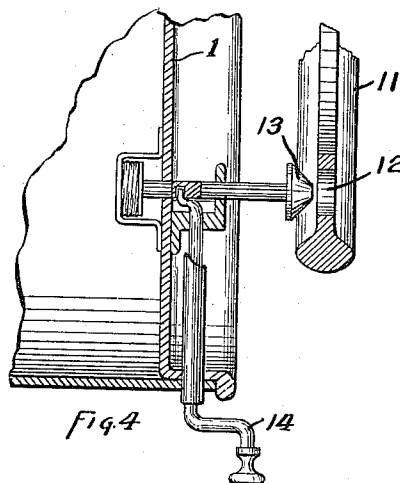
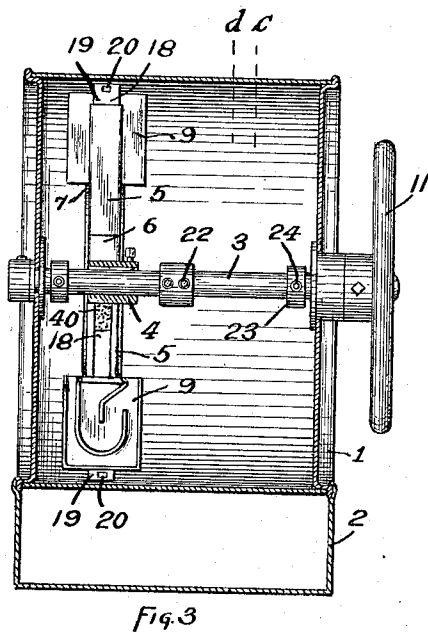
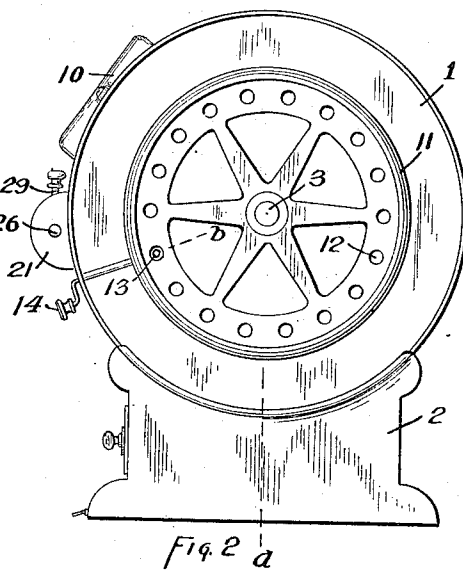
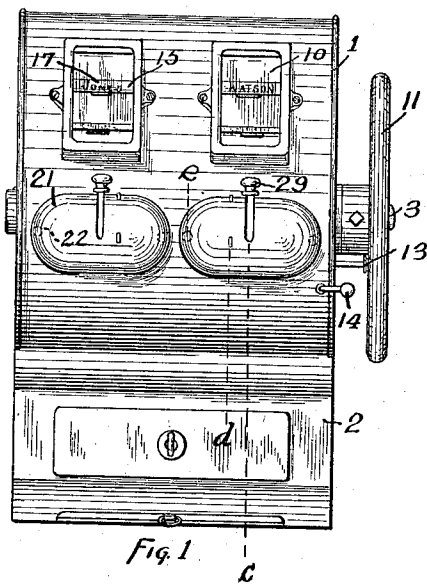


1,195,291.

J. STUBBERS,
ACCOUNT FILE,
APPLICATION FILED JULY 6, 1915.

Patented Aug. 22, 1916.
3 SHEETS—SHEET 1.



Witness:
Geo. Johnson.

Joseph Stubbers.
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3 SHEETS—SHEET 2.

