Jan. 19, 1926. 1,569,884

W. A. RINGLER

VISIBLE INDEX DEVICE

Filed March 22, 1920 2 Sheets-Sheet 1

Fig. 1.

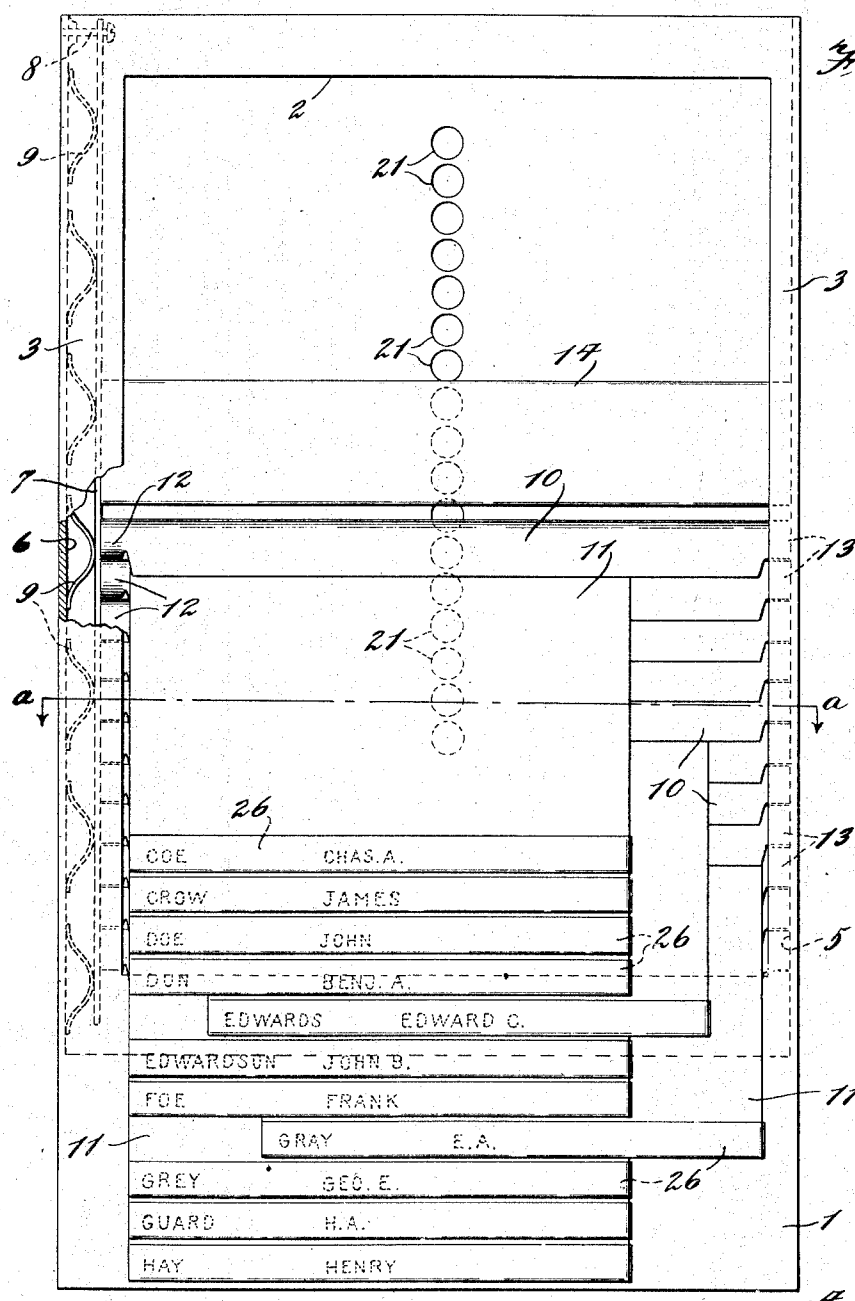


Fig. 2.

