Nov. 14, 1950 D. J. NASH 2,530,071

FANFOLD PASS CASE

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Fig. 1.

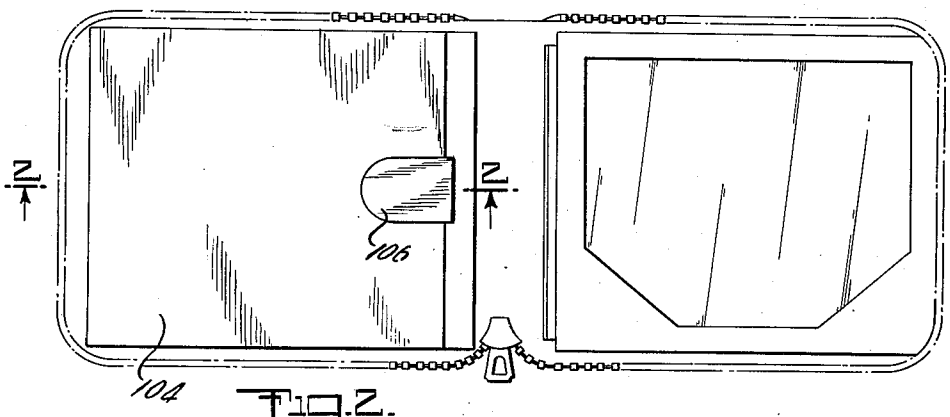


Fig. 2.

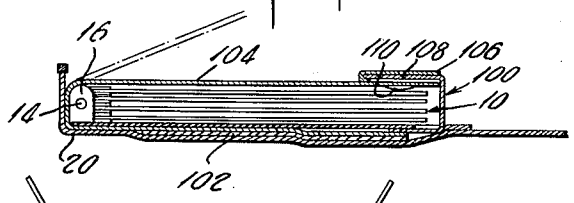


Fig. 3.

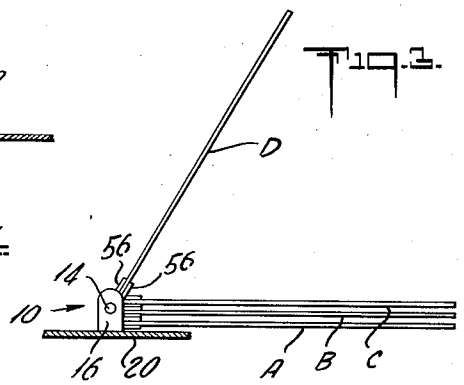


Fig. 4.

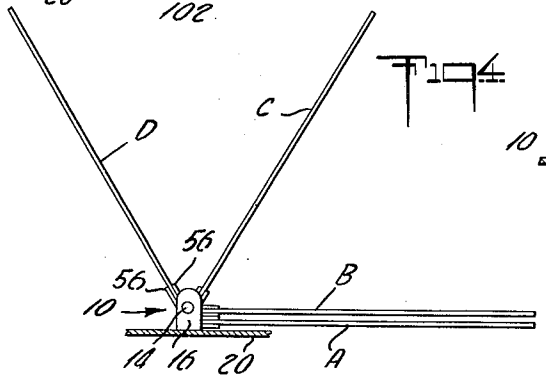
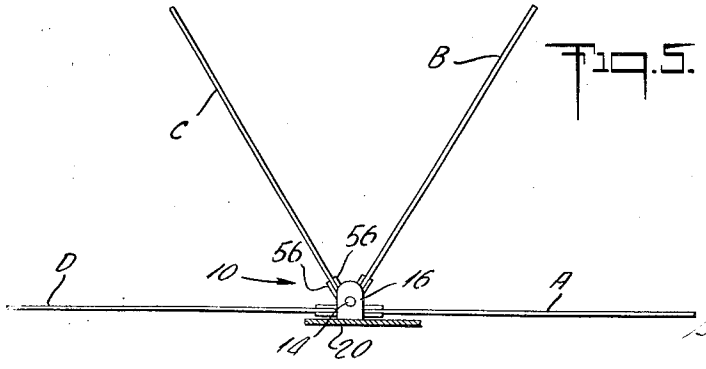


Fig. 5.