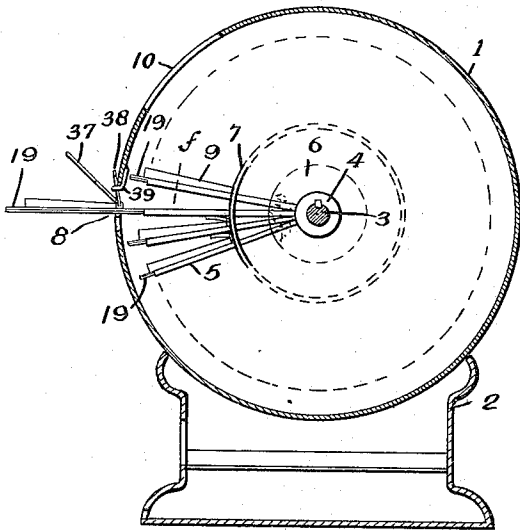


Fig. 5

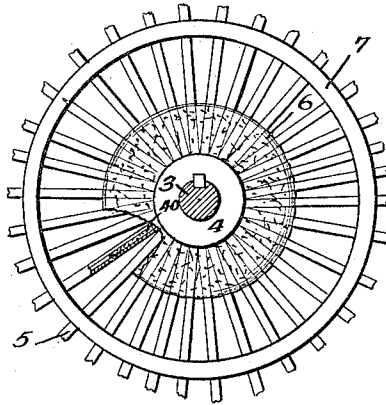


Fig. 6

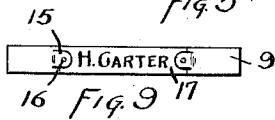


Fig. 9

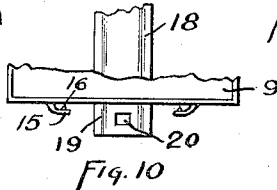


Fig. 10

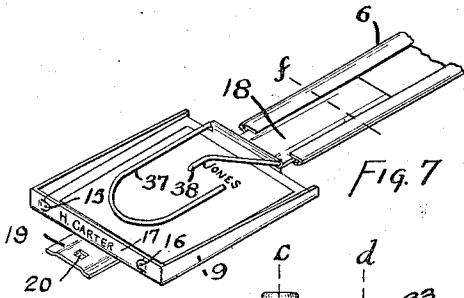


Fig. 7

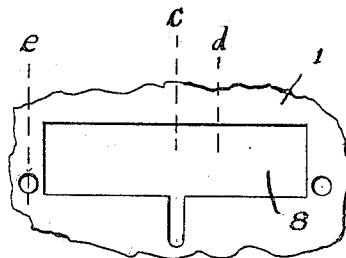


Fig. 11

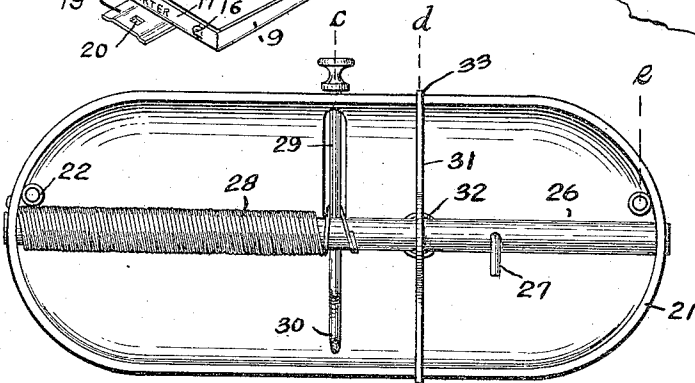


Fig. 8

Witness:

Geo Johnson

Joseph Stubbers

Inventor

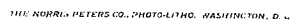
by *James W. S22*

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APPLICATION FILED JULY 6, 1915.

Patented Aug. 22, 1916.

3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

JOSEPH STUBBERS, OF CINCINNATI, OHIO.

ACCOUNT-FILE.

1,195,291.

Specification of Letters Patent.

Patented Aug. 22, 1916.

Application filed July 6, 1915. Serial No. 38,123.

To all whom it may concern:

Be it known that I, JOSEPH STUBBERS, a citizen of the United States, residing at Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Account-Files, of which the following is a specification.

There is frequently employed in modern business, devices for taking care of a number of small accounts, the devices comprising a rotatable wheel disposed within a casing, each spoke of the wheel carrying a tray in which is kept the current account bills pertaining to an individual customer, the rotation of the wheel permitting any one of the trays to be brought to a wicket in the casing so that the tray may be more or less withdrawn from the casing to give access to the particular customer's account bills.

My present invention relates to improvements in this class of account files, the improvements being designed to simplify the construction and to increase the facility with which the various trays of accounts are brought into accessibility.

The improvements will be readily understood from the following description taken in connection with the following drawings, which drawings are on a diversity of scales, illustrating an exemplification of my present improvements.

In account files of the character with which the present invention concerns itself, there may be contained within the same casing several wheels of trays containing individual accounts.

