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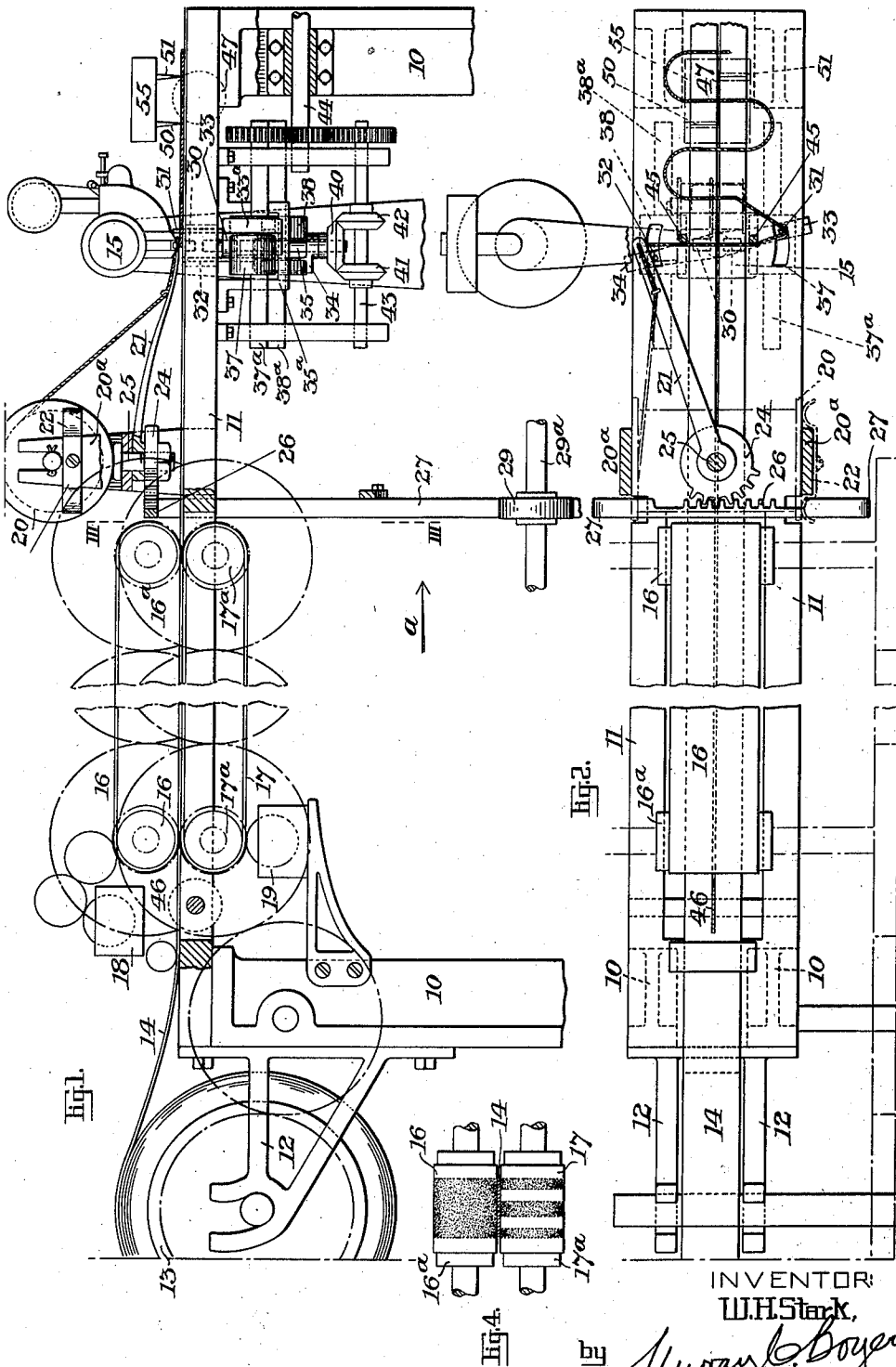
W. H. STARK

2,075,672

MANUFACTURE OF BAG HANDLES

Filed Aug. 1, 1935

2 Sheets-Sheet 1



INVENTOR:
W.H. Stark,

By *Murray B. Boyer*
Att'y.

