June 28, 1938. C. A. FLOOD 2,121,865

TICKET STRIP

Filed April 13, 1937 2 Sheets-Sheet 1

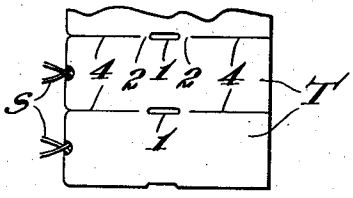


Fig. 1

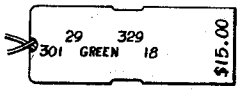


Fig. 2

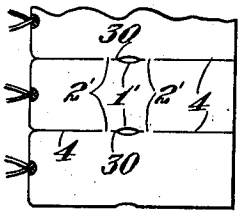


Fig. 3

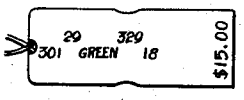


Fig. 4

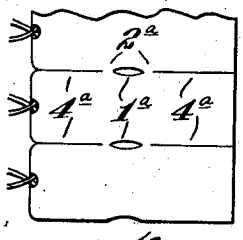


Fig. 5

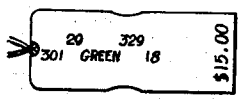


Fig. 6

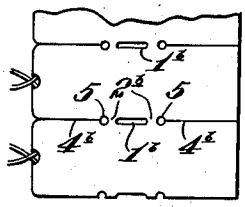


Fig. 7

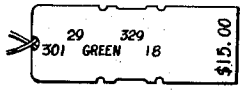


Fig. 8

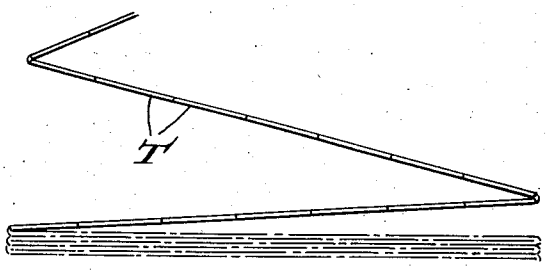


Fig. 9

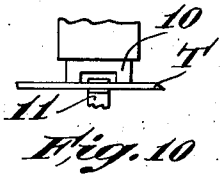


Fig. 10

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TICKET STRIP

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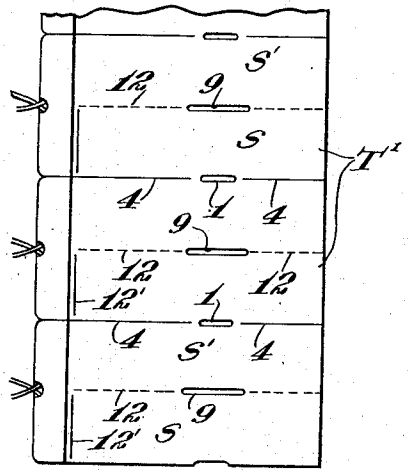


Fig. 11

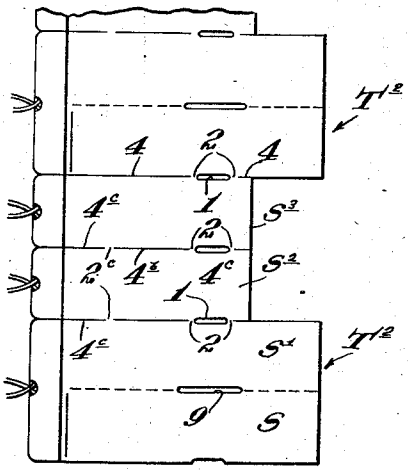


Fig. 13

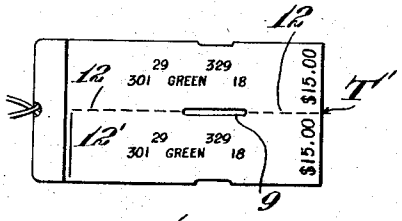


Fig. 12

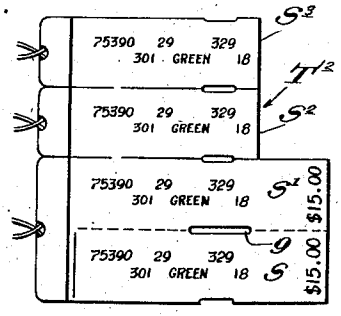


Fig. 14

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UNITED STATES PATENT OFFICE

2,121,865

TICKET STRIP

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Application April 13, 1937, Serial No. 136,599