In the drawings I have illustrated a file carrying two account wheels, but as the account wheels are all substantially alike I will confine the description to the singular.

In the drawings:—Figure 1 is a front elevation of the improved account file arranged for two wheels of account trays: Fig. 2 a side elevation of the machine viewed at that end of the casing at which is located the operating wheel: Fig. 3 a vertical section of the casing in the plane of line *a* of Fig. 2: Fig. 4 a diametrical section of the casing in the plane of line *b* of Fig. 2: Fig. 5 a vertical section of the device in the plane of line *c* of Figs. 1, 3, 8 and 11: Fig. 6 an elevation at the central portion of one of the account wheels: Fig. 7 a perspective view of one of the account trays, in conjunction with one of the wheel-spokes with which the tray is telescopically con-

nected: Fig. 8 a rear view of the extractor-hood: Fig. 9 a front view of one of the trays: Fig. 10 a plan of the front portion of one of the trays: Fig. 11 a front view of the casing showing the wicket through which the selected tray is withdrawn outwardly from the wheel: Fig. 12 a section, in the plane of line *c* of Figs. 1, 3, 8 and 11 of one of the spokes in conjunction with its tray and the hood of the extractor with some of its mechanism, this view illustrating the tray in its home position relative to the wheel which carries it: Fig. 13 a similar section illustrating the tray as having been withdrawn from the casing by the extracting mechanism: Fig. 14 a vertical section of the hood of the extractor in the plane of line *d* of Figs. 1, 3, 8 and 11: Fig. 15 a vertical section of the extractor-hood with its guiding mechanism in the plane of line *e* of Figs. 1, 8 and 11: and Fig. 16 a transverse section of one of the wheel spokes in conjunction with the shank of one of the trays, the section being in the plane of line *f* of Figs. 5, 7, 12 and 13.

In the drawings:—1, indicates a drum-shaped casing, preferably of sheet metal: 2, a base having a concave upper surface in which the casing rests and in which it may be angularly adjusted: 3, a shaft journaled axially in the casing and projecting from one end thereof: 4, a hub secured to the shaft, by means of a key or set-screw or both: 5, radial spokes, preferably of the cross-section indicated in Fig. 16, with their inner ends contiguous to the exterior of hub 4: 6, solder disposed in disk form around the hub and between the inner ends of the spoke and unifying the spokes: 7, rings soldered to the sides of the spokes concentric with the shaft and outwardly of the soldering 6, these rings giving spacing support to the spokes, the spokes projecting some distance outwardly from the rings: 8, a wicket in the front of the casing, this wicket having a width and height sufficient to permit of there being withdrawn from the outside of the casing a tray carried by the spoke: 9, a tray, one for each spoke, provided with a shank adapted to slide radially in the spoke, the tray being of a size suited to freely receive the account-sheets which the machine is to deal with and being formed, preferably, of sheet metal: 10, a window, preferably glazed, in the periphery of the casing above the wicket 8: 11, a hand wheel

fast on the outer end of the shaft: 12, a circular series of indexing holes carried by the hand wheel, equal in number to the spokes of the wheel: 13, a spring detent carried by the casing and adapted to enter the holes in the hand wheel: 14, a handle by means of which the detent may be permitted to enter an indexing hole in the hand wheel or held normally out of engagement with the hand wheel: 15, claws struck outwardly from the outer end wall of each tray: 16, spurs projecting inwardly from these claws toward the end wall of the tray: 17, a label, as of thick paper, disposed against the face of each tray between the face of the tray and the claws 15, the spurs 16 being impressed somewhat into the face of the label so as to secure the label firmly to its tray; and 18, shanks secured to and underneath the trays and having a cross-section, such as indicated in Fig. 16, so as to permit the shanks with their trays to freely slide in the spokes.

The spoke wheel with the sliding trays constitutes the account wheel and all parts of it are normally disposed entirely within the periphery of the casing. There may be as many account wheels secured to the shaft as is desired, the casing having a corresponding length. The illustration shows two account wheels but all description will be made in the singular as the account wheels and their accessories are alike.

By turning the hand wheel, when the detent is free from engagement with it, as is the normal condition, any one of the trays may be brought opposite the wicket 8 through which the tray may be pulled outwardly relative to but not disengaged from its spoke. The tray may be pulled outwardly through the wicket and to a position outside the casing such as to permit free access to the tray in making notes on the account sheet or sheets which may be held in the tray or in removing the sheets or in adding sheets.