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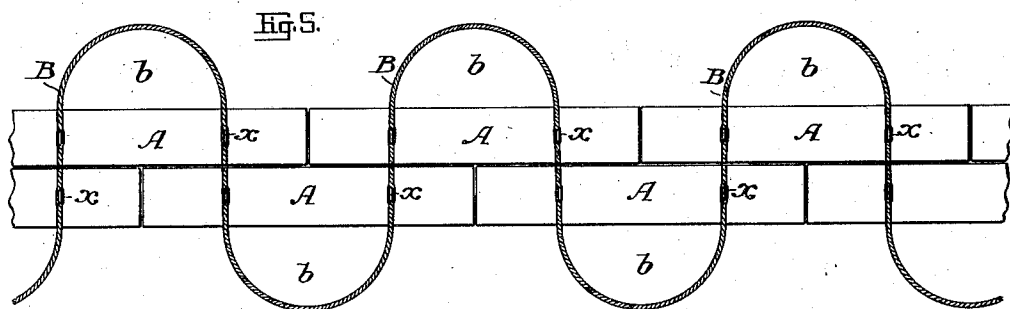
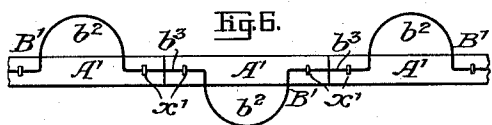
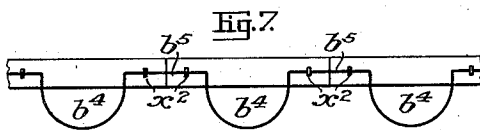
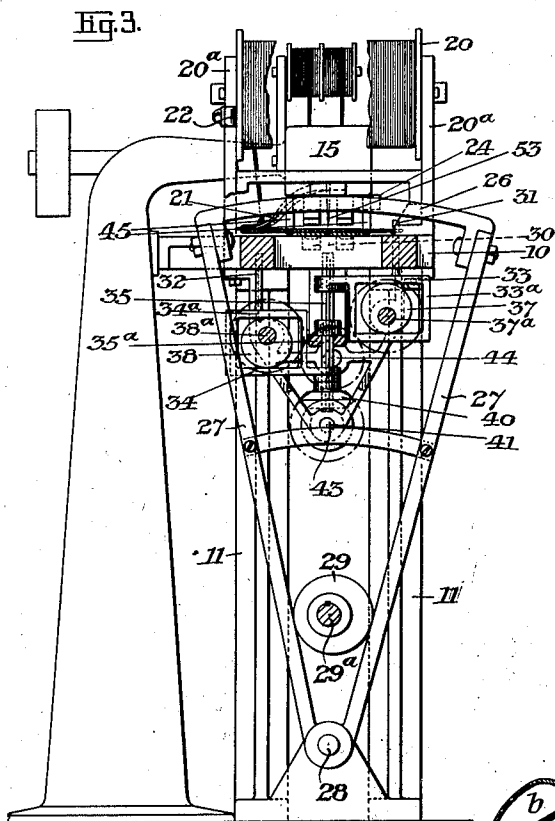
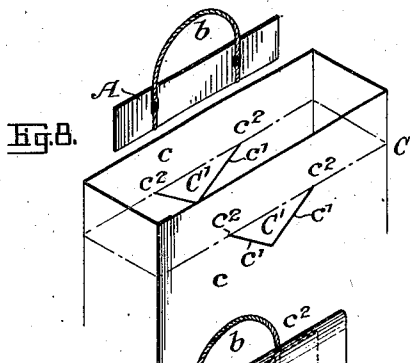
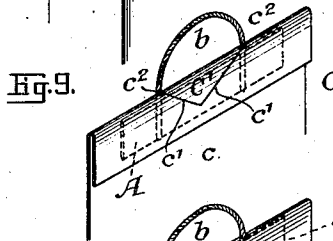
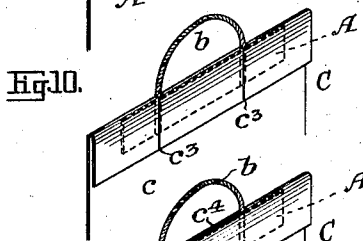
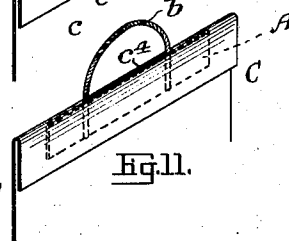
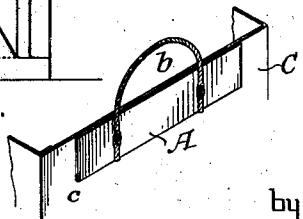
W. H. STARK

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MANUFACTURE OF BAG HANDLES

Filed Aug. 1, 1935

2 Sheets-Sheet 2



INVENTOR
W. H. Stark,

by Murray B. Boyer
Att'y.

UNITED STATES PATENT OFFICE

2,075,672

MANUFACTURE OF BAG HANDLES

William H. Stark, Langhorne, Pa.

