J. C. CRAWFORD.

MEMORANDA DEVICE.

APPLICATION FILED OCT. 20, 1919. RENEWED AUG. 27, 1921.

1,412,043. Patented Apr. 11, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

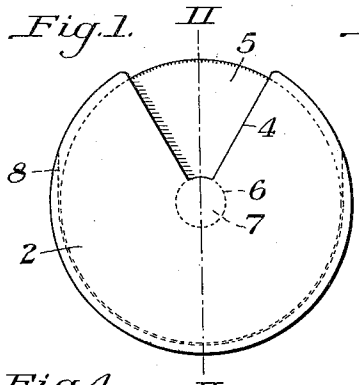


Fig. 2.

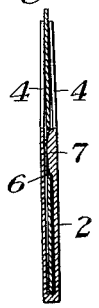


Fig. 3.

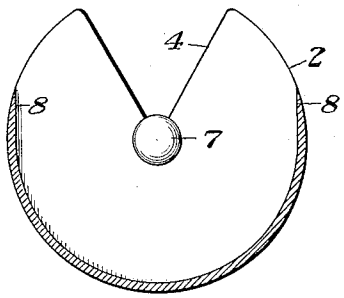


Fig. 4.

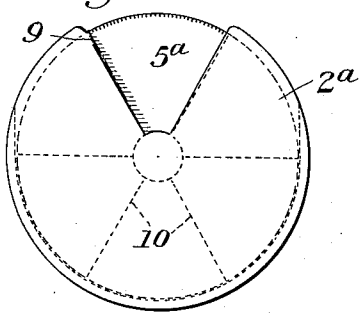


Fig. 5.

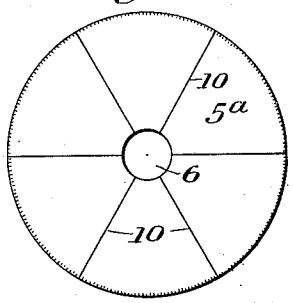


Fig. 6.

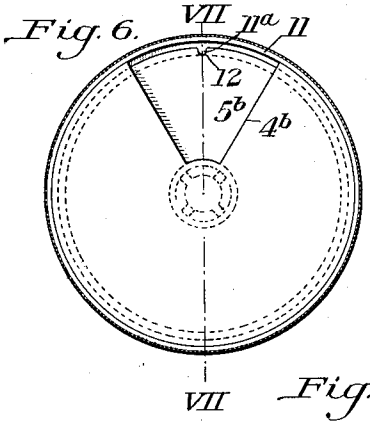


Fig. 7.

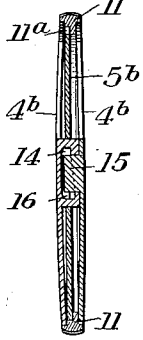


Fig. 8.

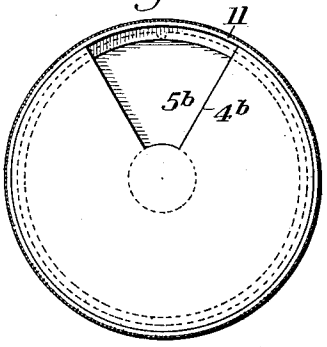
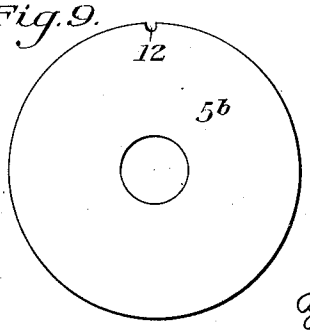


Fig. 9.



WITNESS

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INVENTOR

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By Bakewell, Byrne & Parmelee,

his attys.

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2 SHEETS—SHEET 2.

Fig. 10.

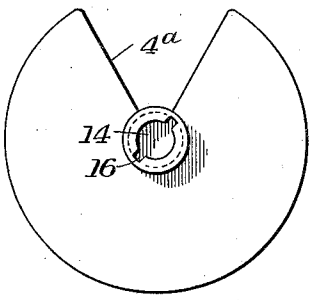


Fig. 11.

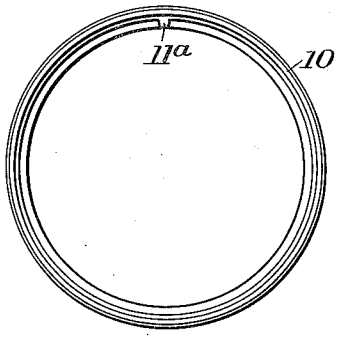


Fig. 12.