10 Claims. (Cl. 281—5)

This invention relates to improved ticket strips and to tickets which are provided by separating the strips into separate parts. In accordance with this invention, tickets to be employed, for example, as price tickets, may be provided in an elongate strip which may be conveniently folded back and forth on itself so that the strip may be furnished to the user in a flat package of convenient, compact form. Ticket strips of this type may conveniently be printed and separated into separate tickets by a machine of the type disclosed in my copending application Serial No. 136,598, filed on even date herewith.

An important feature of the present invention involves the provision of a ticket strip wherein the tickets are separated by preformed slits and by short preformed feeding slots aligned therewith, there being narrow necks of the sheet material at each end of a feed slot. These necks afford a sufficiently strong attachment so that the parts of the strip properly hold together as the successive tickets are being fed to the printing machine and printed, although they afford relatively little resistance to folding so that the strip may readily be folded between ticket sections to afford a compact package.

These narrow necks can readily be cut by a narrow bipartite cutter which is actuated either manually or mechanically. The cutter may be arranged so that the cuts provided thereby are aligned with the slits and the slots so that the separated tickets have relatively smooth cut edges extending along their entire widths rather than the rough edges that are afforded when perforated tickets are torn apart. Preferably these edges of the tickets are free from protuberances so that they may readily be received in the guide portions of remarkers, such as are shown in my United States Patent No. 2,014,727, issued September 17, 1935. Furthermore, if desired, the narrow necks can readily be torn, the slits and slots accurately defining the lines along which the tickets are separated, so that if the tickets are torn apart, there is little possibility that the line of tear will depart from this line to injure the ticket, as might otherwise be the case. Moreover, if desired, the necks between the tickets may be readily creased by a knife rather than being entirely cut apart, so that the tickets may subsequently be more readily separated by tearing.

In accordance with this invention, the ticket strip may comprise individual ticket sections designed to receive but one printing of indicia thereon, or each ticket may comprise two or more sections, each of the sections being arranged to receive printing thereon. When a multi-section ticket of this type is provided, feed slots may be afforded between each section of the ticket, the connecting material between adjoining sections which are to be separated being wholly within the path of the knife which is operated to cut the sections apart, and connecting material between adjoining sections which are not to be separated being disposed outside of the path of the knife. Thus a strip of this type may have its successive sections fed to printing position by a feed finger engaging the successive feed openings or slots, and the cutter may operate once during each cycle of the machine irrespective of whether or not it is desired to have the cutter separate the sections or not. Thus when adjoining sections are to be separated, the cutter, for example, may cut through the narrow connecting necks at the ends of a feed slot, these necks affording the only connections between the adjoining sections, while when the cutter moves between adjoining sections which are not to be separated, there is material outside of the path of the cutter which continues to afford an effective connection between the section even after the cutter has operated. If desired, for example, the feed slots between such sections may be wide enough to receive the narrow cutter so that the cutter, although passing between the sections, does not cut any material between these sections, or if desired additional connecting material may be afforded outside of the necks which are severed by the cutter, such additional material comprising, for example, a third connecting neck which is not cut by the cutter.

