May 1, 1951 W. LANG 2,551,213

CARDHOLDER FOR INDEX DEVICES

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Fig. 2

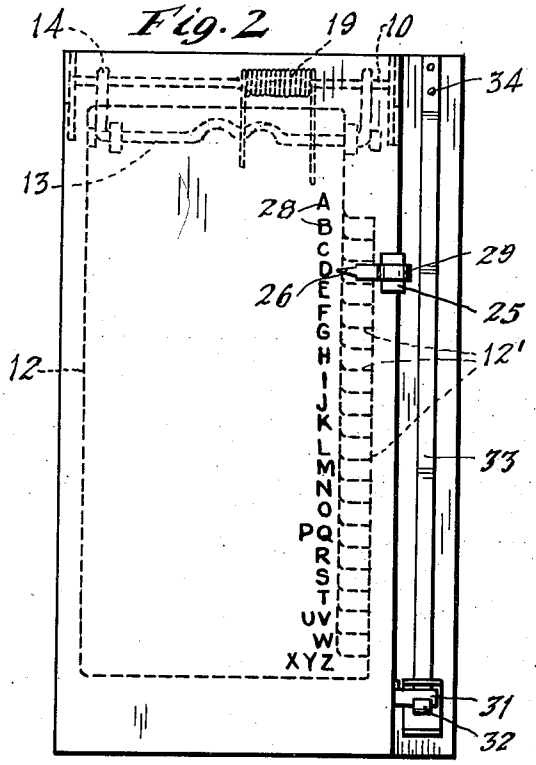


Fig. 1

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CARDHOLDER FOR INDEX DEVICES