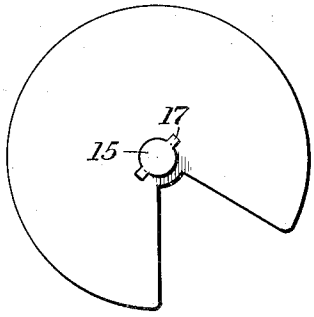


Fig. 13.

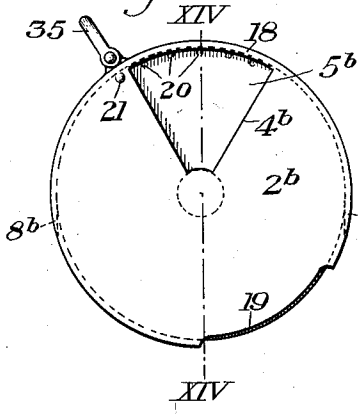


Fig. 14

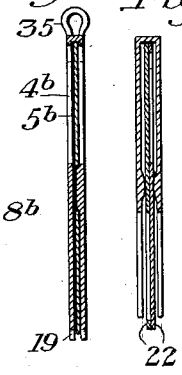


Fig. 15.

Fig. 16.

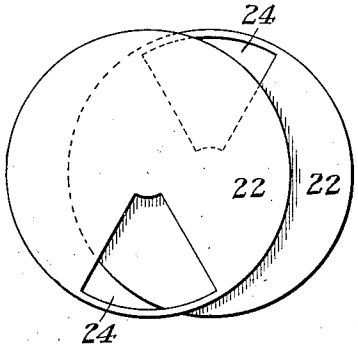


Fig. 17.

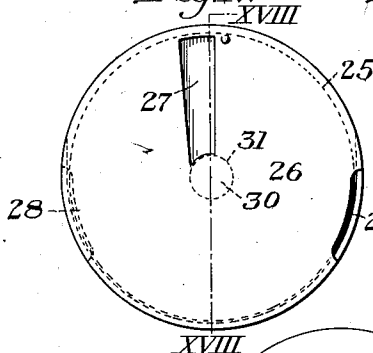


Fig. 18.

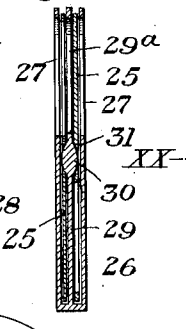


Fig. 19.

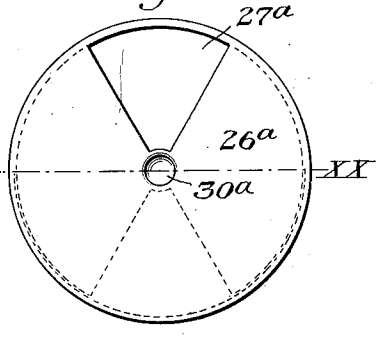


Fig. 20.

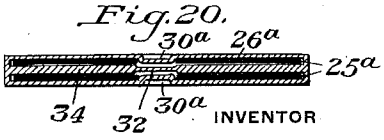
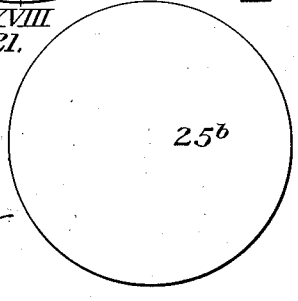


Fig. 21.



WITNESS

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his Attys.

UNITED STATES PATENT OFFICE.

JESSE C. CRAWFORD, OF PITTSBURGH, PENNSYLVANIA.

MEMORANDA DEVICE.

1,412,043. Specification of Letters Patent. Patented Apr. 11, 1922.

Application filed October 20, 1919, Serial No. 331,975. Renewed August 27, 1921. Serial No. 496,127.

To all whom it may concern:

Be it known that I, JESSE C. CRAWFORD, a citizen of the United States, residing at Pittsburgh, Allegheny County, Pennsylvania, have invented a new and useful Improvement in Memoranda Devices, of which the following is a full, clear, and exact description.

The present invention relates generally to memoranda, information or reference devices, and more particularly to devices of this nature assembled in compact form and adapted for pocket and personal use by public speakers, lecturers, teachers, entertainers, etc., or by commuters, advertising promoters and others requiring condensed information or schedules of events.

The principal object of the present invention is to provide a protective casing with a removable and renewable rotatable or changeable indicia carrying-disk or member.

Another object of the invention is to provide in a device of this character an indicia disk or member divided into a plurality of sectors, each having means co-operating with the casing for indicating audibly or frictionally when the indicia is in reading position.

Another object of the invention is to provide a casing adapted to receive a plurality of independently operable indicia carrying members.

A further object of the invention is to provide means co-operating with the indicia carrying member for protecting the edge thereof during use.