In the accompanying drawings:

Fig. 1 is a plan view of a portion of a ticket strip made in accordance with this invention;

Fig. 2 is a plan view of a single ticket cut from the strip shown in Fig. 1;

Figs. 3 and 4 are views, respectively, similar to Figs. 1 and 2 but showing another type of ticket strip and a corresponding type of ticket;

Figs. 5 and 6 are views, respectively, similar to Figs. 1 and 2 but showing another type of ticket strip and a corresponding type of ticket;

Figs. 7 and 8 are views, respectively, similar to Figs. 1 and 2 but showing another type of ticket strip and a corresponding type of ticket;

Fig. 9 is a side elevational view of a ticket strip of this character in folded position, the upper part of the strip being shown partially unfolded as when the end of the strip is being drawn from the pack;

Fig. 10 is a detail view with a part of a ticket

shown in section, and part of a cooperating knife and of a feed finger shown in elevation;

Fig. 11 is a plan view of a portion of a strip comprising tickets having two sections;

Fig. 12 is a plan view of a ticket cut from the strip shown in Fig. 11;

Fig. 13 is a plan view of a ticket strip including tickets having four sections; and

Fig. 14 is a plan view of a ticket cut from the strip shown in Fig. 9.

The principles of this invention may be employed with ticket strips of different widths and which comprise tickets including one or more individual ticket sections, each of which receive indicia printed thereon. Thus, for example, strips of this character may be provided in different standardized widths and to include tickets comprising different numbers of sections, while any of these strips may be printed and cut on the same machine.

As shown in Fig. 1, a typical ticket strip of the type provided by this invention may comprise a plurality of rectangular tickets T with aligned side edges extending along the sides of the strip. These tickets may be of the folded type and may be provided with attaching strings S at one end thereof, if desired. Adjoining tickets T are separated by feed slots 1 which extend a minor fraction of the width of the strip. At the ends of these slots are narrow necks 2 of sheet material which may afford the only connections between adjoining tickets. The widths of both of the necks 2 at opposite ends of a feed slot 1, when added together, preferably may be distinctly less than the distance between the necks. In practice the width of each neck may be less than one-eighth inch, and preferably may be of the order of one-sixteenth inch.

Aligned with the slots are slits 4 extending from the necks to the parallel side edges of the ticket strip. These slits extend for the major portion of the width of the strip and preferably are symmetrically disposed longitudinally of the strip relative to the slots. Such an arrangement permits the strip readily to be folded along lines extending between adjoining ticket sections T, as shown in Fig. 9, to provide a compact rectangular package which may be supplied to the user of the ticket printing machine.

When the tickets are to be fed to the printing machine, the end ticket of the strip may be lifted and the strip unfolded to assume the zigzag form shown in Fig. 9 and in my above-identified copending application. While the narrow necks 2 permit ready folding of the long ticket strip in this manner, they are sufficiently strong so that the tickets remain attached to each other as they are fed to printing position, but they are so narrow that the tickets may be easily separated by a narrow bipartite knife 10 (Fig. 10) which may conveniently straddle a feed finger 11 engaging the corresponding feed slot between adjoining tickets. The restricted dimensions of the necks permit the knife to be actuated with a nominal pressure, either manually or mechanically, as may prove more convenient. Preferably the knife itself may be relatively narrow, the dimension of the strip between the opposite outer edges of the connecting necks which are cut by the knife being less than one-half the overall width of the strip. It is evident that the necks themselves lie in parallel longitudinal zones of the strip, so that they are readily cut by a narrow knife as the strip is fed along a straight-line path.

When the tickets are separated from a strip by the knife in this manner, the severed portions of the necks preferably are aligned with the slits 4 so that the ticket has a relatively smooth cut edge with a shallow pre-cut reentrant portion formed by one-half of an original feed slot 1, a ticket of this form being shown in Fig. 2. Thus the ticket has relatively smooth cut edges which avoid the roughness characteristic of torn perforated edges.

It is to be understood that in practice the tickets may be provided in various widths, as desired by the user, to accommodate either long or short lines of indicia. In some cases a narrow ticket may be provided having an elongate slit 4 at only one side of the feed slot 2, the corresponding slit at the other end of the slot being relatively short since the feed slot may be located near one side of the strip.