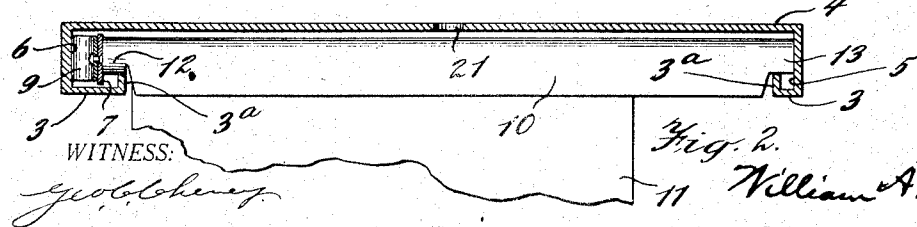


Fig. 8.

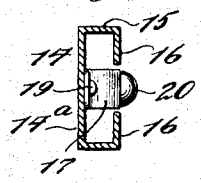
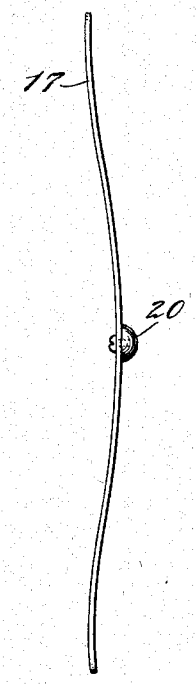


Fig. 9.



WITNESS:

INVENTOR.

William A. Ringler

BY

Rosenbaum, Stockbridge & Boost

ATTORNEYS.

Jan. 19, 1926. 1,569,884

W. A. RINGLER

VISIBLE INDEX DEVICE

Filed March 22, 1920 2 Sheets-Sheet 2

Fig. 3.

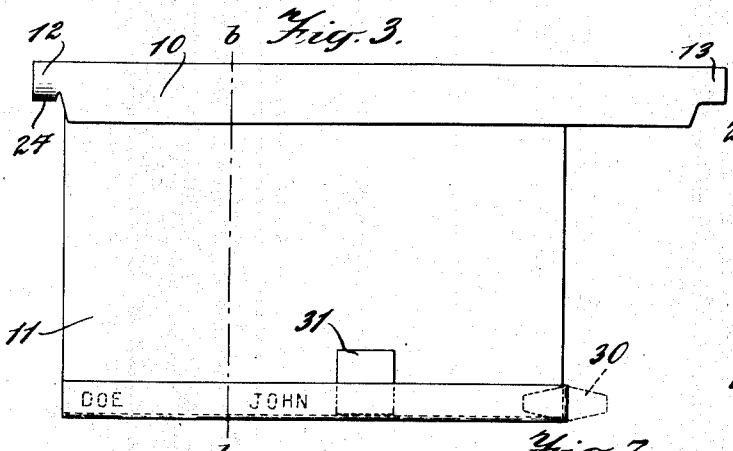


Fig. 4. Fig. 6. Fig. 5.

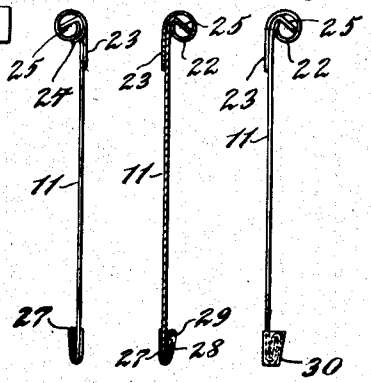


Fig. 7.

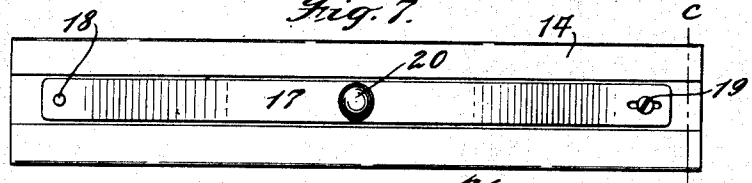


Fig. 10.

