July 20, 1937. W. N. LOWE 2,087,518

FILING AND INDEXING DEVICE

Filed May 8, 1936

Fig. 2

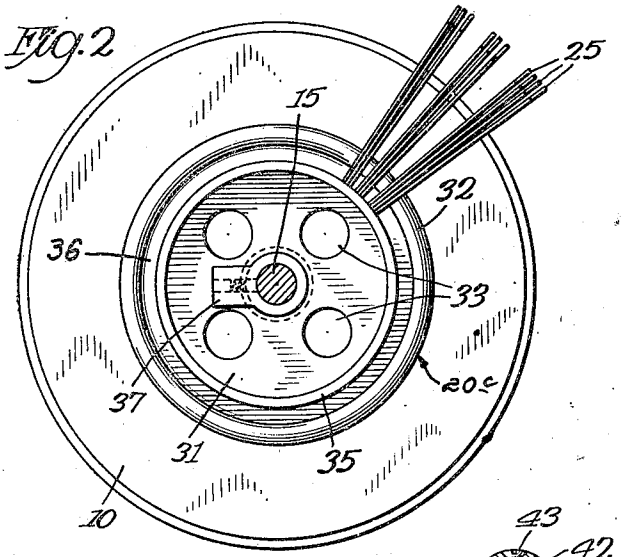


Fig. 3

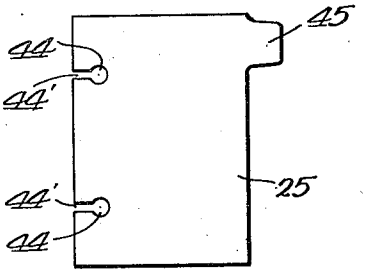
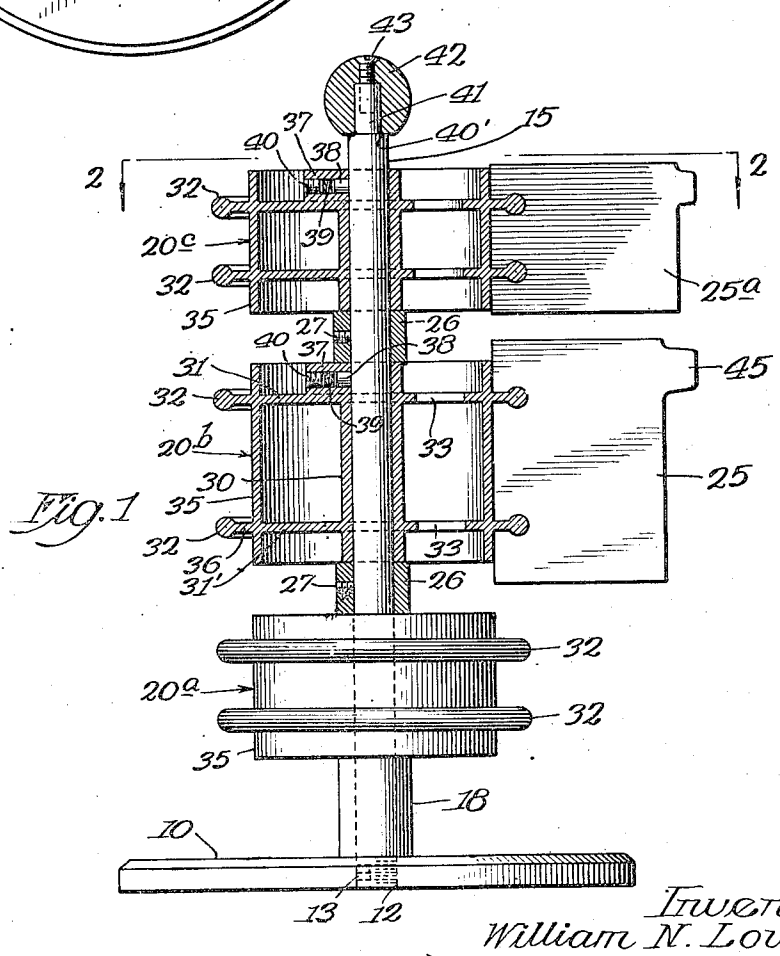


Fig. 1



Inventor:
William N. Lowe
By Frank H. Marks, Atty.