The ticket may be printed to have a staggered line of indicia extending transversely thereof and may also have a price marking extending along its end in a direction at right angles to the staggered line of indicia, this price marking preferably being arranged at the edge of a blank area so that either the original price marking may be marked over on this portion of the ticket or it may be cut away, and a new price may be marked on the adjoining space. For this purpose a remarking machine of the type disclosed in my United States Patent No. 2,014,727 may be employed.

As shown in Fig. 3, a strip of this character may be provided with feed slots 1', which are disposed between necks 2' similar to the necks 2 of Fig. 1. The said slots 1', however, are provided with curved end surfaces which merge into slit-like extensions 30 of each slot at the ends thereof, these extensions 30 being aligned with the slits 4. Such an arrangement permits the edge surfaces of the reentrant portions of the severed ticket to merge more gradually into the edge portions which were defined by the slits 4. Thus, the ticket shown in Fig. 4 has less pronounced corners at the ends of its reentrant portions.

As shown in Fig. 5 the strip, if desired, may have slots 1^a to the slots 1' shown in Fig. 3 but without the short slit-like extensions 30 that are shown in Fig. 3. Such slots 1^a with their gradually curved end portions may be separated by narrow necks 2^a from the elongate slits 4^a which extend to the edges of the strip. Thus a ticket cut from such a strip may have the shape shown in Fig. 6 with shallow precut reentrant portions.

As shown in Fig. 7, the inner ends of slits 4^b may extend to small round openings 5 which may have diameters of the order of the width of the feed slots 1^b, it being obvious that the narrow necks 2^b are arranged between the ends of the feed slots 1^b and the round openings 5. A ticket cut from the strip shown in Fig. 7 has the form shown in Fig. 8, it being evident that this form of ticket also is free from any protuberances which extend beyond the major edge portions of the ticket which are defined by the precut slits 4^b.

It is to be understood that the principles of the present invention may not only be employed with tickets of different widths, but also with tickets including a plurality of sections, each of which may receive the identifying indicia and, if desired, the price marking. A strip including such tickets T^1 is shown in Fig. 11. The tickets T^1 may be separated from each other by slots 1 and slits 4 of the type shown in Fig. 1, although

the arrangements shown in Figs. 3, 5 or 7 may be employed if preferred. Between the sections S and S^1 of such a ticket a feed slot 9 may be provided, this slot being aligned with perforated lines 12 along which the sheet material may be torn to separate the ticket sections when desired, there being slits 12' extending at right angles to lines 12 to aid the separation of sections S from sections S'. As shown in Fig. 11, the slot 9 may have a width at least as great as the combined widths of the feed slots 1 and the necks 2 so that the bipartite knife 10, which may be actuated after each printing operation, may enter the slot 9 without necessity of cutting the material. It is evident that the strip shown in Fig. 11 may be fed forward by a feed finger which alternately engages feed slots 1 and feed slots 9, so that the ticket sections are successively fed to printing position.

Fig. 13 shows a ticket strip including multi-section tickets T^2 separated by slits 4 and slots 1 with necks 2 at their ends in the same manner as the tickets T of Fig. 1. As shown, these tickets may comprise four sections, the sections S and S^1 being similar to similarly designated sections of the tickets T^1 and the sections S^2 and S^3 being narrower and being separated from each other and from the section S in a somewhat different manner. Thus, for example, the sections S^1 and S^2 may be separated from each other by feed slots 1 with necks 2 at their ends. These slots 1 are of the same dimensions as those that separate the adjoining tickets, although the feed slot 9 between sections S and S^1 may be of the type shown in Fig. 11. Slits 4^b and 4^c may extend from the necks 2 adjoining these slots 1, however, and a narrow neck of sheet material 2^c, having dimensions similar to the necks 2, may be disposed at the end of the slit 4^b and between that slit and a slit 4^c. A similar arrangement may be provided between the ticket section S^2 and the adjoining section S^3.

