of Figure 17 shows the compressor of the second operation of my method and I have 95 termed this compressor C'. This compressor C' is of the same general construction and nature as the compressor C and by means of these two compressors, work tables, and carrying belts 100 which are positioned conveniently adjacent to each other in a similar manner as illustrated in the plan view in Figure 15, my method may be carried out to complete the expanding portfolios, files and wallets.

When the first operation has been complete to 105 secure the inside members 11 and 11' to the expanding bellows or gusset 14, and they are discharged in the container D, they are then taken over to the top or storage table 27' and are stored on this work table 27' so that the workers on each 110 side of the tables 26' may apply the outside walls to the file or wallet.

The method is then continued by passing the 115 outer sheet 32 through the gluer F so as to apply glue over the entire surface such as 33, illustrated in Figure 9 by the dots over the surface. This sheet 32 is then applied to the large inside sheet 11, as illustrated in Figure 10. Then a second 120 outside sheet 34 is passed through the gluer F in a manner so that it will be held by the guard 35 to apply glue over the surface 36 illustrated by the dots on the surface in Figure 12. The area of the surface 36 is virtually the same as the surface of the small sheet 11' and then the sheet 34 is laid on the outside of the inner small sheet 11', as illustrated in Figure 13, and the operator 125 then lays the expanding portfolio file or wallet G on the starting end 15' of the compressor C' and it is carried into the compressor C' which compresses the same in a manner to set the adhesive by the time it is discharged out into the 130 container H. The complete portfolios or files G are thus delivered in rapid succession into the container H, all in a uniform formation and with the parts tightly adhered together. This completes the portfolio or expanding file G in a simple and effective manner and much more economically than they can be manufactured by hand 135 and where they are placed in a press to squeeze them long enough to permit the adhesive to set so that the parts will not separate in the making of the same. In making these files and portfolios by hand where they are squeezed together 140 in a press, the manufacturing costs make the prices to the customer virtually prohibitive of general use. A portfolio or file of this nature is very desirable and with my method I accomplish 145 a long desired result to provide portfolios, files or other articles of the nature set forth at a reasonable price so as to permit their general use. 150

Thus my method consists in attaching the parts of an expanding wallet, file or portfolio, by applying adhesive and then passing the same through a compressor carrier which holds the parts compressed until the adhesive has set. My method is carried out in a simple and effective manner and overcomes the old method of making expandable portfolios and files by hand, permitting them to be made virtually automatically in the sealing and securing of the parts together, and while I have illustrated and described the method in accordance with the patent statutes, suggesting certain means of carrying out the method, I desire to have it understood that variations can be made and the same applied to other uses within the scope of the following claims without limitation as to the purpose and intent of the invention.

I claim:

1. The method of making expanding files, portfolios, wallets and the like, consisting in applying adhesive in a marginal strip about the edges of the inner walls, placing the inner walls inside of the edges of the body portion, compressing the same, applying the adhesive on the outer walls over a suitable area, placing the outer walls on the outside of the inner walls and compressing the same.

2. The method of making expanding files, portfolios, wallets and the like, which consists in applying adhesive in a marginal strip about the edges of the inner walls, placing the inner walls inside of the edges of the expanding accordion gusset, compressing the same, applying adhesive on each outer wall over an area equal that of the corresponding inner wall, placing the outer walls on the outside of the inner walls, and compressing the same.

3. The method of making expandable portfolios, files and the like, which consists in applying adhesive to the parts to be attached together and then compressing the same for a sufficient length of time to set the adhesive repeatedly accentuating the compression during this time.

4. The method of making a portfolio having an expanding gusset consisting in applying adhesive to inner side members, placing the inner side members inside the gusset, compressing the

same, then applying outer side members which have been covered with adhesive to the side members first attached to the gusset to provide the finished form and compressing the same.

5. The method of making an expandable file having a bellows-like gusset consisting in first applying adhesive to some of the respective parts, compressing the same, then applying adhesive to other of the parts, then placing the same together to provide the finished formation of the file and compressing the same to secure the parts together in finished form.

6. The method of making containers having a gusset and side walls which consists in applying glue to the side walls, then placing the same in position in the gusset, and repeatedly compressing the same for a sufficient length of time to set the glue to permanently attach the parts.

7. The method of automatically making portfolios and the like having gusset portions which consists in applying adhesive to the respective parts and then continuously compressing the same for a period of time repeatedly accentuating the compression.

8. The method of making a reinforced portfolio file having an expandable gusset consisting in placing inside walls with adhesive on the same in proper position in relation to the gusset, compressing the same, applying outer side walls thereto by adhesive and compressing the same.

9. The method of making a portfolio consisting in applying adhesive to the respective portions of the respective parts, compressing the same repeatedly accentuating the compression, applying other parts thereto and again compressing the same in a similar manner.

10. The method of making a portfolio file or the like, which consists in partially assembling the parts, compressing the same, then fully assembling the parts and again compressing the same.

11. The method of making a file consisting in attaching two of the inner parts together, conveying these two parts, simultaneously pressing them together, and attaching additional pieces to the file, conveying the completed file, simultaneously pressing the same.

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