Application August 1, 1935, Serial No. 34,254

21 Claims. (Cl. 93—1)

My invention relates to the manufacture and assembly of handle structures used with paper bags of the type familiarly known as "shoppers". These handle structures usually comprise a

5 looped section of cord or the like permanently fastened to a strip of flat material—stiff paper, cardboard, or the like—of suitable weight and strength, and they are subsequently associated with and secured to the open ends of the bags; usually underlying a turned-in portion of the wall of the bag at the mouth of the same between which turned-in portion and the main wall of the bag the flat strip, to which the looped cord handle is attached, is permanently held.

15 The main object of my invention is to provide means for preparing handle structures of this type from strip material, which may be delivered in continuous form, and to which a continuous cord to constitute the handles proper is applied.

20 A further object of my invention is to provide means whereby the strip material may be separated longitudinally and fed to a point where the cord may be applied continuously in the form of oppositely disposed loops which subsequently form the desired handles, and to cut such strip material into individual handle structures after the application of the cord.

25 A further object of my invention is to provide means for separating the continuous strips of paper or cardboard into individual handle-applying sections prior to the application thereto of the cord to constitute the separate handle structures.

30 A further object of my invention is to provide separate sections of paper or cardboard to be fed from containers in staggered relation to continuous cord-applying means.

35 A further object of my invention is to provide means for guiding and continuously applying to the strip material, no matter how or in what form the latter is presented, a suitable cord in alternate looped formation on opposite sides of the strip material to form the handles proper of the improved handle structures.

40 A further object of my invention is to provide means for securing this cord to the strip material, whether the latter is in continuous form or is presented to the fastening-applying means in separated sections, and while other forms of fastening means may be employed, I prefer to use metal staples applied by suitable stapling mechanism.

45 And a still further object of my invention is to provide an improved method of producing the handle structures continuously for immediate or

subsequent association with the bags to which they are to be attached.

These and other features of my invention are more fully set forth hereinafter, reference being had to the accompanying drawings, more or less diagrammatic in character, in which:

Figure 1 is a longitudinal elevation, partly in section, illustrating generally one form of mechanism which may be employed in the continuous production of bag handle structures in accordance with my invention.

Fig. 2 is a plan view of the same, partly in section and partly broken away.

Fig. 3 is a sectional view on the line III—III, Fig. 1, looking in the direction of the arrow *a*.

Fig. 4 is a fragmentary view illustrating a detail of my invention.

Fig. 5 is a fragmentary plan view of strips of bag handle structures made in accordance with my invention.

Figs. 6 and 7 are similar views illustrating other forms of bag handle structures within the scope of my invention, and

Figs. 8, 9, 10, 11, and 12 are views illustrating various ways in which the handle structures made in accordance with my invention may be attached to the open ends of bags of various types.

Bag handles with attaching elements of the general type illustrated in the accompanying drawings have been made for many years, but so far as I am at present advised, no attempt has been made to associate the handles and attaching elements continuously and, in a certain sense, automatically.

By one method of procedure in accordance with my invention, I associate a continuous cord to represent the handles proper with a continuous strip to which such cord is attached, and provide means for separating such strip into sections and for severing the cord between each section so that, as a result of the operations in accordance with my invention, I am able to produce continuously and automatically a plurality of complete, preformed handle structures ready for association immediately, if desired, with the paper or other bags.

In carrying out this part of my invention, I may proceed substantially as follows:

I provide a roll of strip material—cardboard, tough paper, or the like—of suitable character and of a width sufficient for the purpose, which is to provide a plurality of attaching sections, each section carrying an individual cord handle. The strip material so provided is preferably of

double width. Before or after it is linked up or associated with the cord to form the individual handle structures, it may be separated into two sections longitudinally of the strip; each of said sections having a width equal to or slightly less than one-half of the original strip. This strip material, in continuous or separated form, is fed continuously to fastening-applying means and, just before the securing operation, a cord from a suitable source of supply and in continuous length is laid across the strip material and immediately presented to means for applying fastenings, which may be a stapling head, by which means staples may be driven through the cord and into the strip material; such staples being preferably arranged to lie longitudinally of the cord at the point of application, and being clinched at the back of the strip material. Each run of the cord crossing the strip material may receive one or more staples, at least one for the portion which serves as the handle-attaching means.

In order that the continuous cord may be looped back and forth to form the desired handles and be properly presented to the fastening mechanism, which may be the stapling head, I provide guiding means to lay the cord in place. This guiding means may be in the form of a swinging arm oscillated back and forth in front of or beneath the stapling head and in advance of the stapling operation, which arm serves to lay the cord over the strip material during such oscillation and adjacent a movable stop (or stops) associated with the stapling head. In connection with this oscillating guide arm, I may provide means in the form of upstanding posts or pins alternately raised and lowered over which the cord is alternately caught and alternately released.

