

[72] Inventor **Dorothy B. Lucas**
 2279 17th Ave., San Francisco, California
 94116
 [21] Appl. No. **730,074**
 [22] Filed **May 17, 1968**
 [45] Patented **Oct. 27, 1970**

3,023,602 3/1962 Foote et al. 70/445
 Primary Examiner—Reinaldo P. Machado
 Attorney—Clarence A. O'Brien and Harvey B. Jacobson

[54] **BRILLE FINDER**
 3 Claims, 3 Drawing Figs.

[52] U.S. Cl. 109/1;
 35/35.1; 70/445; 109/23, 109/64

[51] Int. Cl. E05b 1/00

[50] Field of Search 109/23, 64,
 1; 70/445, 431, 446; 35/35.1, 39, 38

[56] **References Cited**
UNITED STATES PATENTS
 2,091,146 8/1937 Hamilton 35/35.1

ABSTRACT: A Braille finder for use in conjunction with a manually movable part such, for example, a knob-equipped dial on a combination lock, a typewriter platen, a spindle or shaft with a calibrated wheel, knob or the like. It comprises a compatible adaptation in an environment which can be lined up with a stationary index or reference point. It is applied to the turnable surface of the knob or analogous part. This surface is provided with Braille characters which can be selectively lined up with the index, whereby the location of the characters can be reckoned in a step-by-step manner until the contemplated result is achieved.