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Fig. 6a.

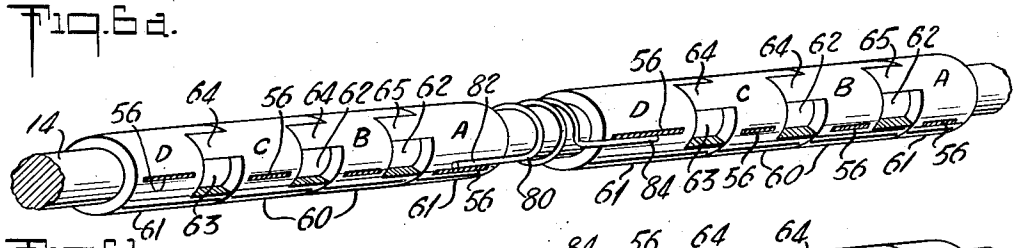


Fig. 6b.

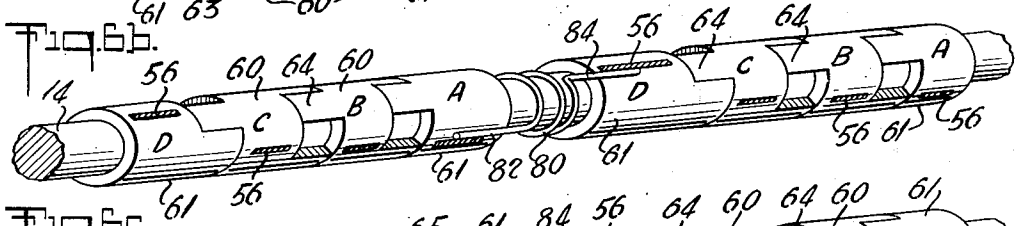


Fig. 6c.

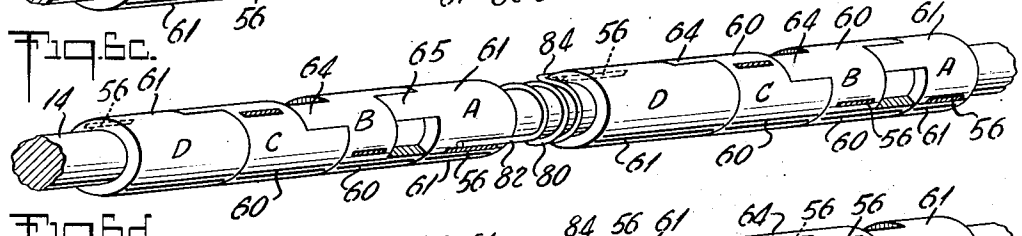


Fig. 6d.

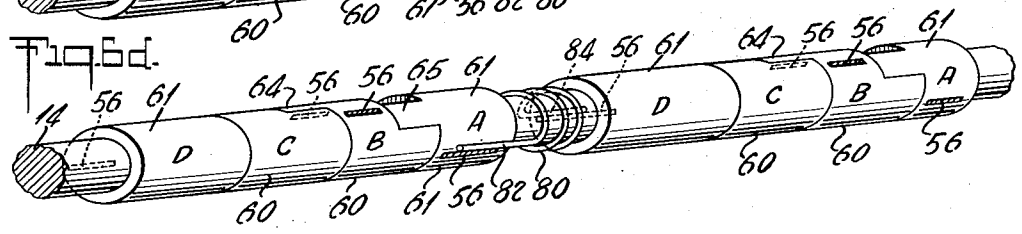


Fig. 7.