It will be understood that the loop-forming or developing means (or any modification thereof) holds the cord against the movable stop (or stops) associated with the stapling head while staples are being set in one cross-run of the same and that, while such guiding device is swinging the cord in the opposite direction to cause it to again lie across the strip material, the latter has been advanced to a position to receive the cord in proper relation for presentation to the stapling head to have staples inserted therein and in the proper relation.

As the strip material is fed forward after the first connection of the cord, the latter is looped as described and laid in reverse direction across such material, and the cord in this second position with respect to such strip material is presented to the stapling head and staples are passed through the same in the same manner as the first stapling operation referred to. Simultaneously with, or just after this last-mentioned stapling operation, the cord where it crosses the strip material may be severed at a point beyond the stapling head, or simultaneously with the stapling operation, and such cord is again laid across the strip material in the direction of the first presentation; again presented to the stapling head, and so on. The means for effecting this separation of the cord may also be employed to slit the strip material longitudinally of the same, or such slitting of the strip material may be effected before the cord is laid over the same.

At or about the relation of every other stapling operation, so to speak, the separated strip material is cut transversely of the line of travel between each looped portion of the cord secured to

the same, and the result is a succession of complete handle structures from each strip; the loops of the respective handles so formed being disposed in staggered relation at the outer edges of the respective strips.

For the purpose of advancing the strip material to the stapling head, I employ feeding means coordinated with the cord looping means so that the cord is always presented to the stapling head at the proper timed relation to insure the securing of the same to the strip material at the proper position. The feeding means may comprise a pair of endless belts between which the strip material is fed, or a pair of belts above and below the strip material may be employed.

These handle structures, comprising the attaching strips with the looped cords attached thereto, may be produced continuously in the manner indicated, and pairs of the same subsequently associated with the paper or other bags. I may, however, arrange for this association immediately following their formation, and as an adhesive is desirably employed to secure the handle structure to the open end of the bag—inside or outside the same—the feeding belts for moving the strip material may serve to apply adhesive to the surface or surfaces of the same from suitable sources of supply, so that the operator receiving the finished handle structures will find the same properly coated with adhesive for immediate association with the open end of the bag.

As it is desirable that the surface of that portion of the strip material passing the anvils of the stapling mechanism shall be without an adhesive coating, I may arrange the adhesive-applying means to coat only a portion of the lower feeding belt so that only a part of the under surface of the strip material will be coated. In lieu of this, I may employ a plurality of lower feeding belts and omit the application of adhesive to certain of the same.

One form of preformed handle structures developed from strip material and cord continuously fed thereto is shown in Fig. 5, wherein the attaching portions of the paper or cardboard strip material are indicated at A, and the handle portions formed from such cord are indicated at B; the latter comprising the loops or bights *b* in staggered relation on opposite sides of the strip material and the crossing portions *b'* continuous therewith; the latter being secured at the points *x*, by stapling or otherwise, to the attaching sections A.

While I prefer to form handle structures from double-width material, subsequently slit; or from a pair of strips developed from such double-width material; or from separate sections of cardboard, paper, etc., fed to the cord-securing means in staggered relation with loops on opposite sides in staggered relation, it is within the scope of my invention to prepare handle structures continuously from single width strips or strip sections in a manner hereinafter described with special reference to Figs. 6 and 7. Fig. 6 shows the strip sections at A', and the cord to form the handle portions is indicated at B'. In this arrangement, the cord is looped on opposite sides of the strip section, as indicated at *b*², with straight runs *b*³ disposed longitudinally of the strip between the looped portions. The portions *b*³ of the cord may be produced by allowing the cord-applying means to dwell momentarily between the oscillations designed to lay the cord across the strip

material; the stapling mechanism applying staples x' across the straight runs b^3 of the cord between the cross movements of the cord-applying means. In the arrangement shown in Fig. 7, the cord is looped on one side only of the sections of strip material, as indicated at b^4 , with straight runs of cord, indicated at b^5 , disposed longitudinally of the strip material between the looped portions. In producing this form of the handle structure, the cord-feeding and -guiding means will have shorter oscillations, with momentary dwells centrally of the strip material while the latter moves forward. The cord may be secured to the strip material by staples x^2 crossing the cord in the same manner as indicated in Fig. 6.

Mechanism capable of carrying out the features and/or objects of my invention is shown more or less diagrammatically in the accompanying drawings wherein, referring particularly to Figs. 1, 2, and 3, 10 represents a suitable frame having a table 11. At one end of the same, I provide a support 12, for a reel 13 carrying strip material 14, from which the attaching sections "A" may be produced, such strip material being guided over the table to a stapling head 15.