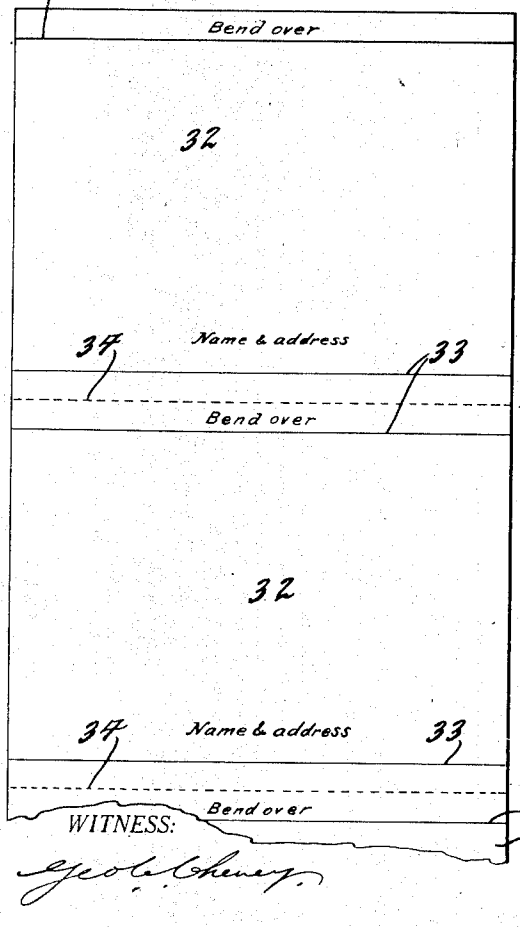


Fig. 11.

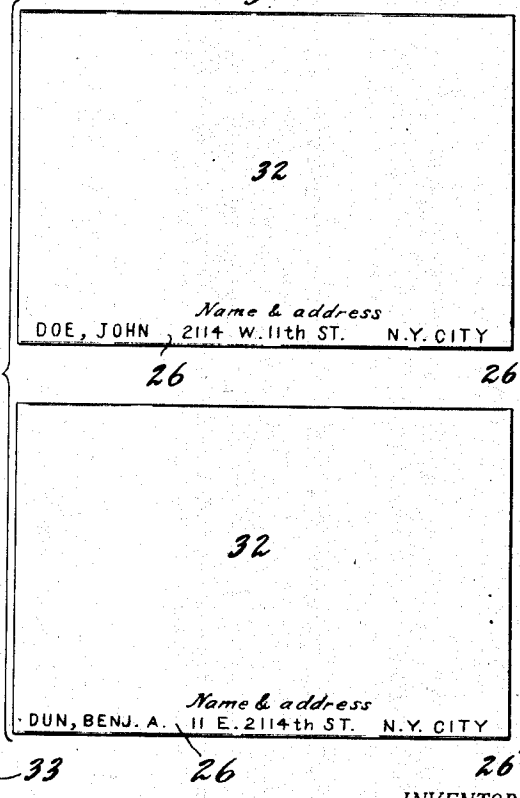


Fig. 12.

WITNESS:
Geo. L. Cheney.

INVENTOR.
William A. Ringler

BY
Rosenbaum, Stockbridge & Rose
ATTORNEYS.

Patented Jan. 19, 1926. 1,569,884

UNITED STATES PATENT OFFICE.

WILLIAM A. RINGLER, OF NEW YORK, N. Y., ASSIGNOR TO THE GLOBE-WERNICKE COMPANY, A CORPORATION OF OHIO.

VISIBLE-INDEX DEVICE.

Application filed March 22, 1920. Serial No. 367,617.

To all whom it may concern:

Be it known that I, WILLIAM A. RINGLER, a citizen of the United States, residing at the city of New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Visible-Index Devices, of which the following is a full, clear, and exact description.

This invention relates to card index devices of the so-called visible index type, in which a series of index cards are supported in a frame, with the free edges of the cards projecting one beyond the other so as to leave a narrow portion of each card exposed along its free edge, which portion is adapted to carry the name, address, identification number, or other suitable information or data in a position to be always visible.

One object of my invention is to provide improved means for supporting the cards in position, which will enable the insertion or withdrawal of a card at will anywhere in the index without removal or rearrangement of other cards, which will permit of ready access to both sides of any card for the purpose of obtaining information therefrom or entering additional information thereon, without removing the card from the frame; which prevents the cards from falling out or becoming disarranged when the frame is shifted to different positions, and which permits the shifting of any card at any time to different offset positions, relatively to the other cards, in order to convey additional information by its position or to accentuate by its position, any card or group of cards.

A further object is to provide carriers for each card for supporting the same in the frame, which will enable rapid renewal or substitution of cards, when old ones are discarded.