A still further object of the invention is to provide a device of this nature which may be loosely carried in the pocket or attached as an ornament to a watch chain or the like.

The foregoing and other objects, together with their attendant advantages, will be apparent as the invention becomes better understood by reference to the accompanying specification and drawings forming a part thereof, it being premised that changes may be made in the various details and the manner of operation within the scope of the appended claims without departing from the spirit of the invention.

Figure 1 is a side view of one form of my invention.

Figure 2 is a sectional view on the line II—II of Figure 1.

Figure 3 is a sectional view of one half of the casing.

Figure 4 is a view corresponding to Figure 1 of a slightly modified form of my invention.

Figure 5 is a side view of one of the indicia carrying members.

Figure 6 is a side view of still another form of my invention.

Figure 7 is a cross-sectional view on the line VII—VII of Figure 6.

Figure 8 is a side view of the back of the invention illustrated in Figure 6.

Figure 9 is a side view of the indicia carrying member adapted for use with the form of invention illustrated in Figures 6, 7 and 8.

Figures 10, 11 and 12 are detail views of the parts constituting the form of invention illustrated in Figures 6 to 8.

Figure 13 is a side view of a further modification.

Figure 14 is a cross-sectional view on the line XIV—XIV of Figure 13.

Figure 15 is an edge view of still another form.

Figure 16 illustrates a method of assembling the portions of the casing for bringing the reading openings out of alignment.

Figure 17 is a side view of a still further modified form of my invention.

Figure 18 is a sectional view on the line XVIII—XVIII of Figure 17.

Figure 19 is a side view and Figure 20 is a cross-sectional view on the line XX—XX of Figure 19 illustrating a different embodiment of my invention, and

Figure 21 is a side view of one of the indicia carrying members formed without a central opening.

The present invention is adapted to provide in compact form a memoranda, information or reference device which may be used for supplying any desired information, and which may be constructed of material in such form that it is readily inserted in the pocket or in the hand of the person desiring to use the same. I am aware that it has heretofore been proposed to construct various types of pocket indicators or calculators comprising a rotatable indicia carrying

member, but so far as I am aware such devices have never been provided with a readily removable and renewable disk member, or with means co-operating therewith for indicating in the manner of the present invention the registry of the respective parts.

By the use of the present invention, a speaker may deviate at will from a set course without fear of omitting some important feature, and the strain, produced where subject titles must be memorized, is eliminated. In like manner, it is adapted for use by any one requiring condensed, tabulated or scheduled information of various kinds on widely different subjects.

Referring more particularly to the drawings, I have illustrated in Figures 1, 2 and 3 one form of my invention as comprising a protective casing 2 of generally circular form constructed either of a base or ornamental metal as may be desired. Portions of the opposite sides of the casing 2 are preferably cut away to provide reading openings 4 for an indicia carrying disk 5 mounted within the casing and provided with a central opening 6 engaging the boss 7 formed on one side of the casing. To permit the ready insertion and withdrawal of the indicia carrying disk for renewing the same or substituting a new disk as may be desired, the casing may be constructed, as shown in Figure 3, so that the edge walls 8 only extend to a position slightly above the center line of the casing. A portion of the sides of the casing may be pressed inwardly, as shown most clearly in Figure 2, for cooperating with the boss 7 to hold the indicia carrying disk in position within the casing. I may construct the disk 5 of metal, celluloid paper or the like, according to the particular use to which the device is to be placed.

In some cases it may be desirable to use a transparent disk so that light will shine therethrough for advertising purposes, or to facilitate reading the indicia thereon. In still other instances the indicia may be applied by the use of luminous paint, and either white or colored backgrounds may be used, the specific arrangement being capable of a variety of different embodiments and uses.

In Figures 4 and 5 I have illustrated a slightly different form of construction in which the casing 2^a is provided with a depending finger or projection 9 adapted to cooperate with grooves or ribs 10 formed on the indicia carrying member 5^a. By reason of this construction it may be readily determined when the disk is in proper alignment with the reading opening.

For protecting the edge of the disk and preventing the same from becoming mutilated, I may in some instances desire to provide the same with a supplemental ring 11 having a projection 11^a adapted to engage a correspondingly shaped depression 12 formed in the periphery of the disk 5^b. With this construction the opposite sides of the casing are preferably held together by means of a bayonet slot connection or the like illustrated as comprising a pocket 14 formed on one of the sides, and a projecting boss 15 formed on the opposite side. The pocket is preferably provided with cam groove openings 16 for the reception of the locking lugs 17 of the opposite member. Due to this construction the sides may be assembled in such manner that the reading openings 4^a may be brought either into or out of alignment as may be desired.