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Fig. 3

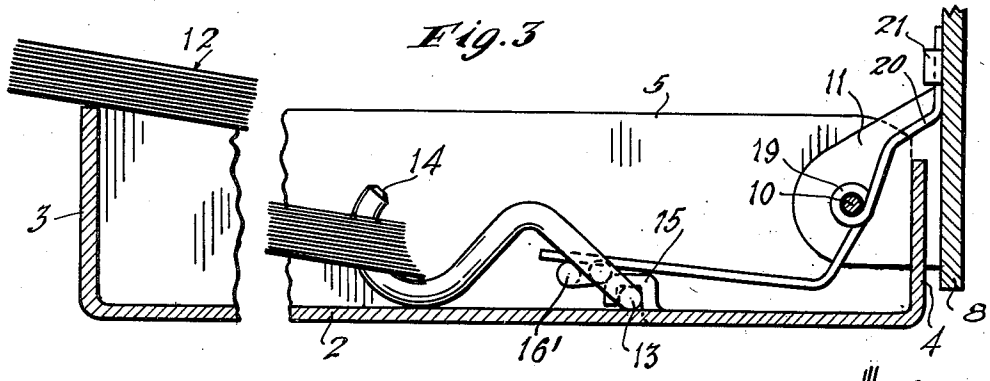


Fig. 4

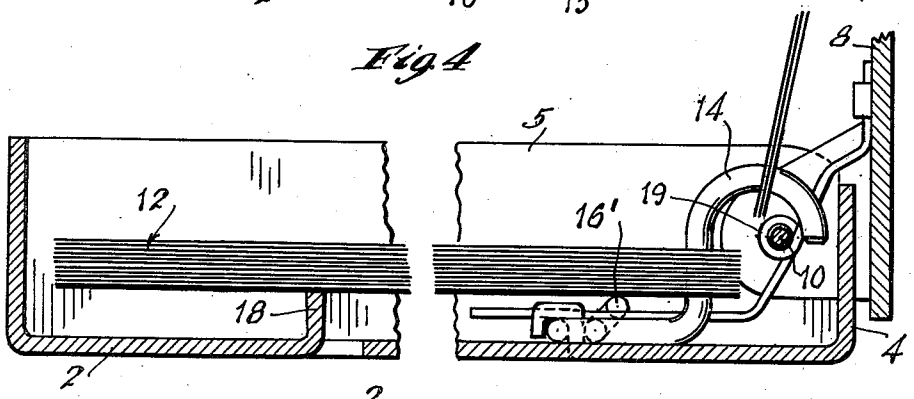


Fig. 6

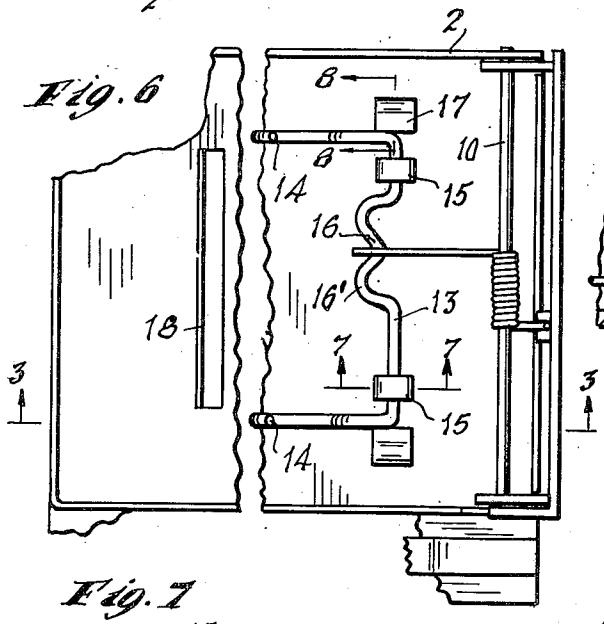


Fig. 5

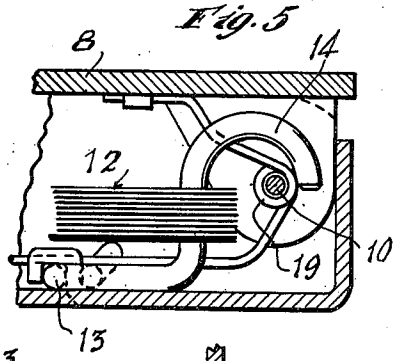


Fig. 8

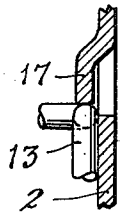
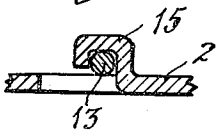


Fig. 7



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May 1, 1951 W. LANG 2,551,213

CARDHOLDER FOR INDEX DEVICES

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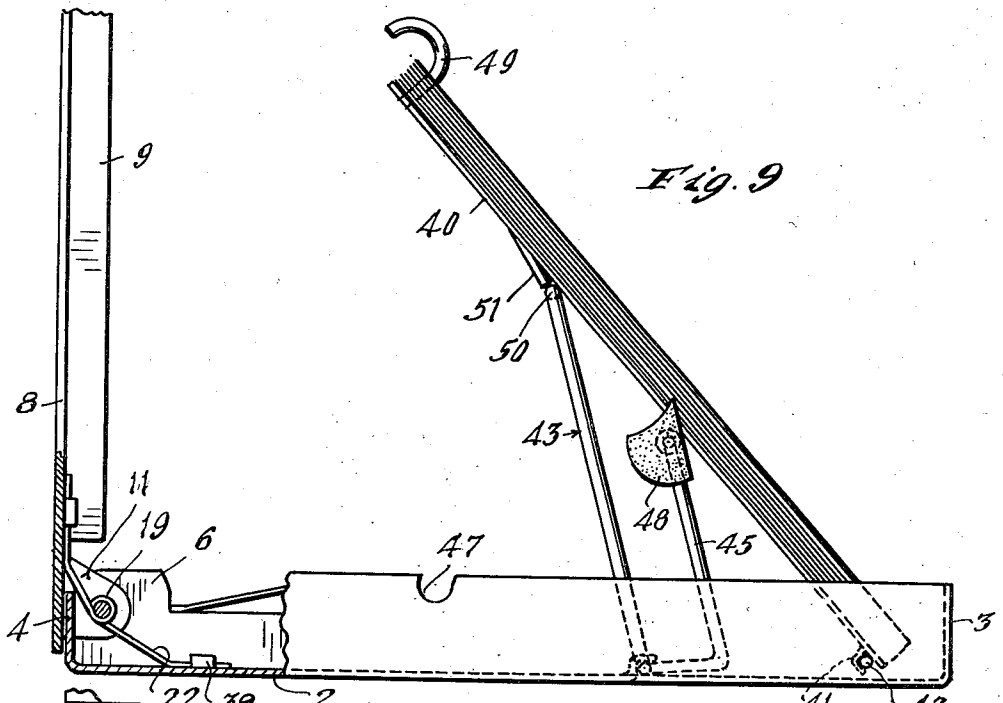


