Oct. 20, 1925. 1,558,376

L. R. LEWIS ET AL

CARD INDEX FILE.

Filed Jan. 30, 1924 2 Sheets-Sheet 1

Fig. 1.

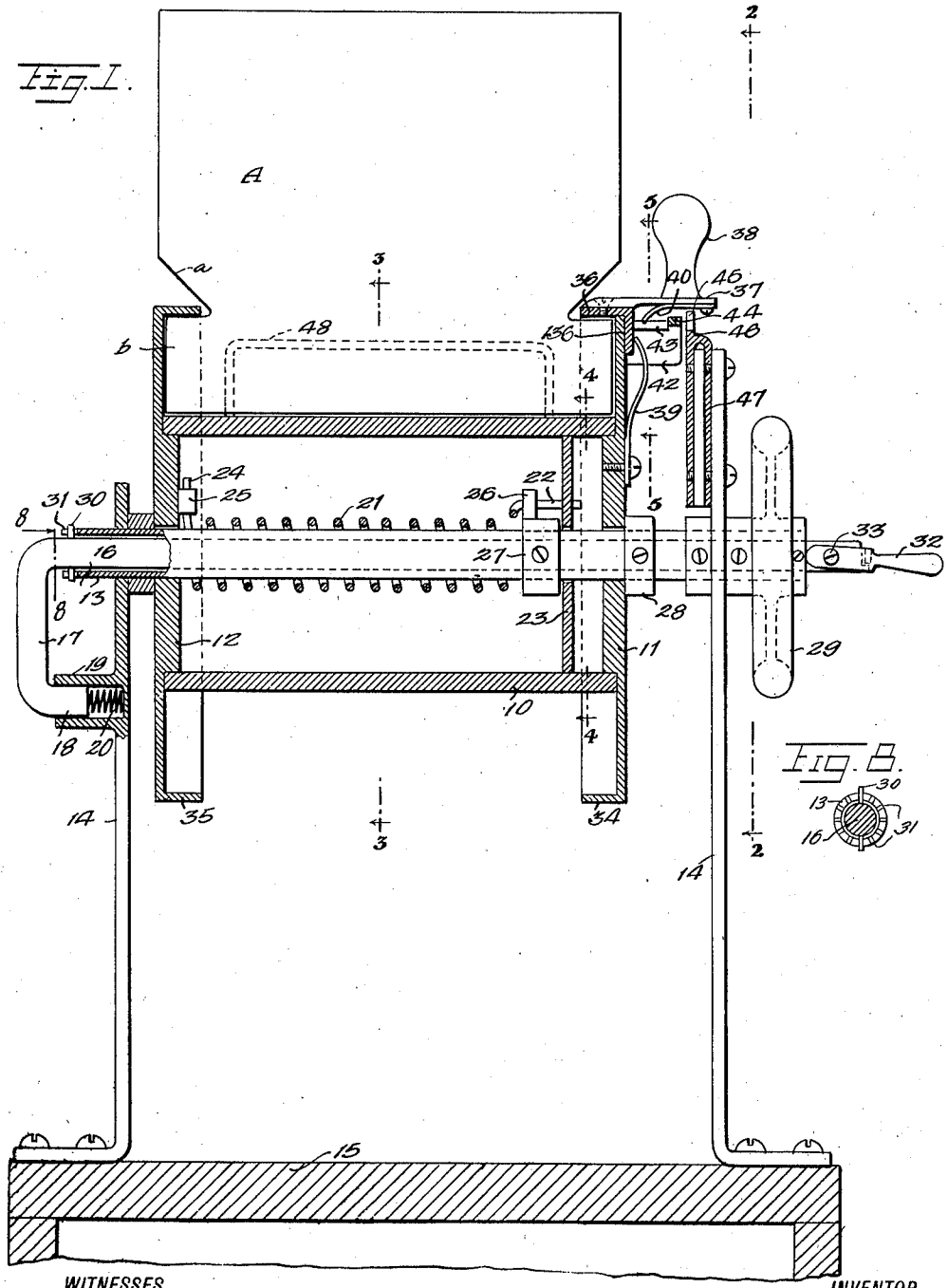


Fig. 8.

WITNESSES

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Fig. 2.