In forming the spoke part of the account wheel, the hub and spokes are placed accurately in a suitable fixture and the solder 6 is applied, and then the rings 7 are soldered to place. The spoke structure is thus produced with great accuracy and economy. In order that the solder 6 shall not, in being applied, run into and fill the longitudinal grooves in the spokes, the grooves at the inner end of each spoke are provided with a plug 40, preferably of asbestos. Thus far mention has been made of pulling out through the wicket the selected account tray, and for the present it may be assumed that the tray is simply to be taken hold of and moved outwardly when it is opposite the wicket. As a matter of fact there will be later explained rather complete mechanism, in the way of an extractor, for pulling the tray outwardly.

In Figs. 7 and 9 a tray is illustrated as being labeled "Carter." The first thought might be that this is the tray containing Carter's account, but such is not the case. It is the tray containing the Jones account. Turning to Fig. 1, a tray at the left is labeled "Jones," but that tray does not contain the Jones account, and it is immaterial for present purposes to know or care what account that tray does contain. But the label "Jones" appearing at about the center of the window, indicates that the Jones account tray is in a position opposite the wicket 8 so that it may be drawn outwardly through that wicket. In other words, the label appearing at the window is a mere indicating label to show when the tray corresponding with that label will be in the lower position opposite the wicket.

The window might be of such vertical height as to show but a single labeled tray, but it is preferable that in turning the account wheel, at more or less speed, several labels shall appear at the window as the particular one wanted is thus more apt to be brought into view during the turning of the wheel. The user of the device soon familiarizes himself with the position which the label pertaining to the desired account is to occupy at the window when the tray pertaining to that account is opposite the wicket through which the tray is to be moved outwardly. For instance, when the Jones label has reached the position indicated in Fig. 1, at about the center of height of the window, the hand wheel is stopped and then handle 14 is operated to throw the detent into engagement with the hand wheel, thus locking the account wheel with the Jones account tray opposite the wicket out through which it is to be moved. When the business is completed with the Jones tray then it is to be pushed back into the casing, and the detent is to be disengaged from the hand wheel, leaving the rotary system entirely free for future operation. While I have illustrated the detent as a male member entering the apertures in the hand wheel, this is merely a typifying indexing construction for which many equivalents may be found by those skilled in the indexing art.

I will now describe the extractor by means of which, after a given tray is brought opposite the outlet wicket, the tray may be withdrawn outwardly and the extractor locked to it so that the extractor may not be disengaged from it until the tray has been restored to its normal position within the casing. Proceeding with the drawings:—19, indicates an outward projection from each tray: 20, an aperture therein: 21, an extractor-hood normally seated against the outside of the casing and closing wicket 8: 22, guide-tubes sliding

through the casing and having their outer ends secured to the interior of the extractor-hood, the hood carrying a pair of these tubes at such distance apart as not to interfere with the sides of the trays: 23, collars loose on shaft 3, in line with the tubes 22: 24, guide-rods secured to these collars and entering the tubes 22 so that the extractor-hood in being withdrawn is guided by the rods and tubes: 25, a collar on the inner end of each guide-tube 22 to limit the outward withdrawal movement of the extractor-hood: 26, a spindle journaled in the extractor-hood parallel with the axis of the account wheel: 27, a hook carried by this spindle and adapted, when the hood is in its home position against the casing to engage within the casing at the lower portion of wicket 8, and prevent the movement of the hood away from the casing: 28, a spring coöperating with the spindle and serving to maintain hook 27 normally in engagement with the interior of the casing: 29, a handled stem projecting from shaft 26 out through a slot in the hood and having its handle exterior to the hood, the stem and handle being normally in the position indicated in Fig. 12: and 30, a hook carried by spindle 26 and adapted, when the handle rod is moved down to a substantially horizontal position, to engage within the opening 20 of the tray.

Assuming the parts in the position indicated in Fig. 12, after the desired tray has been brought opposite the wicket 8 and the hand wheel locked, handle rod 29 is to be depressed, the result of which is that hook 27 releases the hood from the casing, and hook 30 engages the aperture 20 of the tray. Now, by pulling outward on handle 29 the hood brings out with it the tray to which the hood has become hooked, the outward withdrawal motion being limited by collars 25 on guide pins 22. This outward withdrawal of the tray puts it in the condition indicated in Fig. 13 in which the tray is outside the casing and its account sheet may be written upon, or added to, or abstracted. When the transaction relating to this particular withdrawn tray is over then the hood is pushed back to the casing, thus delivering the tray again within the casing, whereupon the handle rod and the hood are to be released, the hook 30 disengaging from the tray, and hook 27 engaging the casing, thus locking the hood again to the casing but quite out of connection with any tray.