Fig. 9

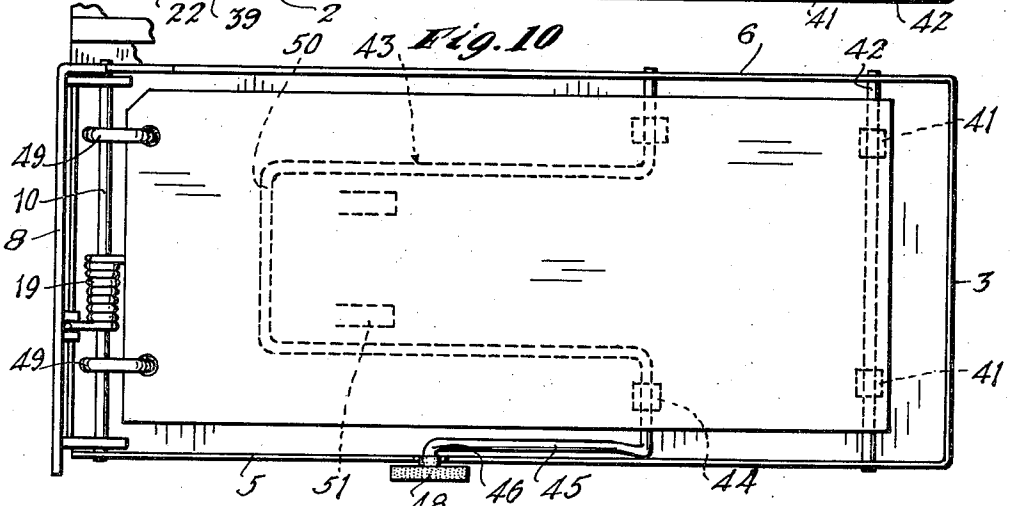


Fig. 10

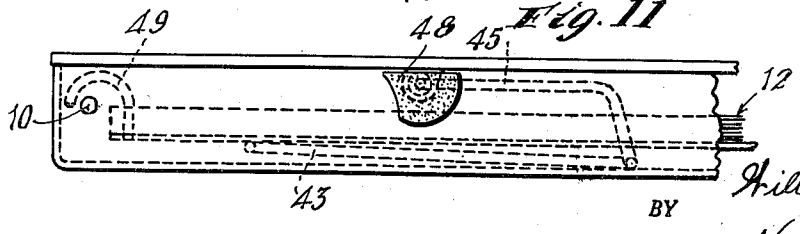


Fig. 11

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Patented May 1, 1951

2,551,213

UNITED STATES PATENT OFFICE

2,551,213

CARDHOLDER FOR INDEX DEVICES

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Application September 14, 1945, Serial No. 616,244

5 Claims. (Cl. 129—24)

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My invention relates to index devices by which ready reference may be had to a list of telephone numbers, addresses, recipes, or other classifiable matter. More particularly, it is directed to a holder for a group of loose cards superimposed upon each other, one or more of which is reserved for a single classification and which may readily be opened at any desired point for reference such as shown in Patent No. 2,341,983.

A principal object of my invention is to provide a card holder in which the card supporting hooks are adapted to be swung to a position remote from the connection between the cover and base with their free ends exposed for readily and easily connecting or disconnecting loose cards therefrom.

Another object is to provide such a holder in which the card supporting hooks are adapted to be swung to a position encircling the hinge rod of the cover for providing a substantially common center of swing for the cards and cover and for preventing displacement of the cards.

A further object is to provide a holder for cards wherein no obstruction is placed upon the hooks to tear the cards and the cards will be protected when the holder is being opened.

Yet another object is to provide a holder whereby one or several cards may be turned back to lie perfectly flat thus giving complete access to any matter upon the cards and presenting the cards in the best position for writing or working upon the same.

A further object is to provide a device of this character which is simple in construction, economical to manufacture and highly effective in use.