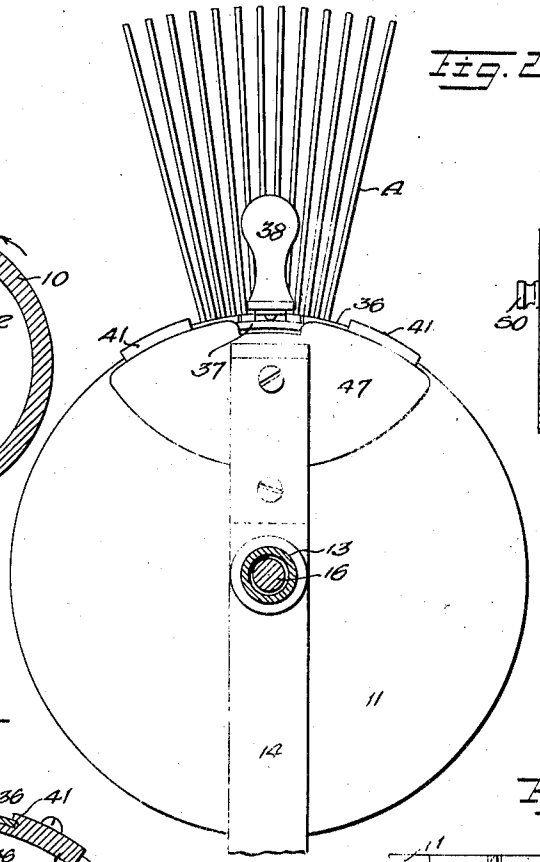


Fig. 4.

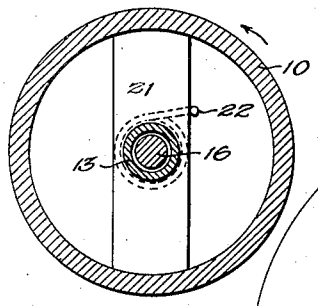


Fig. 6.

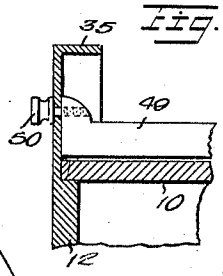


Fig. 5.

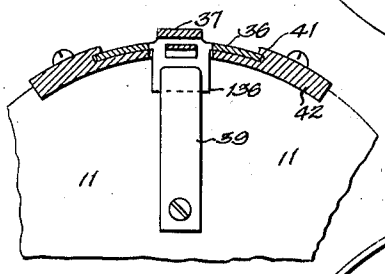


Fig. 7.

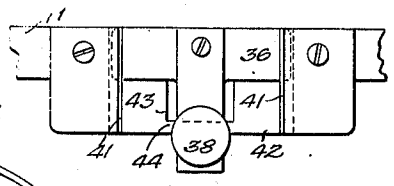
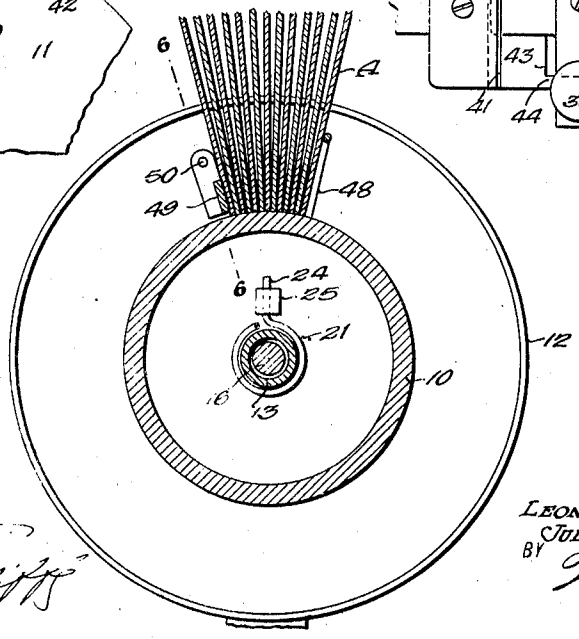


Fig. 3.



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UNITED STATES PATENT OFFICE.

LEON RAY LEWIS AND JULIUS J. COLVIN, OF HUDSON FALLS, NEW YORK.

CARD-INDEX FILE.

Application filed January 30, 1924. Serial No. 689,494.