A further object is to provide a transparent covering for the normally exposed free edge of each card which can be easily attached to and detached from each card, which is not susceptible of accidental detachment during normal use of the index, and which will protect the exposed portion of the card from soiling due to handling.

A further object is to provide a device of the character described which is inexpensive, simple in construction, and durable and convenient in use.

Other objects will be apparent from the following description, and the novel features of my invention will be particularly pointed out in the claims.

In the drawings:

Fig. 1 is a front elevation of an index device embodying my invention.

Fig. 2 is a transverse section of the same, substantially on the line *a*—*a* of Fig. 1.

Fig. 3 is a front elevation of one of the index members or elements,

Fig. 4 is an end elevation of an index member.

Fig. 5 is an elevation of the opposite end of the same member,

Fig. 6 is a section substantially on the line *b*—*b* of Fig. 3.

Fig. 7 is an elevation of the locking block or bar,

Fig. 8 is a section of the same, substantially on the line *c*—*c* of Fig. 7,

Fig. 9 is an elevation of a detail,

Fig. 10 is a plan of a sheet from which the index cards are formed,

Fig. 11 is a plan of the same sheet, after it has been separated into cards and bent into the desired shape, and

Fig. 12 is an end elevation of the cards illustrated in Fig. 11.

In the illustrated embodiment, the main supporting frame 1 is preferably of metal and has a rectangular opening 2 in the front face thereof. The side panels 3 of the opening and the rear face 4 form guideways 5 and 6 along the opposite sides of the frame. In one of the guideways 6, I provide a thin flexible strip of spring steel 7 which is anchored to the frame at one end with provision for sliding movement toward the rear wall of the guideway, by suitable means such as a screw 8 carried by the frame and passing through an aperture in the strip. The strip 7 carries in spaced relation along its length a plurality of small spring members 9 which react upon the bottom or rear wall of the guideway 6 and hold the strip in spaced relation therewith. An inturned flange 3ª of the frame limits outward movement of the strip 7 and confines it within the guideway.

A plurality of card carriers 10, which are adapted to receive and adjustably carry cards 11, are disposed side by side in the guideways. The ends or extensions 12 and 13 of the carriers 10 are of such a shape that they form pivots and permit rotation of the carriers in the guideways and about their in-

dividual axes. The spring strip 7 and individual springs 9 tend to shift the carriers to the right (Fig. 1) with the extensions or pivot ends 13 extending as far into the guideway 5 as possible, so that the carriers cannot drop out of the frame. When one desires to insert a new carrier into the frame, the pivot 12 is first thrust into the guideway 6 and against the strip 7 which yields locally and permits the further insertion of the pivot sufficiently to allow the other pivot 13 to drop into the opening 2 in alignment with guideway 5. The carrier is then released and the strip 7 and springs 9 shift the same toward the right (Fig. 1) until the pivot 13 abuts against the rear wall of the guideway, and holds it in this position. When one desires to remove any carrier, it is first manually shifted to the left (Fig. 1) against the action of the strip 7 and spring 9 until the pivot end 13 leaves the guideway 5, whereupon the carrier is swung outwardly and to the right (Fig. 1) to withdraw the pivot 13 from the guideway 6. By the use of the flexible spring strip 7 and the small springs 9, any carrier can be removed or inserted without releasing adjacent ones, due to the fact that the strip 7 yields only locally at the point where the carrier is inserted or removed, and holds the others in place, or at least sufficiently secure, so as to prevent them from falling out. The spring 7 is allowed to yield locally in this manner because of its support at but one end which permits sufficient longitudinal movement to compensate for the shortening due to the local bending. It will thus be seen that any carrier can be quickly and easily removed or inserted anywhere without removing or rearranging the other carriers. If the frame should be shifted to different positions, the carriers would be likely to slide along the guideways by the action of gravity and perhaps assume a diagonal position which would allow some of them to drop out. To prevent this, I provide a locking bar 14 arranged to slide in the guideways and be secured in various adjusted positions and thus hold the carriers together at one end of the frame. The bar 14 may conveniently be formed from sheet metal by bending the ends of a blank at right angles to the face 14^a to form edge faces 15, and then again bending the ends or edges of the edge faces at right angles to the latter to form bottom walls 16 which are in the same plane with one another and parallel with the front face 14^a, the shape being that of an open ended box with a slot along the entire length of one face thereof. A spring strip 17 is secured rigidly at one end by a rivet 18 to the interior of the box, in alignment with the slot in the rear face, and has at its other end a pin and slot connection 19 also with an interior face of the box. The intermediate or central portion of the strip is bowed outwardly through the slot and carries thereon a button 20 with a round or semispherical end. The rear wall of the frame is provided with a row of depressions or apertures 21 extending parallel with the guideways and each of less diameter than the semispherical end of button 20, and as the locking bar 14 is manually shifted along the guideways the button 20 will snap into and be cammed out of each depression or aperture 21 which it passes. When left in any adjusted position the button by engagement with the depression or aperture will yieldingly hold the bar against displacement.