Patented July 20, 1937

2,087,518

UNITED STATES PATENT OFFICE

2,087,518

FILING AND INDEXING DEVICE

William N. Lowe, River Forest, Ill.

Application May 8, 1936, Serial No. 78,608

7 Claims. (Cl. 129—16)

My invention relates broadly to office equipment and has to do more particularly with a device which is especially suitable for the filing and indexing of information.

An object of my invention is to provide a device of the type referred to which will be simple in construction, rugged, inexpensive to fabricate, and which will make available in compact and readily accessible form a large amount of data.

Various other objects and advantages will no doubt suggest themselves to those skilled in the art as the description proceeds.

Referring now to the drawing illustrating a preferred embodiment of my invention:

Fig. 1 is an axial sectional view, partly in elevation, of a device embodying my invention;

Fig. 2 is a plan section taken substantially along the line 2—2 of Fig. 1; and

Fig. 3 is a plan view of a data card or slip which may be used in connection with my invention.

The numeral 10 represents a base which may be in disc form, which may be formed of metal or other suitable material, and having a central threaded bore 12 seating a threaded portion 13 of a post 15. Arranged on the post 15 above the base 10 is a collar 18, which may be loose or secured by a stud (not shown), if desired.

Rotatably arranged on the post 15 in spaced relation is one or a plurality of drum-like rotary members 20*a*, 20*b*, and 20*c* for carrying cards or sheets 25, 25*a*, adapted to bear data or information. The rotary members may be of the same width or of different widths, depending upon the uses to which the device is to be put. As shown in Fig. 1, the device may be intended to carry cards 25, 25*a* of different sizes for different types of information, and hence the drum-like members will, in such cases, be of different widths. The diameters of the rotary members are preferably the same, as shown, although not necessarily so, and said members are spaced from each other by means of sleeves 26, which may be locked to the shaft 15 by set screws 27.

The rotary members each comprise a cylindrical bearing portion 30 and a pair of spaced flanges or disc portions 31, 31', said discs terminating in peripheral bosses 32 which may be in the form of a torus, as shown in Fig. 1. The discs 31, 31' may have a plurality of perforations as at 33 in order to reduce weight. The discs 31, 31' are connected by a cylindrical member 35 spaced inwardly of the bosses 32 and forming a wall for snugly seating the data bearing members, and defining annular portions 36 in the discs 31, 31'.

The bearing portions 30 of the rotary members have bosses 37 formed thereon each of which are diametrically bored to receive a slidable braking plug 38 which is retained by means of a coil spring 39 secured by a set screw 40. By the frictional bearing of these plugs 38 on the post 15, rotation of the members 20*a*, 20*b* and 20*c* is slowed down.

Any number of rotary members may be arranged on the shaft, according to the requirements, and as stated above, said rotary members may be of any suitable length and diameter. The post 15 preferably extends a slight distance above the uppermost rotary member as at 40 and disposed thereabove the post 15 is reduced, as at 41 to seat a knob 42 secured by a screw 43 or the like. The knob 42 gives the device a neat and attractive finish, and at the same time serves conventionally as a handle whereby the entire device may be lifted.

Various types of information bearing elements may be used in connection with the device just described. Referring to Fig. 3, which shows one form of element which has been found convenient, the element 25 comprises a rectangular sheet member, such as a paper card of substantial stiffness, having a pair of circular perforations 44 arranged in spaced relation to each other and spaced from a marginal edge of the card, with which edge said perforations are connected by means of slots 44'. It will be understood, of course, that the perforations 44 and slots 44' are of a size and shape corresponding to the torus shaped bosses 32 and the annular portions 36 of discs 31, 31'. Preferably integral with the card 25 is a "thumb index" tab or ear 45 on the side opposite the perforations for bearing information which is a key or index to that carried by the main body portion of the card 25. It will be readily understood that the ear 45 is spaced longitudinally of the card in such a way that the ears of adjacent cards are simultaneously visible.