To all whom it may concern:

Be it known that we, LEON RAY LEWIS and JULIUS J. COLVIN, citizens of the United States of America, and residents of Hudson Falls, in the county of Washington and State of New York, have invented a new and Improved Card-Index File, of which the following is a description.

Our invention relates to a card index file and particularly to an index so constructed and arranged that the cards will be held and disposed radially or approximately so about a drum.

The general object of our invention is to provide a card index file in which the cards are arranged in a manner to be readily accessible and available.

A further important object of the invention is to provide for the ready insertion and removal of cards as required and to provide an embodiment of the invention reflecting practical considerations with respect to simplicity and characterized by the maximum convenience of operation.

The nature of the invention and its distinguishing features and advantages will clearly appear as the description proceeds.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a longitudinal vertical section of a card index file constructed in accordance with our invention;

Figures 2, 3, 4 and 5 are vertical sections indicated respectively by the lines 2—2, 3—3, 4—4 and 5—5, Figure 1;

Figure 6 is a fragmentary longitudinal section as indicated by the line 6—6, Figure 3;

Figure 7 is a plan view of a portion of the file adjacent one end showing the movable section provided for the entrance and removal of the cards.

Figure 8 is a detail in cross section on the line 8—8, Figure 1.

In carrying out our invention in accordance with the illustrated example a cylinder or drum 10 is provided, having heads 11, 12 at its ends, said heads being turnable relatively to the drum as hereinafter referred to. A tubular shaft 13 extends through the drum heads 11, 12 and projects at its ends beyond the same, the projecting ends having bearings in standards 14 on a base 15. A solid shaft 16 extends through tubular shaft 13 and at one end is bent at right angles or approximately so as at 17 and then laterally inward as at 18. The inwardly projecting end 18 is received in a socket 19 on the adjacent standard 14 which socket has a coil spring 20 therein normally tending to press against the end 18 and move the shaft 16 axially in the shaft 13.

Spring 21 is coiled about shaft 13 and one end 22 engages against a cross piece or rigid partition 23 in the drum 10. The opposite end 24 of the spring is passed through a lug 25 on the head 12. On the tubular shaft 13 is a collar 27 having a lug 26 lying adjacent to the arm 22 of the spring 21. A set collar 28 is shown on shaft 13 directly adjacent the head 11 to retain said head in position. At the end of the tubular shaft 13 opposite that end adjacent the bends 17, 18 of shaft 16, said shaft 13 is provided with a handwheel 29 and adjacent said handwheel 29 a lever 33 is fulcrumed as at 32 on shaft 16 so as to swing to a position for the end of the lever to engage the hub of wheel 19. That end of the tubular shaft adjacent to that end of the shaft 16 having the bends 17, 18, is provided with diametrically opposite notches 31, and pins 30 are placed diametrically opposite on the shaft 16 to enter said notches when the lever 33 is rocked to cause the end thereof to engage the hub of wheel 29. When the lever 32 is dropped to disengage the wheel 29, spring 20 moves the shaft 16 axially a sufficient distance for the pins 30 to pass out of the notches 31.

The head 11 has a flange 34 directed laterally inward and a flange 35 is provided on the opposite head 12, the flanges being engageable by filing cards A at notches *a* in the latter. A cut-out is provided in the flange 34 of head 11 facilitating entrance and removal of the filing cards A and at the cut-out is provided a movable flange portion 36 of angle shape presenting one member 136 directed radially inward and pressed against the face of the outer head 11 by a plate spring 39. The movable flange portion 36 is on a slide 37 having a suitable handle or finger hold 38. The flange 36 has guided movement beneath keeper members 41 on a curved bracket plate 42 rigid

with the head 11. The bracket plate 42 has a cut-out 43 leaving a bar portion 44 and the slide 37 has a spring catch 40 at the under side adapted to engage said bar portion 44 when the movable flange portion 36 is drawn outwardly away from the cut-out in the flange 34.

When the spring latch 40 is engaged with bar 44 the spring lies in the depression 45 of cam plate 46 on a plate 47 or equivalent device secured to the adjacent standard 14. The cards A are adapted to be disposed between a stop 48 on the drum body 10 and a follower bar 49 secured at one end as by a screw 50 or the like to head 12. Said means of securing one end of bar 49 serves to firmly hold said bar 49 to the movable head 12 to move therewith. Said stop 48 is advantageously in the form of an arched bar and the follower bar 49 lies adjacent to and parallel with the periphery of the drum 10. The cards A are disposed edgewise on the drum 10 with their inner edges contacting with the peripheral surface of said drum and having the portion *b* radially inward of the notches *a* disposed within the flanges 34, 35.