While various means may be employed to move the strip material to the stapling head, such movement being continuous, I have shown upper and lower driving belts 16 and 17 carried by suitably driven drums 16^a and 17^a. When it is desired to operate the mechanism and simultaneously apply an adhesive to the surfaces of the strip material, the adhesive receptacles 18 and 19 may be employed, with suitable applying means. From the receptacle 18, adhesive may be applied over the entire upper surface of the strip material, while from the receptacle 19, the adhesive may be applied in longitudinal lines on the under side of the strip material in such areas as to clear the anvils of the stapling mechanism, as indicated in Fig. 4.

In order to form the cord handle loops indicated at "b", Fig. 5, I provide a reel 20 of suitable cord, which may be supported in brackets 20^a carried by the table, and such cord may be continuously fed from such reel to a movable guide 21 which lays it back and forth across the strip material; means being provided to oscillate this cord guide over the strip material beneath the stapling head. In order that proper tension may be maintained on the cord, I may employ a flat spring 22 carried by one of the reel supports and engaging one end of the reel.

Various means may be employed for the purpose of oscillating the cord-guiding arm 21, and I do not wish to be limited to any special mechanism for effecting this operation. In the present instance, I have shown the cord-guiding arm as carried by a segmental gear 24 mounted on a vertical pivot 25 disposed beneath the reel carrying the cord and engaged by a rack 26 carried by an oscillating frame 27 pivotally mounted at 28. The rack portion is preferably separable from the frame carrying the same for ease of assembly. The frame carrying the rack may be oscillated back and forth by an eccentric cam 29 mounted on a shaft 29^a disposed below the table, such shaft being driven in any suitable manner.

The cord to be attached to the strip material, whether the latter is in continuous lengths or in sections, is laid by the guiding arm 21 transversely across such strip material directly above the anvils 30 of the stapling mechanism, so that

the staples may be properly applied, either across or in line with such cord. It is necessary to provide means that will insure proper positioning of the cord over the anvils so that the staples may be properly applied, and such means will probably include restraining members that will engage the cord alternately at opposite sides of the strip material at such position as to insure holding a sufficient amount of cord to provide the desired handle. In the present instance, I have shown a pair of pins 31 and 32 which may be raised and lowered alternately and, simultaneously with such movement, be given a movement of translation longitudinally of the table. These pins are intended to engage the cord alternately and to provide the desired handle bights. While other means may be employed for this purpose, the mechanism shown herewith may be employed. The pins 31 and 32 are shown as carried by supporting arms 33 and 34, carried by a vertical shaft 35 disposed below the table and arranged to be rocked. The arms 33 and 34 are preferably splined to the shaft so that, as the latter is rocked, first in one direction and then in the other, pins 31 and 32 will be alternately moved longitudinally of the table. In addition, the supporting arms 33 and 34 are to be given a vertical movement on the shaft 35, so as to alternately raise and lower the pins 31 and 32 into and out of position for engagement with the cord as the latter is applied by the swinging arm 21. For this purpose, the arms 33 and 34 may carry box-like frames 33^a and 34^a within which may be disposed eccentric cams 37 and 38 carried by shafts 37^a and 38^a. When one pin is up—31, for instance—the other pin will be down, and, by reason of the eccentric cam arrangement for raising the arms 33 and 34, the shafts 37^a and 38^a may rotate in the same direction, being actuated by suitable driving means. The vertical movement of the pins 31 and 32 may take place simultaneously with, or at a suitably timed relation with respect to, their movement longitudinally of the table. To effect this longitudinal movement, the shaft 35, which may be supported by a bracket 35^a, carries at its lower end a mutilated bevel gear 40, which is engaged at properly timed intervals by mutilated bevel gears 41 and 42 carried by a shaft 43; engagement of the gear 40 by the gear 41 effecting the desired rocking movement or oscillation of the shaft 35 in one direction, and engagement of the gear 40 by the gear 42 effecting the desired rocking movement or oscillation of the shaft 35 in the opposite direction.