In Figures 13 and 14 I have illustrated a slightly modified form of the invention disclosed in Figures 1 to 3, and comprising a casing 2^b having a reading opening 4^b provided with a protecting flange 18. With this construction the disk is inserted through the opposite side of the casing, a portion 19 of which may be cut away to facilitate rotation thereof. The disk may be provided with projections or depressions 20 engaging with a correspondingly shaped depression or projection 21 formed in the casing for the purposes already described.

Where the size of the device is such that all of the information cannot be contained on one disk, I may provide the device with a plurality of disks 22, as indicated in Figures 15 and 16, adapted to be contained within any suitable casing. Each of the disks will necessarily be provided with an opening 24 to permit the reading matter contained on the back of the disk co-operating therewith to be read.

In Figures 17 and 18 there is disclosed another form of my invention utilizing a plurality of disks 25 within a casing 26 having reading openings 27 suitably formed in the opposite sides thereof, and provided with cutaway portions 28 facilitating rotation of the disks. An intermediate partition member 29 may be formed between the sides of the casing, having a centrally enlarged portion 30 forming bosses co-operating with openings 31 in the disks for frictionally retaining the same in rotatable position within the casing. This intermediate partition member is also preferably provided with a reading opening 29^a permitting the reading of the indicia on the backs of the respective disks through the openings 24 formed therein, as described in connection with Figure 16.

The casing 26^a of Figures 19 and 20, provided with a reading opening 27^a in each side thereof, may be provided with depressions 30^a adapted to co-operate with similarly formed recesses 32 in the central partition member 34 for frictionally retaining the disks 25^a in position. It will be understood that with the construction just described, the recesses and projections may be

so formed that the disks may be frictionally held in position therebetween without the necessity of providing openings centrally therein. In Figure 21 I have illustrated a disk 25^b constructed in this manner.

With any of the forms of invention described, I may provide an attaching ring or bracket 35 facilitating the carrying or supporting of the device in any position.

While I have illustrated several different embodiments of my invention herein, it will be understood that the various types of casings and disks may be to a large extent interchanged, thereby providing a large number of uses for the same.

Certain forms of the invention shown herein are illustrated and claimed in my copending application filed March 11, 1922.

It will be understood that if desired, the casing may be provided with indicia of suitable type adapted to cooperate with indicia on the disk, and that the indicia may be changed at will according to the use to which the invention is to be placed.

I claim:

1. As an article of manufacture, a protective casing, having a reading opening therein and a freely rotatable indicia carrying member removably held therein in reading relation with said reading opening, substantially as described.

2. As an article of manufacture, a protective casing having a reading opening therein, and a rotatable indicia carrying member held therein in reading relation with said reading opening entirely by friction, substantially as described.

3. As an article of manufacture, a protective casing having at least one reading opening therein, a boss formed on one portion of said casing, and an indicia disk having an opening frictionally engaging said boss and rotatable therearound in reading relation with said opening, said disk being held within said casing entirely by said frictional engagement, substantially as described.

4. As an article of manufacture, a protective casing comprising side and edge walls, one of said side walls having a reading opening therein, and a rotatable indicia carrying member in said casing in reading relation with said opening, said edge walls terminating at opposite sides of the casing to form an opening through which said disk is removable, substantially as described.

5. As an article of manufacture, a casing, a partition in said casing, said casing having a plurality of reading openings therein, and indicia disks frictionally held within said casing on opposite sides of said partition, said disks being rotatably mounted with respect to said reading openings, substantially as described.

6. As an article of manufacture, a casing, a partition in said casing provided with a reading opening, said casing having a plurality of reading openings therein, and indicia disks frictionally held within said casing on opposite sides of said partition, said disks being rotatable with respect to said reading openings, substantially as described.

7. As an article of manufacture, a protective casing having a reading opening therein, and a plurality of freely rotatable indicia carrying members removably held therein in reading relation with said reading opening entirely by friction, substantially as described.

8. As an article of manufacture, a protective casing having at least one reading opening therein, a boss formed on one portion of said casing and extending partially thereacross, and an indicia disk frictionally engaging said boss and rotatable in the casing in reading relation with said opening, said disk being held within the casing entirely by said frictional engagement, substantially as described.

9. As an article of manufacture, a one piece protective casing having a reading opening therein, and a freely rotatable indicia carrying member removably held therein in reading relation with said opening, substantially as described.

10. As an article of manufacture, a protective casing having a reading opening therein, and a freely rotatable indicia carrying member removably held in said casing in reading relation with said opening and adapted to be sprung into and out of said casing, substantially as described.

In testimony whereof, I have hereunto set my hand.

JESSE C. CRAWFORD.