With the above-described construction additional cards may be accommodated at any time between the fixed stop 48 and the follower bar 49 by turning the head 12 against the tension of the spring 21, then placing the cards in position after which the head 12 is released and the tension of the spring 21 permitted to restore the said head 12 so that bar 49 will press against the cards A in the group.

The movable flange portion 36 is provided in order to facilitate the insertion and removal of the cards A without injury. In use, if the card desired should be disposed in a position other than at the top of the drum, the handwheel 29 may be turned to cause the drum with its heads 11 and 12 to turn as a unit, thereby carrying the card desired to the top of the drum, it being understood that the lever 32 is at this time disengaged from the wheel 29 and pins 30 are out of the notches 31. With the desired card brought to the top of the drum, the lever 32 is caused to move the shaft 16 to bring the pins 30 into notches 31 for locking drum 10 against turning. The head 11 is now turned about the axis of the drum and relatively to the drum body 10 to bring the slidable flange portion 36 in proper position relatively to cam plate 46 fixed on standard 14. The slide 37 is then moved outwardly to carry the flange portion 36 away from the adjacent inner portions *b* of the adjacent cards whereby the desired card may be removed and then readily replaced. When the flange 36 is in the outer position the latch 40 on slide 37 will engage the bar 44 and hold said flange portion in the outer position. Now, when drum 10 is turned, the spring latch 40 will be engaged by the fixed cam 46 and said latch will be released from the bar 44 permitting the spring 39 to carry the slide 37 and flange portion 36 inward.

It will be seen that the cards are disposed radially or approximately so on the drum 10 to be readily visible and accessible. The described construction permits of the ready insertion and removal of any desired card and the assemblage is effective for holding the cards firmly in position when not required to be removed.

We would state in conclusion that while the illustrated example constitutes a practical embodiment of our invention, we do not limit ourselves strictly to the exact details herein illustrated, since, manifestly, the same can be considerably varied without departure from the spirit of the invention as defined in the appended claims.

Having thus described our invention, we claim:

1. A card index file including a drum having heads, one of said heads turnable relatively to the drum body, a card engaging means on the drum body, and a movable card-retaining portion on said turnable head and movable by the turning of said turnable head.

2. A card index file including a drum body, a head turnable on said body at one end, a stop on the drum body at the periphery, and a follower carried by said head and movable by the turning of the head toward or from said stop.

3. A card index file including a drum body, a tubular shaft on which said body may turn, a non-rotatable solid shaft extending through the tubular shaft, co-engaging means on the tubular shaft and on the solid shaft to effect an interlock between the shafts, and manually controlled means to cause longitudinal movement of one shaft relatively to the other to effect locking engagement of the shafts or for bringing said co-engaging means into locking engagement.

4. A card index file including a drum body, a tubular shaft on which said body may turn, a non-rotatable solid shaft extending through the tubular shaft, coengaging means on the tubular shaft and on the solid shaft to effect an interlock between the shafts, spring means tending to move the solid shaft for disengaging the interlocking means, and a lever mounted on the solid shaft and adapted to engage a fixed part appurtenant to the tubular shaft for effecting longitudinal movement of the solid shaft for releasing the shafts.

5. A card index file including a drum body, a tubular shaft on which said body may turn, a solid shaft extending through the tubular shaft, coengaging means on the

tubular shaft and on the solid shaft to effect an interlock between the shafts, a handwheel on the tubular shaft for turning the same, means to lock the solid shaft against turning, and a head on the drum body turnable relatively thereto, said head having a movable card-retaining portion.

6. A card index file including a turnable drum adapted to receive index cards, a movable card-retaining portion on said drum, latch means on said movable portion to hold it away from its card-retaining position, and fixed means adapted to release said latch by a turning movement of the drum.

7. A card index file including a drum body, a spring within the body, a head turnable on the body and subject to the said spring to restore the head after a turning movement, a fixed stop on the body to engage index cards, and a follower bar carried by said turnable head and movable with the turning thereof to or from said stop.

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JULIUS JOAB COLVIN.