Fig. 2 shows the pin 31 in the raised position and substantially in line with the cross-axis of the anvils 30 and engaged by the run of cord which has been carried across the said anvils by the guiding arm 21. The opposite pin 32 is below the upper level of the table out of the way of the guiding arm and forward of a line through the transverse axis of the anvils. The position indicated in Fig. 2 is the position of stapling, and for the purpose of describing the operation of the cord-positioning means, it will be understood that the staples have been applied to the cord. Just before the guiding arm 21 starts to swing in the opposite direction, after the stapling operation holds the cord to the strip material, the eccentric cam controlling the supporting arm 33 for the pin 31 starts to shift, and the same begins to lower and, simultaneously, the eccentric cam controlling the position of the supporting arm 34 starts to shift, and the pin 32 starts to rise so as to be in position to engage the cord as the arm 21

swings across the strip material. Simultaneously with this rising and lowering of the pins 31 and 32, respectively, the shaft 35 is rocked in one direction so that, when this pin 32 reaches the limit of its upward movement, it will lie in the same relative position at the opposite side of the strip material as the pin 31 is shown as occupying in Fig. 2, such pin in such raised position engaging a bight of the cord that will subsequently form one of the handle sections. When in the lowered position, the pins 31 and 32, respectively, are out of the way of the end of the cord-guiding arm 21. The shafts 33^a and 34^a carrying the eccentric cams 37 and 38, and the shaft 43 carrying the mutilated gears 41 and 42, may be driven from a shaft 44 through the train of gearing indicated in Figs. 1 and 3. Additionally, the shaft 29^a may be driven from the shaft 44 through suitable gearing.

Movable stops 45 are arranged to insure the positioning of the cord across the anvils, such stops being associated with the stapling head so that the runs of the cord between the looped bights of the same may be laid in substantially parallel, spaced relation over said strip material as the cord is delivered by each movement of the guiding arm 21 adjacent said stops 45, and the stapling head is then operated to apply staples through the cord and strip material whereby the cord may be fastened in place. While the staples may be applied to the cord across or in line with the same, I have shown the stapling head as arranged to apply staples in line with the cord. It will be understood, of course, that the movement of the strip material is continuous; that the stapling operation is accomplished quickly and does not appreciably halt the movement of the strip material, and that the stops 45 rise momentarily with the stapling head to permit passage of the cord with the strip material to which it has just been secured. It will be noted that the stapling operation takes place at successive, timed intervals of the same duration.

Prior to the application of the cord, the strip—initially of ample width—may be slit longitudinally so that a plurality of handles may be produced from each portion, and this slitting may be effected by a rotating knife or saw 46 operating in advance of the feeding belts. After the cord has been applied to the strip material, it must be severed and, in addition, the strip must be cut transversely to provide independent handle units. The cutting of the cross-runs of the cord may be effected by a rotary knife or saw 47 aligned with the knife or saw 46, and the strip material may be severed transversely by knives 50 and 51 set in staggered relation, since the handle loop at one side of the plural strip material is in advance of the handle loop at the other side of the same. In lieu of employing the knife or saw 46 to slit the strip material longitudinally before it reaches the stapling head, such slitting may be effected by the knife or saw 47 which also cuts through the cord. In lieu of employing the saw 47 to sever the cross-runs of the cord, I may arrange a knife for operation with the stapling head, such as indicated at 53, Fig. 3, so that, simultaneously with the stapling operation, the cord may be cut.

In lieu of feeding continuous separated strips to the stapling head for the reception of the continuous cord to form the handles, these strips may be severed transversely at a point in advance of the feeding belts or other feeding means, and fed forward to the stapling head in the form of in-

dividual sections to be presented to the stapling head in staggered relation, the cord being looped across these separate sections in the same manner that it is looped across the continuous strip material.

In still another method of applying cord to attaching sections, the strip material may be cut into attaching sections of the required size and then stacked in a pair of suitable containers, side by side, from which they will be fed alternately so as to occupy the same position with relation to the stapling head as the continuous strip material or other sections of the same.

The knives 50 and 51 may be carried by a suitable head 55, to which vertical movement may be imparted by suitable means at suitably timed intervals, as the strip material with the attached handle loops is fed beneath the same. It will be understood, of course, that, when separate pieces are fed in staggered relation to the stapling head, there will be no need of employing these knives.

In applying adhesive to the surface of the strip material, it is desirable that a complete application thereof be made over the upper surface of the same only. In some instances, as where the handle structure is to be applied to the outside of a bag, only one surface of the attaching section will receive adhesive. When applied to both surfaces, only so much adhesive will be applied longitudinally of the strip material as will leave a clear space to pass over the anvils of the stapling mechanism as the strip material is moved over the same.

It will be understood, of course, that I may employ strip material having one or both surfaces initially provided with adhesive material prior to the formation of the same into individual handle-attaching sections, such surfaces to be dampened prior to application to the bags.