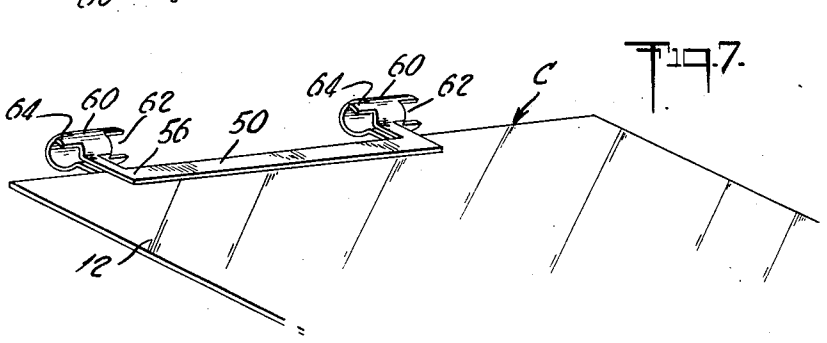
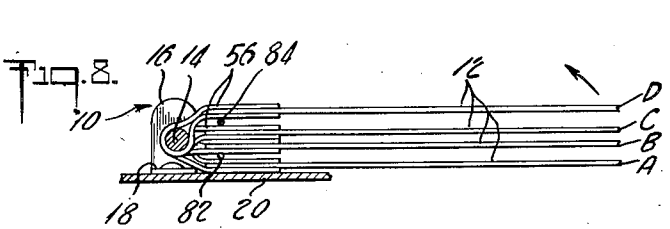


Fig. 8.



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FANFOLD PASS CASE

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Application March 8, 1949, Serial No. 80,211

10 Claims. (Cl. 40—102)

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The present invention relates generally to pass cases, that is, supports for indicia bearing material as cards and the like. While the invention is not to be limited except by the claims annexed hereto, it will be described in connection with its use and application to a wallet or billfold.

In conventional devices, a plurality of pass cases or card supports (as they are sometimes known) may be provided in any one overall holder, and the problem is created of spacing apart or of separating the individual pass cases or card supports as to render their contents readily visible. When a number of cases or supports are provided, it becomes necessary to separate them, one from the other, in order to view their contents. The present invention is directed to the provision of a mechanism which automatically separates and spaces apart the several pass cases or card supports, so as to render them individually and easily visible.

The main object of the present invention, therefore, is the provision of a multi-leaf pass case or card support, having means automatically operable to fan out or space apart the individual cases or supports from one another.

Another object of the present invention is the provision of a multi-leaf pass case or card support in which the individual leaves are interconnected, and are provided with means engaging one leaf to function automatically to separate and space apart all the leaves successively.

Still another object of the present invention is the provision of a multi-leafed pass case or card support in which the leaves are pivoted at one end thereof, and interfitted one with the other at said end so that limited rotative movement of one leaf causes limited rotative movement of another leaf to space apart the several leaves.

Still other and further objects of the present invention will in part be obvious and in part specifically pointed out in the following description of an illustrative embodiment.

In the drawings annexed hereto and forming a part hereof,

Figure 1 is a front elevational view of a wallet or billfold within which is disposed the multi-leaf pass case or card support constructed according to and embodying the present invention, same being shown in closed position within a compartment of a billfold;

Figure 2 is a section on the line 2—2 of Figure 1;

Figures 3, 4 and 5 are side elevational views showing successive stages in the opening movement of the leaves forming the pass case or card support of the present invention;

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Figures 6*a*, 6*b*, 6*c* and 6*d* are isometric views illustrating the movement of the hinges during the successive stages in the opening of the leaves forming the pass case or card support;

Figure 7 is a perspective view of a single pass case or card support and hinge therefor; and

Figure 8 is a side elevational view of the device in compacted or collapsed position.

Referring now to the drawings, the multi-leaf pass case or card support is indicated generally by reference numeral **10**, and comprises a plurality of individual pass cases or card supports as **12**, **12**, all of which are mounted on a common shaft **14** for pivotal movement thereabout. Each card support or pass case may consist of a pair of thin, flat sheets of some transparent material, as cellophane or the like, the sandwich arrangement being indicated by the reference numeral **12**, the card or other indicia being disposed between the sheets for viewing from either side. Other types of supports may be provided, as frames or the like within the present invention. However, whatever support is used, same is secured to a hinge member, as **60**, **61**, one of which is shown in perspective in Figure 7. A pair of spaced-apart standards **16**, **16** are provided to support shaft **14**, the ends of which shaft are fixed in suitable openings in the standards. The standards **16**, **16** may be formed as bent-up end portions of a U-shaped member as **18**, secured to a base portion **20**, or they may be individually formed and secured to base **20**. Shaft **14** is circular in section to permit rotation of hinge members **60**, **61** thereabout, to which hinge members the card pass cases or card supports are secured.