Other objects and advantages of my invention will be apparent from the following description thereof taken in connection with the accompanying drawings in which—

Figure 1 is a perspective view of one embodiment of my improved device with the cover in raised or open position and the pile of index cards indicated in dot-dash lines.

Figure 2 is a plan view thereof with the cover closed.

Figure 3 is an enlarged fragmentary sectional view taken on the plane of the line 3—3 of Figure 6 but showing the hooks in open position with a pile of index cards thereon and with the cover in open position.

Figure 4 is a view similar to Figure 3 but showing the hooks in closed position and some of the cards turned up.

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Figure 5 is a sectional view of the right hand end of Figure 4 with the cover closed.

Figure 6 is a fragmentary plan view showing the hooks and cover in open position, the cards being removed.

Figure 7 is a sectional view taken on the plane of the line 7—7 of Figure 6.

Figure 8 is a sectional view taken on the plane of the line 8—8 of Figure 6.

Figure 9 is a side elevational view partly broken away of another embodiment of my invention, the card holder and the cover being shown in open position.

Figure 10 is a top plan view of the device of Figure 9 but showing the card holder in closed position with the cover open.

Figure 11 is a fragmentary side view of the device of Figure 9 with the cover closed.

Referring first to the embodiment shown in Figures 1 through 8, the index comprises a rectangular shallow box-like base or support 1 including a floor portion 2, front wall 3, rear wall 4, and side walls 5 and 6, the side wall 6 being cut away as indicated at 7. A rectangular shaped cover 8 having an inwardly extending flange portion 9 along one side edge thereof is hingedly connected to the base by a rod 10 passing through brackets 11 on the cover and through the side walls 5 and 6 of the base, so that the cover may swing into closed position in opposed relation to and above said base and spaced from said rod at the side thereof opposite said base and the cover may swing open into a position approximately perpendicular to said base.

A group of superimposed cards or sheets 12 are connected and disconnected, at will, from the base by means of a holder or binder. This holder comprises a rod 13 formed of a single length of wire or other stock material which is bent at each end at right angles to the body of the rod forming highly arched card retaining ring-like hook portions 14. The rod is hingedly connected to the floor of the base at a point remote from the hinge rod 10 by upstruck bearing lugs 15 and intermediate its ends the holder is bent to form a V-shaped portion 16. Lugs 17 hold the rod against longitudinal movement. The bent portions and hooks 14 at the ends of the rod are sufficiently long to permit the hooks to be swung forward of the base a considerable distance away from the connection between the cover and base to a substantially flatwise position with the free ends thereof exposed and facing upwardly as shown in Figures 1 and 3 so that cards can readily and easily be connected to and

disconnected from the base. The hooks are also adapted to be swung rearwardly of the base to a substantially upright position partly encircling the hinge rod of the cover as shown in Figures 4 and 5 so that the centers of swing of the cover and of the cards are substantially the same. When the hooks are in this encircling position, their free ends are sufficiently close to the hinge rod to prevent displacement or shifting of the cards.

The cards are supported off of the floor of the base at the rear by spaced upstanding curved portion 16[1] of the rod 13 and at the front by an upstruck elongated flange portion 18.

The cover is suitably biased to raised or open position as by a tensioned coiled spring 19 disposed about the hinge rod 10 and having one arm 20 extending beneath and bearing against the adjacent portion of the cover and held against displacement by a clip member 21, and having its other arm 22 extending over and bearing against the holder 13 at its offset portion 16 whereby the holder is yieldingly held against hinging movement and is also held against lateral displacement.

The cards are of a width to fit within the side walls of the base and each card is provided with spaced perforations 23 at one end thereof. As shown in Figure 2, the edge portions of the cards along one side thereof are cut back from their rear edges as indicated at 12', in amounts which progressively increase from the uppermost to the lowermost card, such edge portions thus being of different and progressively decreasing lengths with the shortest of such edge portion on the bottom card.