It is believed that the operation of the device will be quite obvious from the above description. It will be seen that devices embodying my invention may be very quickly assembled with a minimum of labor. The information bearing cards 25 are quickly secured to the rotary members merely by slipping slots 44' over the bosses 32 and frictionally engaging the perforations 44 with said bosses, and said cards are readily disengaged merely by exerting a slight pressure on the card in a direction outwardly of the rotary members. The rotary members are capable of

holding an extremely large number of cards and, by having a plurality of rotary members on the same staff, the information may be readily classified into different groups. By extending the length of the staff or post **15** a considerable number of classifications of information may be used, employing a separate rotary member for each classification. When information is desired, it may be readily obtained by simple rotation of the proper rotary member, the friction plugs **38** serving slightly to retard the rotation of said members so that they will not spin about the post while at the same time said rotary members are free to rotate without the application of any substantial effort.

An advantage of my invention is that the number and arrangement of drums **20***a*, **20***b*, and **20***c*, may readily be modified to suit changes in needs. Without the use of any tools except, possibly, a screw driver, the drums and spacing sleeves may be removed and replaced with others of different size.

I am aware that drum shaped devices on a horizontal axis, for carrying data bearing cards, have been heretofore suggested. I have found that many advantages accrue from arranging such devices on a vertical axis. For example, with a vertical axis, the drums rotate very easily and may be stopped at any point for inspection with a minimum of effort, whereas, with a horizontal axis drum, the cards naturally tend to collect at the bottom and rotation, therefore, has to be against gravity, requiring additional effort.

Numerous other advantages will be found incident to my improved construction.

Various modifications and improvements coming within the spirit of my invention may suggest themselves to those skilled in the art, and hence I do not wish to be limited to the specific form shown or uses mentioned, except to the extent indicated by the appended claims, which are to be interpreted as broadly as the state of the art will permit.

I claim:

1. In a device of the class described and in combination, a vertical post constituting a bearing, a member arranged for rotation thereon having a peripheral boss thereon, and a sheet for bearing information carried by said rotary member and having a perforation comprising a portion of enlarged cross section engaging said boss and a portion of restricted cross section through which the enlarged portion communicates with the edge of the sheet to permit removal of the sheet from the boss, and means to prevent twisting about a horizontal axis in the plane of the sheet.

2. In a device of the class described and in combination, a base member, a vertical post secured thereto, and a rotary member mounted on said post and having a plurality of peripheral spaced bosses adapted to engage and carry a sheet for bearing information.

3. In a device of the class described and in combination, a base member having a vertical post secured thereto, a plurality of rotary members mounted on said post, sleeves also mounted on said post for spacing said rotary members, said rotary members each having a plurality of spaced peripheral bosses, adapted to engage and carry a sheet for bearing information.

4. In a device of the class described and in combination, a base member having a vertical post secured thereto, a rotary member mounted on said post, said rotary member having a plurality of spaced peripheral torus shaped members adapted to engage and carry a sheet for bearing information.

5. In a device of the class described and in combination, a base member having a vertical post secured thereto, a drum rotatably mounted on said post, said drum having a cylindrical wall and a plurality of spaced annular members extending outwardly of said wall and terminating in torus shaped bosses, and a sheet for bearing information having perforations therein corresponding to said bosses, said perforations engaging the bosses and the adjacent edge of said sheet engaging said wall.

6. In a device of the class described and in combination, a base member, a vertical bearing post carried thereby, a plurality of rotary members detachably mounted on said post, a detachable spacing ring arranged on said post between adjacent rotary members, said rotary members each having a plurality of spaced peripheral bosses adapted to engage and carry a sheet for bearing information.

7. In a device of the class described and in combination, a base member, a vertical bearing post carried thereby, a plurality of rotary members detachably mounted on said post, a detachable spacing ring arranged on said post between adjacent rotary members, said rotary members each having a plurality of spaced peripheral torus shaped members adapted to engage and carry a sheet for bearing information.

WILLIAM N. LOWE.