These handle structures may be associated with the open end of a paper or other bag in various ways. They may be applied to the outside wall of the bags at the open end of the same, or they may be enclosed within a folded end of the bag. In associating these handle structures with the folded wall at the open end of the bag, it is necessary, of course, that the wall be apertured at the fold, or at some point adjacent thereto for the passage of the cord loop constituting the handle. In Figs. 8, 9, et seq., I have shown a bag at "C". In one manner of associating the preformed handle structures with a bag of this type, shown in Fig. 8, I may cut or slit the outer wall *c* of the bag on the lines *c'* to form V- or other shaped flaps or tabs *C'*, the terminals *c²* of such cuts or slits being spaced apart a distance equal to the spacing of the cord forming the handle loop, and, after the operator has passed the loop through the opening provided by the slits, the V- or other shaped flap or tab *C'* is pressed down upon the adhesively coated surface of the attaching section to which the cord loop is secured, and the end of the bag may then be infolded over the attaching section and pressed down upon the adhesively coated surface of the same.

In lieu of this arrangement, the V- or other shaped flaps or tabs may be formed in the portion of the bag end that is turned in, as shown in Fig. 9, and the handles applied thereto in a similar manner. Or I may slit entirely through the folded portion at the end of the bag, as indicated at *c³*, in Fig. 10, and pass the tab portion thus provided through the loop and paste the same down upon the attaching section of the handle within the bag. Still another way of attaching

the handle structure is to slit the crease of the fold for a distance sufficient to pass the loop, as indicated at c^4 in Fig. 11, and then press the folded walls of the bag against the attaching section after insertion of the latter. In lieu of all the forms of attachment with the folded end of the bag, the attaching section of the handle structure may be applied to the outside of the bag at the open end of the same, as indicated in Fig. 12, or to the inside of the bag.

It will be understood that the several moving parts of the mechanism that may be employed in preparing bag handle structures in accordance with my invention, including the stapling mechanism, will be driven in proper timed relation and preferably from a single source of power, operatively connected to the shaft of the strip material reel; the shafts of the driving belts; and the shafts 29^a and 44.

It will be understood, of course, that various modifications may be made within the spirit and scope of my invention, hereinbefore described, all of which are intended to be covered by the appended claims.

I claim:

1. The method of forming bag handle structures consisting of cord loops attached to strip sections, which comprises feeding strip material to form the bag-attaching sections of such handle structures, cutting the strip material transversely to provide a plurality of handle-attaching parts longitudinally of such strip material, continuously looping cord across said strip material as it is fed, securing such cord to the strip material, and severing the cord on the longitudinal division line of the sections.

2. The method of forming bag handle structures consisting of cord loops attached to strip sections, which comprises feeding strip material to form the bag-attaching sections of the handle structures, severing such strip material longitudinally, cutting the strip material transversely to provide a plurality of handle-attaching parts longitudinally of the strip material, continuously looping cord across such strip material as it is fed, securing such cord to the strip material, and severing such cord on the longitudinal division line of the sections.

3. The method of forming bag handle structures consisting of cord loops attached to strip sections, which comprises feeding strip material to form the bag-attaching strip sections of such handles, cutting the strip material longitudinally thereof, continuously looping cord across said strip material as it is fed, securing such cord to said strip material, cutting the cord on the longitudinal division line of said sections, and thereafter cutting the respective strip sections transversely between the cord loops.

4. The method of forming bag handle structures consisting of cord loops attached to strip sections, which comprises feeding strip material to form the bag-attaching strip sections of such handle structures, cutting the strip material longitudinally thereof, applying adhesive to one surface of the strip material, continuously looping cord across said strip material as it is fed, securing such cord to said strip material, cutting the cord on the division line of the sections, and thereafter cutting the strip material into sections transversely between each cord loop.

5. The method of forming bag handle structures consisting of cord loops attached to strip sections, which comprises feeding strip material to form the bag-attaching strip section of the

handle structures, slitting the strip material longitudinally thereof, continuously looping cord across such strip material as it is fed, securing such cord to the continuous sections of said strip, cutting the cord on the longitudinal division line of the strip sections, and thereafter cutting the strip sections transversely between each pair of cord loop connections.

6. The method of forming bag handle structures consisting of cord loops attached to strip sections, which comprises feeding strip material to form the bag-attaching strip section of such handles, slitting the strip material longitudinally thereof, continuously looping cord across said strip material as it is fed, securing such cord to the continuous sections of such strip, severing the strip longitudinally together with the transverse runs of the cord, and thereafter cutting the strip sections transversely between each pair of cord loop connections.

7. The method of forming bag handle structures consisting of cord loops attached to strip sections, which comprises feeding strip material to form the bag-attaching strip section of such handle structures, continuously looping cord across said strip material as it is fed, securing such cord to the continuous sections of said strip, simultaneously slitting the strip material and the transverse runs of the cord, and thereafter cutting the strip section transversely between each pair of cord loop connections.

8. The method of making bag handle structures, which comprises feeding strip material to a stapling head, disposing a continuous cord across the strip material in looped formation, stapling the same to the strip material, and separating the strip material by longitudinal and transverse cuts into individual handle sections.