The carrier 10 is preferably of metal and may be formed from a piece of sheet material which is rolled spirally into the shape illustrated in Figures 3 to 6, with the overlapping edges 22 and 23 spaced from each other to form a slot in which the card is adapted to slide and be supported. The edge 23 extends a short distance over the card to form an apron for preventing any bending of the card which would release it from the slot. At the pivot end 12, a portion 24 of the edge 23 is bent tightly around the spiral to close the slot and limit the movement of the card therein to the left (Fig. 1). The card 11 has its edge, which passes through the slot, bent at an angle to the body thereof, to form a hook-shaped edge 25 which is disposed within the spiral end prevents the card from being pulled out by any forces to which the cards will be subjected in normal use. The cards may be considerably shorter than the carriers so that any card or group of cards can, by sliding it or them along the carrier, be positioned in any offset relation with respect to the other cards, in order to accentuate their position or convey additional information by the relative position occupied. The free edges of the cards, when in the frame, will overlap by an amount approximately equal to the longitudinal space occupied by a carrier in the frame, and the pivots or extensions 12 and 13 should have an equivalent diameter greater than the thickness of the card or information-carrying member 11 in order to allow the cards or members 11 to hang properly. The narrow edge portion 26 of each card which is always exposed by the overlapping of the cards in the frame, will be provided with suitable identification information such as the name, number, or code sign, etc., by means of which any card can be quickly located. In the particular form illustrated, the cards carry the names and are arranged alphabetically, but it is obvious that any other method of identification can be employed. Because of the pivotal mounting of the carriers, any card when located can be inspected by turning up the cards above it so as to expose its entire upper sur-

face, and any desired information can then be readily placed thereon. If one wishes to use the rear of any card, that card can be turned up and the rear side will then be in a position to enable inspection or entry of information thereon.

Where an index of this kind is subject to frequent use, the exposed edges carrying the name, etc., may become soiled, and to prevent this I may employ a transparent protector 27 which can be secured to a card by means of a doubled-back edge 28 on the exposed edge of the latter. The protector 27 is V shaped, but with one arm 29 of the V doubled back within the V into a position parallel with the arm of which it is an extension. The doubled-back arm 29 fits over the doubled-back edge 28 of the card and is supported thereby. The protector 27 is placed upon or detached from the bottom or edge of the card by sliding the same laterally of the card, the edge 28 acting as a guide for this purpose. If desired, the front face or arm of the protector 27 may be provided with a flap 30 which can be bent around the end of the protector and secured to the rear arm 29 and thus prevent possible separation of the arms of the V. Small tabs 31 of paper may be inserted between the front arm of the protector and card, as indicated in Fig. 3, to convey special information, and be removed at any time after their purpose has been served.

In typewriting the name, address, or other information along the bottom edge of the cards, difficulty is often experienced in holding the cards properly in the typewriting machine. I may therefore employ a long sheet 32 of suitable cardboard of a width equal to that of the cards and marked, perforated and scored as indicated in Fig. 10. Thus the scoring would be along lines 33, and the perforations would be along lines 34, all transversely of the cards. The sheet 32 is placed in the typewriting machine and typewritten with the preliminary information which goes on each card. The sheet is then separated along the perforated lines 34 into individual cards, and bent along the scored lines 33. The cards thus formed are illustrated in Figs. 11 and 12, and are ready for insertion into their carriers and to have their protectors 27 applied.