Accordingly when a ticket of this type is fed through a machine provided with a suitable printing mechanism and a synchronized bipartite cutter, the necks 2 are severed between the adjoining tickets as well as between the ticket sections S^1 and S^2 and between the ticket sections S^2 and S^3. Thus the last-named sections are left attached to each other solely by the necks 2^c which may readily be torn apart when the tickets are to be attached to separate articles of a lot as, for example, to separate garments in a suit ensemble. Under such conditions it is often desirable only to have the price marking on certain sections of the ticket as, for example, upon the sections S and S^1, it being understood that the former ordinarily is separated from the article of merchandise and sent to the accounting office. Thus, for example, the sections S and S^1 are wider than the sections S^2 and S^3, providing additional areas for the reception of the original price markings which extend transversely of the staggered line of indicia and affording spaces for additional price markings, while the sections S^2 and S^3 are provided without these spaces.

It is evident that the ticket strip shown in Figs. 11 and 13 provide certain rectangular sections which are connected only by necks lying within a longitudinal zone of the strip having a width less than half the width of the strip, so that these sections of the strip may be entirely separated by a rather narrow knife. Other sections of such a strip as shown in Figs. 11 and 13 may be connected by material lying outside of this zone and the path of the knife. Accordingly, although the knife moves between each successive section of the ticket, only certain sections are entirely separated from each other, while the other sections remain connected to each other, being capable of later separation as may prove convenient.

It is evident that the present invention affords a simple, conveniently packed ticket strip which may be conveniently unfolded and fed to a suitable printing and cutting mechanism, the cutting mechanism being actuated with nominal power to separate the tickets, thus to afford tickets with relatively smooth cut edges interrupted only by shallow precut reentrant portions. The ticket strips are preferably all arranged so that when the necks connecting the ticket sections are cut there are no protuberant portions afforded by the severed neck sections to extend beyond the major portions of the edges of the ticket. Accordingly, tickets of this character may readily be received in the edge-guiding portions of a ticket remarker such as shown in my above-identified patent, such a guiding action readily taking place even after the ticket has been remarked a number of times. Furthermore, if desired, such tickets may be readily separated from the strip by tearing, while it is possible, if preferred, to score the necks as the tickets are being printed so that the tickets are even more easily torn from the strip.

It is evident that tickets of this type may be provided in a standardized range of sizes to receive more or less identifying and descriptive indicia, as preferred, and that such tickets may conveniently receive price markings extending transversely of such a line of indicia, and that such tickets may be provided in multiple sections with the feed slots disposed between each of the sections.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. Ticket strip of sheet material having a plurality of sections with feed slots extending transversely of the strip therebetween, the sheet material being provided with slits aligned with the slots, adjoining sections being connected by two narrow necks of the material disposed respectively at the ends of a feed slot, certain slots comprising openings with curved end portions having short slit-like extensions at their ends, the slits and slots providing cut edges extending nearly all of the width of the strip between certain sections.

2. Ticket strip of sheet material having a plurality of tickets with short feed slots extending transversely of the strip therebetween, the sheet material being provided with slits aligned with the slots, adjoining tickets being connected only by two narrow necks of the material disposed respectively at each end of a feed slot, the slits and slots providing cut edges extending nearly all of the width of the strip substantially to separate the tickets, each of said tickets including sections with feed slots therebetween extending transversely of the strip, the last-named slots being longer than the slots between tickets.