In the illustrated embodiment, a total of four card supports are shown, but this is merely exemplary, and within the scope of the present invention three, or five, six, eight or more card supports may be mounted on the shaft. The four individual supports are indicated by letters A, B, C and D for more convenient reference hereinafter.

Each hinge member **60**, **61** is provided with an outwardly extended ear at opposite ends thereof, and a pair of opposed flat wing portions as **56**, **56**, between which wings the card supports as **12**, **12** are clamped or crimped. Each pass case or card support requires its own hinge member, and with four being shown in the present modification, the hinges are so proportioned that two identically shaped hinges as **61**, **61** are used for the outermost cases or supports, with two identically shaped hinges **50**, **50** of different form, used for the inner supports. In Figure 7 there is illustrated a hinge **50** for the inner supports or cases, the ears consisting of tubular members having

notches or cut-outs 62, 62 on one side of each thereof, and projecting fingers 64, 64 on the other side thereof. Hinges 61, 61, for the outer supports, also have ears consisting of tubular members, each having a cut-out 63 in one ear, and each having a projecting finger 65 on the other ear. Hinges 61, 61 differ from hinges 60, 60 only in providing even, unnotched or untoothed ends on one side of one ear, as D, A. Each pair of hinges 60, 60 and 61, 61 are reversed with respect to each other. The ears of all the hinges are of the same diameter, so to fit closely about shaft 14.

As seen in Figures 6*a*, 6*b*, 6*c* and 6*d*, all the hinges are of the same length, from ear to ear. The pass cases or card supports 12, 12 are necessary of the same width, so that their top and bottom edges will be aligned when assembled. Of whatever width, the pass cases or card supports 12, 12 are wider than the length of the hinges, and will be secured to the wings 56, 56 in relative different positions. Thus, when all four hinges are threaded into position onto shaft 14, and interfitted, the fingers of one fitting into the notches of the adjacent hinge, the combined end-to-end length of all the hinges will be equal to the width of the pass case or card supports 12, 12, the upper and lower edges of all of which are aligned.

An expanding coil spring, as 80, is threaded about shaft 14, in the center thereof, the ends terminating in fingers 82, 84 extending axially of shaft 14. I have designated, for ready reference, the four leaves 12, 12 as A, B, C and D, these letters being applied to the leaves in Figures 3, 4, 5 and 8, and to the ear sections in Figures 6*a*, 6*b*, 6*c* and 6*d*. As seen in Figure 6*a*, expanding spring fingers 82, 84 will bear, respectively, downwardly against wings 56 of one ear of leaf A, and upwardly against the underside of wing 56 of one ear of leaf D.

The fan-fold card support of the present invention is so constructed that the normal biasing of spring 80 thereof urges the individual supports away from each other. When disposed in a billfold or wallet, it is obviously desirable to have the several supports rest flatly against one another. To achieve this convenience, there may be provided, as shown, an enveloping sheath 100, which may consist of, as seen in Figure 2, a backer portion 102 to which base 20 may be suitbly secured, backer 102 having a cover portion 104 and a flap closure 106, the latter being provided with a snap fastener component 108 cooperating with a snap fastener component 110 on cover 104, to close the sheath to retain the supports 12, 12 in the compact condition as in Figures 2 and 8. When flap 106 is opened, spring 80 is thereby permitted to expand.