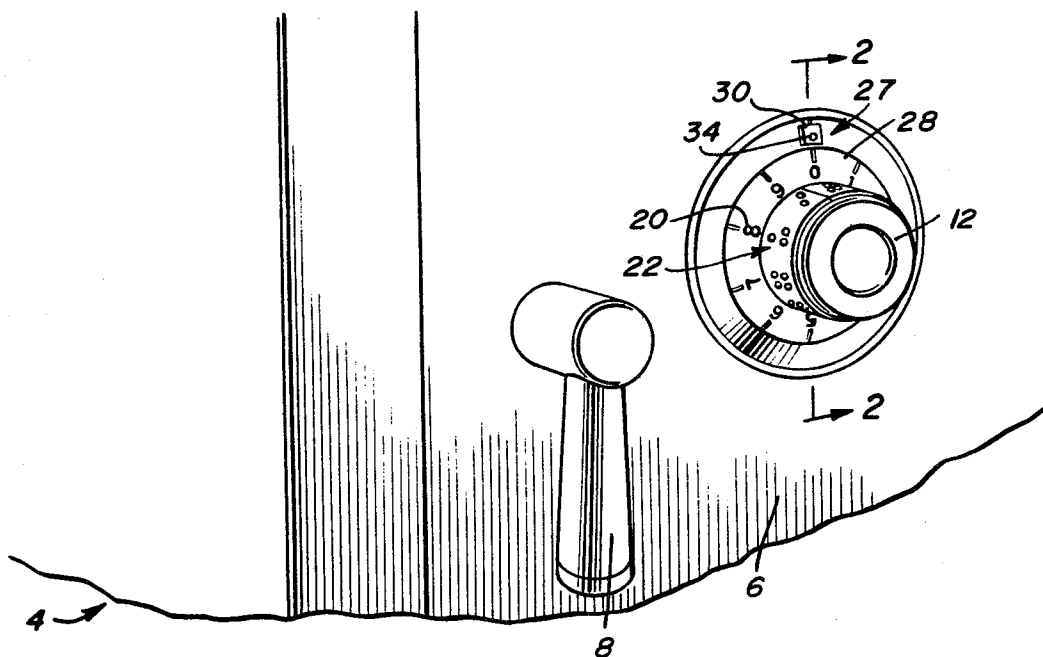


Fig. 1

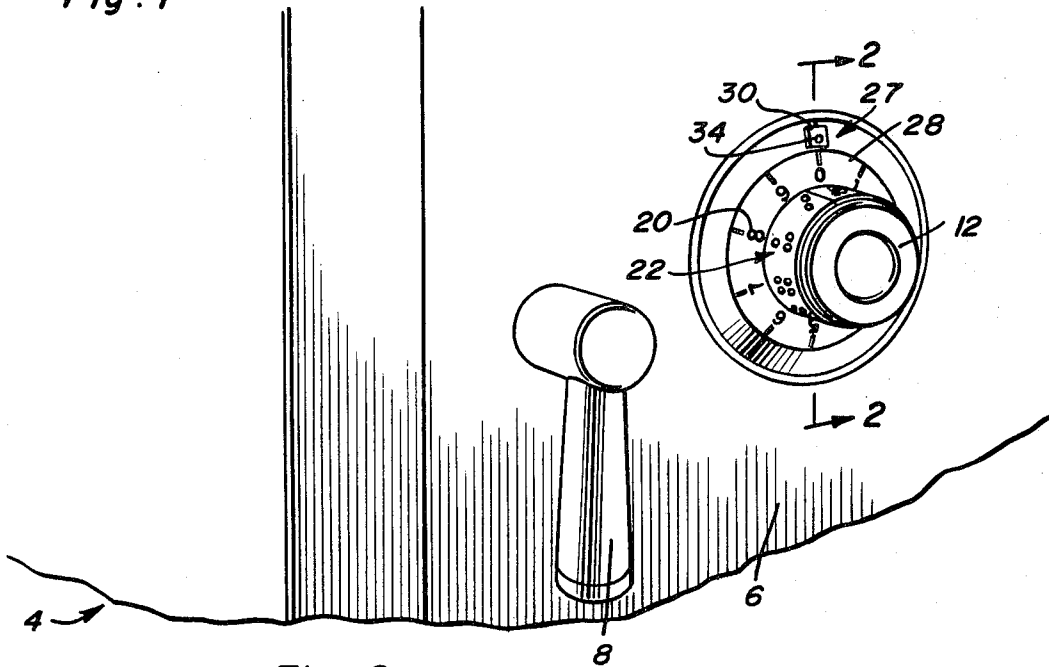


Fig. 2

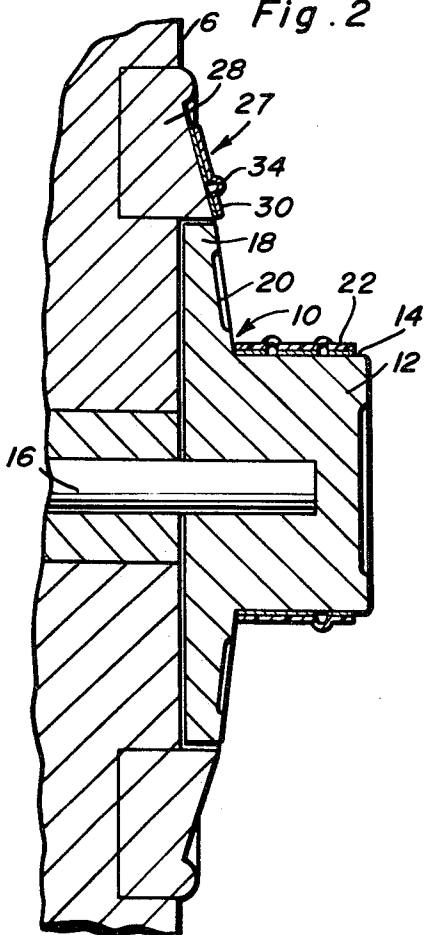
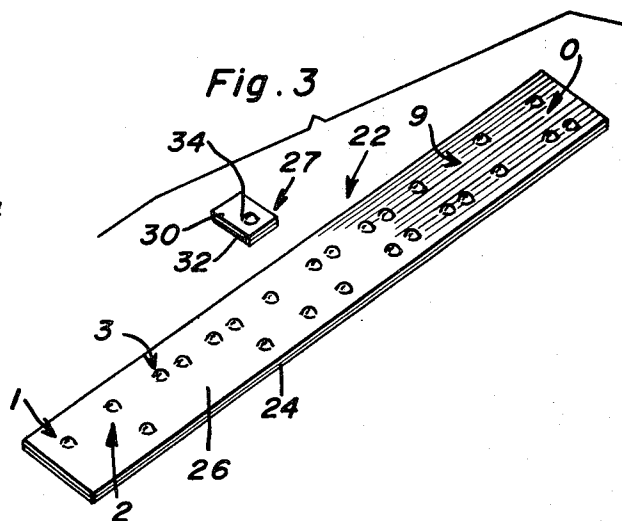


Fig. 3



Dorothy B. Lucas
INVENTOR.

BY *Almae A. Brown*
and *Harvey B. Jacobson*
Attorneys

BRAILLE FINDER

This invention relates to that field of endeavor which has to do with assisting and acceptably aiding visually handicapped or blind persons who are called upon to cope with difficulties such as opening a calibrated combination lock on a safe, operating a typewriter, or coping with footage meter knobs and dials on tape recorders and the like and pertains to a Braille finder capable of compatible use in conjunction with the component parts that have to be caught hold of and controllably actuated.