When it is desired to connect a card to or disconnect a card from the base, the base is tilted slightly to permit the rear end of the card or pile of cards to move outwardly free of the front wall of the base, or a finger may be inserted through an opening 2' in the floor of the base and the card or pile pushed outwardly. A portion of the holder, such as one of the hooks 14, is then grasped and the holder moved forwardly by a swinging or rolling motion until the free ends of the hooks are carried around and face upwardly as shown in Figures 1 and 3. When in this position, these free ends are considerably removed from the cover so that there is plenty of clearance therebetween so that the perforations in the cards may be easily slipped over said free ends. When the hooks are in this open position, the opposite end of the card or pile of cards connected thereto rests on the front wall of the base as shown in Figure 1 thereby permitting ready access to and manipulation of such cards by the fingers of the user of the device.

After the card or cards are thus mounted on the hooks, the holder is swung rearwardly again until the hooks partly encircle the rod 10 as shown in Figures 4 and 5 whereby the centers of the swing of the cards and of the cover are substantially the same. It will also be noted that the hooks are sufficiently close to the hinge rod 10 to prevent any displacement or shifting of the cards.

The cards are also slightly less in width than the flanged cover 8 so that when the latter is in its lowered or closed position it will substantially enclose the stack of cards as shown in Figure 2. The flange 9 on the cover forms a guiderail for a slider 24 which has a shoe 25 engaging said guiderail whereby the slider is slidably mounted on the guiderail for movement

lengthwise of the cover. The slider is provided with an upper portion which extends inwardly over the top of the cover and terminates in a pointer or indicator 26. The slider also has a lower inwardly extending portion or selector 27 which is adapted for selective coaction with the cutaway edges of cards 12 and which when the cover is closed lies at a level slightly below the bottom card of the stack, the cards being supported on the portions 16' and flange 18 off of the floor of the base so that the selector may slide freely underneath the edges of the cards without interference. The pointer 26 is adapted to cooperate with a suitable index 28 such, for example, as the letters of the alphabet, which is applied to and extends longitudinally of the cover adjacent the path of movement of said pointer. The cards also preferably bear index characters which from the top to the bottom of the stack, respectively, correspond to the characters of the index 28 on the cover, that is, in the device illustrated, the uppermost card bears the letter "A," the next card the letter "B" and so on to the lowermost card which bears the letters "X," "Y" and "Z." A suitable handle 29 may be provided on slider 24 to facilitate movement of the latter. Means may also be provided to yieldingly and releasably hold the slider in adjusted position.

Suitable means is provided for automatically effecting the releasable locking of the cover 8 in its lowered or closed position against the action of the spring 19, upon movement of the cover to such position, this means preferably being of such construction that the cover may readily be released to effect automatic upward or opening movement thereof and of such of the cards 12 as may be operatively connected thereto by member 24 under the action of spring 19. This mechanism, as shown, comprises a detent 31 carried by the flange 9 of the cover and a spring biased latch 32 with which said detent coacts. The latch 32 which has an upper inwardly inclined surface is preferably carried by or formed on the free end of a spring 33 which is suitably secured as indicated at 34 at its other end to an extension 35 of the floor of the base. The spring 33 is bowed upwardly midway its ends and extends longitudinally of the base in a position adjacent and substantially parallel to the guiderail 9 of cover 8 when the latter is in its lowered closed position, and with the latch 32 normally located, under the biasing action of the spring, in operative relation with respect to the detent 31 of the cover. The free end portion of spring 33 loosely engages a guide slot formed in a struck-up end 36 of a member 37 secured to the extension 35 of the floor of the base adjacent its front end. The other end 38 of member 37 is also struck-up and forms a stop to limit the forward movement of latch 32 when the bowed spring 33 is flexed downwardly.

The selection of a card by the mechanism just described may be briefly described as follows: When the cover 8, as shown in Figure 1, is in its raised open position and is then swung down against the action of spring 19 to its closed position, the detent 31 engages the upper inclined surface of latch 32 to force the latter outwardly against the action of spring 19, and after the detent has cleared the said inclined surface, the latch snaps into engagement therewith and thus automatically effects the locking of the cover in its lowered closed position as shown in Figure 2. To then effect the opening or separation of the