In use, the cards are prepared in the manner described, the protectors 27 are attached, and the cards inserted into their carriers. The carriers already in the frame are slightly separated at the point where the new carrier is to be inserted, the extension or pivot 12 of the new carrier thrust into guideway 6, depressing spring strip 7, until the extension or pivot 13 can be dropped into the frame. The carrier is then released, and the strip 7 and springs 9 shift the new carrier to the right (Fig. 1) as far as it will go. Any card and carrier can be removed by slightly separating the carriers adjacent thereto, thrusting the particular carrier to the left until pivot end 13 clears the edge of the guideway, then swinging the pivot end 13 outwardly and to the right (Fig. 1) until the pivot 12 is withdrawn from the guideway 6. Thus new cards and carriers can be inserted or removed at will without removal or rearrangement of the cards and carriers. When one desires to accentuate a card, it is shifted in its carrier to the right (Fig. 1) to any desired extent. The bar 14 can be manually shifted as necessary to retain the cards and carriers in one end of the frame and also permit of expansion.

While I have described the members 11 as cards, it is obvious that any account carrying members or containers can be employed with suitable pivots or carriers. The protectors 27 and bent up edges 28 may also be omitted if desired. It is also obvious that various other modifications may be made in the construction of my apparatus as illustrated in the drawings and above particularly described, within the principle and scope of my invention.

I claim:

1. An index device comprising a frame having guideways along opposite sides thereof, a plurality of index cards, carriers disposed in said guideways and supporting each of said cards for sliding movement laterally of the frame and for pivotal movement about the axis of support to position any card so as to enable the ready entry of information upon either face thereof without removal of the member from the frame.

2. A visible index device comprising a frame having guideways along opposite sides thereof, a plurality of index members having extensions adapted to be received in said guideways, a flexible member disposed in one of said guideways, extending lengthwise thereof and anchored at one point to the frame the member being otherwise unattached to the frame, a plurality of resilient devices between the flexible member and the rear wall of the guideway and arranged along the length of the flexible member at spaced distances apart, whereby when one of the extensions of an index member is inserted into the guideway having the flexible member, the latter will yield locally toward the rear wall of the guideway sufficienty to enable insertion of the other extension into the other guideway, and to yieldingly retain the extensions of the index member within said guideways.

3. A visible index device comprising a frame having guideways along opposite sides thereof, a plurality of index members mounted to slide in said guideways, and an adjustable stop member slidably mounted in said guideways and holding said index mem-

bers together at one end of the frame, said adjustable member having a spring operated button for interlocking with the frame to secure the adjustable member in adjusted positions.

4. A visible index device comprising a frame having guideways along opposite sides thereof and also having a series of spaced apertures in the rear wall thereof and extending parallel with the guideways, a plurality of index members slidably mounted in said guideways, a bar also slidably mounted in said guideways and adapted to hold the index members together in one end of the frame, and a spring device carried by the bar and engageable in any of the apertures to retain the bar in adjusted positions.

5. A visible index device comprising a frame having guideways along opposite sides thereof and also having a series of spaced apertures in the rear wall thereof and extending parallel with the guideways, a plurality of index members slidably mounted in said guideways, a bar also slidably mounted in said guideways and adapted to hold the index members together in one end of the frame, and a spring-pressed lug carried by the bar and adapted to snap into the apertures in the frame and retain the bar in adjusted positions and be cammed out of an aperture to permit movement of the bar when sufficient force is applied to the bar in the direction of sliding movement.

6. A visible index member comprising a card carrier of spirally rolled sheet material, the overlapping edges of the carrier being spaced a short distance apart, a card having a narrow portion of one edge bent at an angle to the face thereof, the body of said card being slidable between the overlapping edges of the carrier with the bent narrow portion within the spiral.

7. A blank for use with a visible index comprising a sheet of pliant material capable of receiving written or printed information, said sheet having lines of perforations extending transversely thereof at spaced distances along the same in order to facilitate separation of the sheet at the desired places into individual cards, said sheet also being scored transversely thereof a short distance from each end and a short distance from each side of each of the lines of perforations, whereby any desired data or information may be first typewritten at suitable intervals along the length of the sheet, the sheet separated along the lines of perforations, and bent along the scoring substantially as described.

In witness whereof I hereunto subscribe my signature.

WILLIAM A. RINGLER.