More specifically, the Braille finder herein disclosed lends itself to feasible cooperative use on a suitable moving part such as, for example, a knob and dial-equipped lock cylinder, typewriter platen knobs, a shaft, a wheel thereon or the like. It can be of different sizes in keeping with the available surface of the part involved and the Braille characters or symbols will be closer together or farther apart contingent on the needs at hand. As may be required the herein disclosed invention can be built into the grippable surface of the knob or other part or, alternatively, made of pliable strip material which has been suitably embossed or indented and bonded or otherwise appropriately attached to the surface which is to be converted to meet the needs of the user.

It is to be pointed out at the inception that the inventive concept lends itself to widespread adaptable use. However, and to simplify the instant presentation only several embodiments of the generic concept will be specifically touched upon.

Briefly, and in the case of a revolving cylinder such as is embodied in a combination lock as shown, the unique Braille finder means encircles and is provided around the rotating knob. The Braille figures, symbols or characters are so spaced as to correspond with the Arabic numbers on the lock's dial. To the ends desired the user must have a reference point or index (as does a sighted person) to assist in lining up the numbers needed for the combination required to open the lock. The reference point herein employed is represented by a single embossed stationary bead or equivalent indentation which corresponds to the customary black line used by sighted persons to line up numbers on a conventional-type combination lock. This bead is located on the outer annulus or rim of the lock at a point corresponding to the position of the number 12 on the dial of a clock. This bead or indentation is used as a permanent telltale indicator or index and enables the user to line up the desired numbers therewith.

In the case of a typewriter (not shown) the Braille finder is associated with the knob or knobs at the respective ends of the turnable platen for coaction with the line gauge (Underwood portable) or line meter or page end indicator (Royal standard). The turning knobs can be used herein regardless of what the means may be called by different manufacturers of typewriters. When the paper is inserted in the typewriter and lined up, the zero mark on the Braille finder should correspond to the top of the paper. As the visually handicapped person types she feels the amount of paper which has been used and then by feeling the number on the Braille finder she can determine how close to the bottom of the page she is. Since each typewriter is different and the type varies, the visually handicapped person has to determine by experiment which of the numbers on the Braille finder should be used as an indicator for determining how close she is to the bottom of the page.

In the case of a tape recorder, the Braille finder is placed around each footage indicator in such a way that the Braille finders or symbols correspond to the Arabic numbers already on the footage meter.

In the place of the Arabic footage meter which is standard equipment on commercial and noncommercial tape recorders, a band of metal, plastic, or any other suitable material that will adapt to raised Braille dots, can be used and attached to the cylindrical wheels upon which the Arabic numerals are ordinarily mounted. Or, if the tolerance leaves sufficient space between the outer plate or shell of the tape recorder chassis,

the Braille finder can be attached directly over, and to the already existing Arabic footage meter. Naturally the Braille finder will have to be placed on the tape recorder where the Braille symbols can be felt by the blind person using the tape recorder.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a view in perspective showing a fragmentary portion of a safe and showing, what is more important, a knob-equipped dial-type combination lock and wherein the aforementioned reference index is shown in association with the band-type Braille finder encircling the periphery of the knob.

FIG. 2 is an enlarged view with parts in section and elevation taken approximately on the plane of the vertical section line 2-2 of FIG. 1.

And FIG. 3 is a view in perspective of a simple embodiment of the overall concept showing the band-type finder and the tab-type indicator.

By way of introduction to the description of the details it is to be set forth that the overall concept is believed to be evident from that embodiment which is herein illustrated in FIGS. 1, 2 and 3 and the disclosure is to be construed accordingly.