9. The method of making bag handle structures which comprises feeding strip material to a stapling head, disposing a continuous cord across the strip material to form loops in staggered relation at opposite sides of said strip material, stapling said cord to the strip material, and separating the strip material by longitudinal and transverse cuts into individual handle sections.

10. The method of making bag handle structures, which comprises feeding strip material to a stapling head, separating such strip material longitudinally thereof, disposing a cord across the separated strip material in looped formation, stapling the cross-runs of such cord to the strip material, and thereafter separating the strip material into individual handle sections by transverse cuts.

11. The method of forming bag handle structures which comprises feeding stiff paper in continuous strip form, looping a continuous cord across said paper strip material to form outwardly disposed loops, securing the cross-runs of said cord to the strip material, and thereafter cutting said strip material longitudinally and simultaneously severing the cord and cutting the strip material transversely to form individual handle structures.

12. Apparatus for forming bag handle structures consisting of cord loops attached to strip sections, comprising means for feeding strip material to form the bag-attaching strip sections of such handles, means for cutting the strip material transversely of the same to provide a plurality of bag-attaching parts longitudinally of such strip material, means for continuously looping cord across said strip material as it is fed, means for stapling such cord to said strip ma-

terial, and means for severing the cord between sections.

13. Apparatus for forming bag handle structures consisting of cord loops attached to strip sections, comprising means for feeding strip material to form the bag-attaching strip sections of such handles, means for cutting the strip material transversely of the same to provide a plurality of bag-attaching parts longitudinally of such strip material, means for applying an adhesive to said strip material, means for continuously looping cord across said strip material as it is fed, means for stapling such cord to said strip material, and means for severing the cord between sections.

14. Apparatus for forming bag handles consisting of cord loops attached to strip sections, comprising means for feeding strip material to form the bag-attaching strip sections of such handles, means for cutting the strip material longitudinally, means for continuously looping cord across said strip material as it is fed, means for stapling such cord to said strip material, means for cutting the cord on the division line of the sections, and means for thereafter cutting the strip material into sections transversely between the respective cord loops.

15. Apparatus for forming bag handles consisting of cord loops attached to strip sections, comprising means for feeding strip material to form the bag-attaching strip sections of such handles, means for cutting strip material longitudinally, means for applying adhesive to both surfaces of the strip material, means for continuously looping cord across said strip material as it is fed, means for stapling such cord to said strip material, means for cutting the cord on the division line of the sections, and means for thereafter cutting the strip material into sections.

16. Apparatus for forming bag handles consisting of cord loops attached to strip sections, comprising means for feeding strip material to form the bag-attaching strip section of such handles, means for slitting the strip material longitudinally, means for continuously looping cord across said strip material as it is fed, means for positioning the cord, and means for stapling such cord to the strip sections.

17. Apparatus for forming bag handles consisting of cord loops attached to strip sections, comprising means for feeding strip material to form the bag-attaching strip section of such handles, means for slitting the strip material longi-

tudinally, means for continuously looping cord across said strip material as it is fed, means for positioning the cord, means for stapling such cord to the continuous sections of said strip, means for cutting the cord on the division line of the strip sections, and means for cutting the strip sections transversely between the cord loop connections.

18. The method of forming bag handle structures which comprises feeding bag handle material in continuous strip form, looping a continuous cord transversely across one surface of said strip material to form loops disposed laterally of the strip material, securing the cross-runs of said cord to the strip material, and thereafter cutting said strip material and cord to form individual handle structures.

19. The method of forming bag handle structures which comprises feeding bag handle material in continuous strip form, applying adhesive to said strip material during its movement, looping a continuous cord transversely across one surface of said strip material to form loops disposed laterally of the strip material, securing the cross-runs of said cord to the strip material, and thereafter cutting said strip material and cord to form individual handle structures.

20. The method of forming bag handle structures which comprises feeding bag handle material in continuous strip form, applying adhesive to both surfaces of said strip material during its movement, looping a continuous cord transversely across one surface of said strip material to form loops disposed laterally of the strip material, securing the cross-runs of said cord to the strip material, and thereafter cutting said strip material and cord to form individual handle structures.

21. The method of forming bag handle structures which comprises feeding bag handle material in continuous strip form, applying adhesive to both surfaces of said strip material during its movement; said adhesive covering the upper surface of such strip material and being in spaced relation on the under surface, looping a continuous cord transversely across one surface of said strip material to form loops disposed laterally of the strip material, securing the cross-runs of said cord to the strip material by stapling through the same at the uncoated zones of its under surface, and thereafter cutting said strip material and cord to form individual handle structures.

WILLIAM H. STARK.