It is to be borne in mind that leaf A is acted upon by spring finger 82, keeping same pressed flatly against the backer, as in Figures 6*a*, 8. However, on release of the spring, finger 84 acts on wing 56 and urges support D upwardly, initially as in Figures 3 and 6*a*, thence as in Figures 4 and 5 and 6*b*, 6*c*, 6*d* respectively, until support D rests flatly against the backer. This progressive movement is shown in the movement of the ear pieces in Figures 6*a*, 6*b*, 6*c* and 6*d* respectively. As the hinge ears of support D are swung upwardly under the urging of spring 80, finger 84 thereof, the edge of socket or recess 63 will swing about shaft 14 and bear against, engage and rotate finger 64 of the ear piece of support C along with it, see Figures 6*b*, 6*c* and 4. Supports D and C will then carry support B about shaft 14, see Figures 6*c* and 5. Recesses 62, 63 are so wide, in relation to the width of the interfitted teeth 64, 64, that the arc of separation between adjacent supports is about 60°. Of course, as will be readily understandable, when five supports as 12 are provided, the arc of separation between each will be about 45°. When six supports are provided, the arc of separation will be about 36°, etc.

Suitable means will be provided to properly locate the ear pieces on shaft 14, to prevent endwise movement of the hinges, and to prevent disengagement of the ear pieces from one another. It will be seen that the fan-fold pass case according to the present invention is positive in operation, easy and simple in construction and assembly. Hinges 60, 61 may be formed initially as stampings; standards 16, 16 may be stamped similarly, and these, with a circular shaft member 14, spring 80 and leaves 12, 12 are all the required components of the device.

Having now described my invention, what I claim and desire to secure by Letters Patent is:

1. A device of the character described comprising a plurality of pass cases, a hinge for each pass case, a shaft on which the hinges are mounted for pivotal movement thereabout, and means normally operable on one hinge to cause limited pivotal movement of the other hinges about the shaft.

2. A device of the character described comprising a plurality of pass cases, a hinge for each pass case, a shaft about which the hinges are disposed for pivotal movement thereabout, and spring means on the shaft engaging one hinge to cause limited pivotal movement of the other hinges about the shaft.

3. A device of the character described comprising a plurality of pass cases, a hinge for each pass case having an apertured ear portion, a shaft about which the pass case hinges are disposed for pivotal movement, each ear being interfitted with an adjacent ear, a spring disposed about said shaft, expansion of the spring rotating one hinge about the shaft, and causing thereby partial rotation of adjacent hinges successively about the shaft.

4. A device as in claim 3, in which one ear piece is axially notched and the adjacent ear is axially toothed, and the ears interfit with the tooth of one ear being received within the notch of the adjacent ear.

5. A device as in claim 3, in which one ear piece is axially notched and the adjacent ear is axially toothed, and the ears interfit with the tooth of one ear being received within the notch of the adjacent ear, the notches being wider than the interfitted teeth, whereby the notched ear moves some degrees of arc before the toothed ear is moved under the influence of the expanding spring.

6. A device as in claim 3, in which one ear piece is axially notched and the adjacent ear is axially toothed, and the ears interfit with the tooth of one ear being received within the notch of the adjacent ear, the notches being wider than the interfitted teeth, and the notches and teeth on adjacent ears are out of axial alignment.

7. A device of the character described comprising a plurality of pass cases, a hinge member secured to each pass case, each hinge having a longitudinally apertured ear portion, a shaft, the ear hinge portions of the pass cases being threaded thereonto for pivotal movement thereabout,

the ear pieces of each hinge interfitting with the ear pieces of adjacent hinges, a normally expanding coil spring disposed about the shaft having end portions bearing against the hinges of the outermost pass cases, expanding movement of the coil spring causing swinging apart movement of the outermost pass cases and successive swinging apart movement of the inner pass cases.

8. A device as in claim 7, in which certain of the ear pieces are notched on one end and have axially extending teeth on the other, and the tooth of one ear piece is received within the notch of the adjacent ear piece.

9. A device as in claim 7, in which certain of the ear pieces are notched on one end and have axially extending teeth on the other end, and the tooth of one ear piece is received within the notch of the adjacent ear piece, the notches being wider than the width of the teeth received therewithin.

10. A device as in claim 7, in which certain of the ear pieces are notched on one end and have axially extending teeth on the other end, and the tooth of one ear piece is received within the notch of the adjacent ear piece, the notches being of greater width than the teeth, movement of one pass case causing movement of an adjacent pass case only after the one case has swung through an arc of movement equal to the width of the tooth of the interfitted ear.

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