With reference now to FIG. 1 the numeral 4 designates a safe and 6 a door having handle means 8. With reference in particular to FIGS. 1 and 2 in association with each other it will be noted that the aforementioned movable or turnable component part is generally denoted by the numeral 10 and is characterized by a knob 12 having a peripheral gripping surface 14. This knob 14 is mounted on a spindle or axle 16 which is rotatably mounted in a manner to transmit motion to the lock mechanism (not shown). The flangelike dial is denoted at 18 and has its face provided, as usual, with Arabic numbers 1 to 10, alternatively, 0 to 9, as shown. These numbers are herein designated (FIG. 2) by the numeral 20. In actual practice the knob's peripheral surface 14 is milled or knurled (not detailed). In carrying out the underlying principles of the overall concept, and as is believed to be evident, it is the surface 14 which is modified to achieve the improved result desired. While it is within the purview of this invention to incorporate the desired indicia, Braille characters or symbols, directly on or in the stated surface 14, the present disclosure is directed, more specifically, to a pliable plastic strip or band 22 of requisite length and width. This band is secured to and accessibly encircles the surface 14. It can be attached by bonding in any feasible manner. However it is here shown as provided with a film or ply of pressure sensitive adhesive material 24 which is applied in the manner shown in FIG. 2. The grippable surface of the strip 22 (band or tape) is designated by the numeral 26 and is provided with embossed (indented if desired) symbols beginning with "1" at the left in FIG. 3 and terminating with "0" at the right. The intervening symbols represent 2, 3 and so on up to 9 in the manner shown. When the strip or band is applied in the manner illustrated in FIG. 1, the Braille symbols are aligned and correspond with the aforementioned Arabic numbers 20 on the dial or flange 18.

As already mentioned, a reference or starting point 27 is provided on the embedded annulus 28. This member takes the place of the usual index line (not detailed). To the ends desired, a simple plastic tab 30 is provided and is adhesively or otherwise anchored as at 32 and the "0" on the dial 18 is registered therewith, as illustrated in FIG. 1. The Braille symbols or starting bead is denoted significantly at 34 in a manner to serve the purposes, evident it is believed, from the views of the drawing.

As is evident, the Braille finder herein comprehended may be attached to a cylinder, platen, spindle, wheel or an equivalent moving part in keeping with the size of the moving

part involved. Also, this Braille finder may be of different sizes according to the object to which it is attached and the Braille symbols are relative in position and may be closer together or farther apart as conditions may require. One adaptation may require the Braille symbols to be one-fourth inch apart and another an inch apart and so on. Where the Braille symbols are more than one simple figure as in the case of dual dots, the Arabic numbers should correspond with the first of the dual dots.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

I claim:

1. A door having a combination lock embodying a rotatably mounted spindle having an outer terminal end, spindle turning means embodying a knob accessibly fixed on said terminal end, said knob having a companion dial whose face is provided with circumferentially spaced consecutive Arabic numbers ranging, for example, from 1 to 10, a door-mounted stationary annulus encompassing the marginal edge of said dial and provided with an accessible easy-to-feel Braille-type orientation index providing a stationary reference point for a visually handicapped or a blind user, said knob having a peripheral surface capable of being gripped and turned by the user, said surface having means whereby the user can turn the knob and dial at will in a manner to find and line up selected characters with said index for the predetermined combination necessary to open said lock, said means comprising a strip of material encompassing and attached to said peripheral surface, said strip of material having Braille characters thereon suitable for the purposes desired.

2. The structure defined in an according to claim 1, and wherein said strip is made of pliable plastic material and is per-

manently attached to said peripheral surface, said Braille characters being proportional in size and circumferentially spaced and other wise arranged to coordinate with corresponding numbers on said dial.

3. In combination, a relatively stationary body part having a readily accessible exterior surface, said part being provided with a rotatably mounted operating spindle having an outer end portion projecting but terminating in a position slightly beyond the plane of said exterior surface, a manually actuatable knob having a hub portion axially fixed on said outer end portion, said hub portion having an endless annular peripheral surface which is adapted to be caught hold of and progressively controllably turned either clockwise or counterclockwise at will, said knob also having a complemental outstanding annular flange having an exterior surface provided with equidistant circumferentially spaced consecutively arranged Arabic numbers ranging, for example, from 0 to 9, and providing a selectively usable dial, a ringlike dial-setting annulus fixed on said exterior surface and encircling and coacting with a coordinating marginal edge of said flange and provided with an accessible easy-to-feel Braille-type finger-orienting index constituting a predetermined stationary reference point susceptible of convenient use by a visually handicapped or a blind user, said dialing numbers being selectively registrable with said Braille-type reference point, said peripheral surface being provided with discriminating Braille characters which are circumferentially spaced and are useably arranged so that they cooperatively correspond with the Arabic numbers on said dial, whereby at least one Braille character at a time can be registered with said reference point to achieve a desired dialing and telltale result, said Braille characters being embossed and presented for use on a surface of a strip of plastic material which is wrapped around and securely fastened to said peripheral surface, said characters being proportional in size with said numbers and precisely spaced in a manner to orient and coordinate with corresponding numbers on said dial.

40

45

50

55

60

65

70

75