pile of cards at any desired point it is merely necessary to adjust the slider **24** to the proper position on its guiderail **9** and apply a slight downward pressure to the bowed portion of spring **33**. For example, if it is desired to separate the stack of cards so that the card bearing the letter "D" will be available for reference to or entry of an item, slider **24** is moved on guiderail **9** to a position in which pointer **26** is directly opposite the letter "D" of index **28**. Pressure is then applied to spring **33** to flex the bowed portion thereof downwardly such an amount as to cause the latch **32** to move forwardly out of engagement with the detent **31**. The spring **19** will thereupon act automatically to move the cover to its open position shown in Figure 1, and also to move with the cover all of the cards which are above the card bearing the letter "D" as the hook **27** of slider **24** is then positioned to engage the edge portion of the card bearing the letter "C" and said slider therefore serves operatively to connect the latter card and those above it with the cover. To separate the stack of cards at some other point, the cover is moved to its closed position, slider **24** is adjusted to proper position with respect to index **28** and the cover is again released by applying a downward pressure to spring **33**.

Attention is now invited to the embodiment shown in Figures 9 through 11. In this embodiment, the base, cover and index cards all have substantially the same form and function and carry the same reference characters as in the previous embodiment. The coil spring **19** however has its arm **22** impinging directly against the floor of the base and is held against displacement by a clip **39**.

In this form also a somewhat different form of holder for the cards is used. Here a plate **40** of substantially the same size as the cards **12** has one end formed with outstruck lugs **41** which swing around a transverse rod **42** which is positioned adjacent the front wall and supported by the side walls of the base. A substantially U-shaped link member **43** is journalled in instruck lugs **44** on the floor of the base below the plate and is provided with a crank arm **45** extending along the plate. The crank arm has an offset portion **46** extending laterally of the side wall and through a notch **47** in the upper edge of said wall. A finger piece **48** is mounted on the outer end of the offset portion to facilitate actuation of the crank arm. A pair of hooks **49** are carried on the inner end of the plate. When the plate and link member are in nested position as shown in Figure 11, the hooks encircle the hinge bar **10** of the cover the same as in the previous embodiment.

The cover is yieldingly held in closed position the same as in the previous form and is raised by means of the spring **19**. Upward pressure on the finger piece **48** will lift the link member and the latter will push the inner end of the plate upwardly to swing said plate around the rod **42**, the transverse portion **50** of the link member sliding inwardly along the plate until it rides over and engages the free edges of outstruck lugs **51** formed on said plate whereby the plate is held in upward open position as shown in Figure 9. When in this position, the cards can readily be slipped over the free ends of the hooks **49** for connecting and disconnecting them from the base.

My invention is also particularly adapted for use with the digitally operable mechanism disclosed in Letters Patent No. 2,223,966.

It will readily be seen that the embodiments of the index device shown herein may be modified in numerous ways without departing from the spirit of my invention.

What I claim is:

1. In a card index a base, a transverse hinge rod at one end of said base in spaced relation thereto, a cover having hinge brackets at one end pivotally connected to said rod so that said cover may swing into open position approximately perpendicular to said base and into closed position in opposed relation to and above said base and spaced from said rod at the side thereof opposite said base, a device for releasably connecting perforated loose cards to said base including hooks normally overlying and partially encircling said rod with their free ends facing downwardly in closely spaced relation to said rod for providing a substantially common center of swing for the cards and cover and for preventing displacement of the cards, said hooks being mounted on said base to be swung away from the base and the cover with their free ends facing upwardly to permit said cards to be slipped thereon.

2. In the card index as defined in claim 1 the addition of a helical spring for biasing the cover to open position and for yieldingly holding the card connecting device in each of its said positions.

3. In a card index as defined in claim 1 the addition of a common spring for biasing the cover to open position and for yieldingly holding the card connecting device in each of its said positions.

4. In a card index as defined in claim 1, said device comprising a main portion pivotally mounted on the base to swing on an axis parallel to the axis of said rod and having an integral hook at each end thereof and perpendicular thereto and disposed in a plane at right angles to said rod, said device being so positioned relative to said hinge rod that when said main portion is rotated in one direction the hooks are disposed remotely from said rod with their free ends exposed and facing upwardly, while when said main portion is rotated in the opposite direction the hooks overlie and partly encircle the hinge rod.

5. In a card index as defined in claim 4, said main portion between said hooks being formed with an offset portion, and with the addition of a spring on said transverse rod having opposed arms, one of which biases the cover to open position, while the other engages said offset portion for holding the connecting device in adjusted position.

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The following references are of record in the file of this patent:

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