3. Ticket strip of sheet material having a plurality of tickets with feed slots extending transversely of the strip therebetween, the sheet ma-

terial being provided with slits aligned with the slots, adjoining tickets being connected only by two narrow necks of the material disposed respectively between the ends of the slots and the edges of the strip, said necks lying in parallel longitudinal zones of the strip, the slits and slots providing cut edges extending nearly all of the width of the strip substantially to separate the tickets, the necks providing narrow connecting means, each of said tickets including sections with feed slots therebetween extending transversely of the strip, said last-named slots at least having portions which are disposed between said longitudinal zones, there being connecting portions of the material between adjoining sections of the respective tickets which are separated by said last-named slots, said connecting portions lying outside of the longitudinal zones of the ticket which include the narrow connecting necks.

4. Ticket strip of sheet material having a plurality of tickets with short feed slots extending transversely of the strip therebetween, the sheet material being provided with slits aligned with the slots, adjoining tickets being connected only by two narrow necks of the material disposed respectively at each end of a feed slot, the slits and slots providing cut edges extending nearly all of the width of the strip substantially to separate the tickets, the necks providing narrow connecting means, each of said tickets including sections with feed slots therebetween extending transversely of the strip, the material being weakened along lines aligned with the last-named slots whereby the ticket sections may be readily separated by tearing, one section of each ticket having a greater width than the adjoining section thereof.

5. Ticket strip of sheet material having a plurality of rectangular sections, certain sections, which are to be entirely separated by a cutter moving between each section in succession, being connected only by sheet material lying within a longitudinal zone of the strip and having a width less than half the width of the ticket, the remaining sections of the strip being connected by material lying outside of said zone.

6. Ticket strip of sheet material having a plurality of tickets with short feed slots extending transversely of the strip therebetween, the sheet material being provided with slits aligned with the slots, adjoining tickets being connected only by two narrow necks of the material disposed respectively at each end of a feed slot, the slits and slots providing cut edges extending nearly all of the width of the strip substantially to separate the tickets, the necks providing narrow connecting means, each of said tickets including sections with feed slots therebetween extending transversely of the strip, there being three necks connecting adjoining sections of a ticket, two of said last-named necks being at opposite ends of a feed slot, the third neck being spaced from the other two necks, the material being slit adjoining the necks along lines in alignment with the slot.

7. Ticket strip of sheet material having a plurality of rectangular sections with feed slots therebetween, certain sections being connected only by portions of the sheet material lying within two spaced parallel longitudinal zones of the strip, the feed slots between the last-named sections being disposed between said longitudinal zones, the remaining sections of the strip being connected by material outside of said zones.

8. Ticket strip of sheet material having a plurality of rectangular sections, certain sections, which are to be entirely separated by a cutter moving between each section in succession, being connected only by portions of the sheet material lying within two spaced parallel longitudinal zones of the strip, the remaining sections of the strip being connected by material outside of said zones.

9. Ticket strip of sheet material having opposite parallel edges and comprising a plurality of tickets separated by short feed slots and by elongate slits extending at right angles to said edges and in alignment with said slots, adjoining tickets being connected only by two narrow necks of the material disposed respectively at each end of a feed slot, the slits and slots providing cut edges extending nearly all of the width of the strip, the slots and slits being arranged so that the necks may be cut on lines in alignment with the slits to afford separate rectangular tickets with opposite cut edges each of which is free from projections and is straight for the major portion of the width of the ticket, but each of which is interrupted by a reentrant portion provided by a part of a feed slot of the strip.

10. Ticket strip of sheet material having opposite parallel edges and comprising a plurality of tickets separated by short feed slots and by elongate slits extending at right angles to said edges and in alignment with said slots, adjoining tickets being connected only by two narrow necks of the material disposed respectively at each end of a feed slot, certain slots comprising openings with slit-like extensions at their ends, the slits and slots providing cut edges extending nearly all of the width of the strip, the slots and slits being arranged so that the necks may be cut on lines in alignment with the slits and slit-like extensions to afford separate rectangular tickets with opposite cut edges each of which is free from projections and is straight for the major portion of the width of the ticket, but each of which is interrupted by a reentrant portion provided by a part of a feed slot of the strip.

CARL A. FLOOD.