I will now explain the construction of the means for locking the hood to a tray when a tray has been withdrawn from the casing. Proceeding with the drawings:—31, indicates a latch-plate mounted for sliding movement in notches in the hood: 32, a spring tending to force this latch-plate from the hood in the direction of the casing: 33,

projections from the latch-plate adapted, when the hood is pushed home against the casing, to move away from the casing against the resistance of spring 32: 34, a horizontal slot in latch-plate 31 where the latch-plate surrounds spindle 26, this slot permitting of the proper fore-and-aft movement of the latch-plate: 35, a groove in the front face of spindle 26 at the latch-plate: and 36, a tooth carried by the latch-plate and adapted to enter this slot and prevent the turning of the spindle when the latch-plate is not in contact with the casing.

When the hood is in normal position against the casing then the contact between the casing and the projections 33 will cause the latch-plate to retreat and disengage tooth 36 from the groove in the spindle, thus permitting the spindle to be freely turned so long as the hood is against the casing. But when the spindle has been turned and hook 27 released from the casing and hook 30 engaged with the tray and the hood and tray withdrawn, to any substantial extent, from the casing, then spring 32 causes the latch-plate to move and engage its tooth 36 with the groove in the spindle, the result of which is that while the hood is hooked to a tray and is in any substantial condition of withdrawal from the casing, the hood may not be unhooked from the tray.

As the trays may contain one or more papers, I provide a compressor to hold them snugly down in the trays and I provide means by which, when a tray with its accounts is withdrawn from the casing, this compressor is released leaving the account papers free for manipulation. I will now explain this feature. Proceeding with the drawings:—37, indicates a spring compressor having its heel pivoted at the rear of the tray and adapted to come down upon the papers in the tray: 38, a tail-piece projecting from the heel of the compressor and adapted, when the tray is in its normal position within the casing, to bear upward against the spoke of the next upper tray and hold the compressor down to compressing position upon the papers, as indicated in Fig. 12: 39, a loop projecting from the upper margin of wicket 8 and serving, when a tray is drawn forward out of the wicket, to be caught by the tail-piece and elevate the compressor into the position indicated in Fig. 13, this loop being merely a device by which the tail-piece can engage the casing as the tray is drawn outward: and 40, the asbestos stopper which has been before referred to as means for preventing solder 6 from running into the grooves of the spokes at the time the spoke structure is being formed.

In the illustration I have shown the spokes 5 as being the female members and the tray-shanks 18 as being the coöperating male

members in permitting the trays to have telescopic sliding connection with the spokes. But it is obvious that the same result might be accomplished if the spokes were the male elements and the tray-shanks the female elements of the telescopic system.

It is understood that many modifications may be effected by the skilled constructor without departing from the spirit of my improvements. I have sought merely to set forth the principle of my invention and the best mode in which I contemplate embodying that principle.

I claim:—

1. A rotary account-file comprising within its mechanism, a shaft, a hub thereon, spokes arranged in radial relation to the hub and adapted for telescopic connection with account-holding trays, and solder disposed around the hub in disk form between the inner ends of the spokes and unifying the spokes with the hub and with each other, combined substantially as set forth.

2. A rotary account-file comprising within its mechanism, a shaft, a hub thereon, spokes arranged in radial relation to the hub and adapted for telescopic connection with account-holding trays, means for securing the inner ends of the spokes to each other and to the hub, and rings disposed against the sides of the spokes outwardly of their inner ends and soldered thereto, combined substantially as set forth.

3. A rotary account-file comprising, a circular casing provided with a wicket and with an interior account wheel carrying trays to be brought selectively opposite said wicket and be moved outwardly there-through, and a base provided with a concave seat engaging said casing and supporting the casing and permitting it to be moved angularly, combined substantially as set forth.

4. A rotary account file comprising, a casing having a wicket, a wheel disposed within the casing and having spokes, an account tray telescopically connected with each spoke of the wheel and adapted for outward movement through the wicket when a selected tray is brought opposite the wicket, extracting mechanism supported by the casing at the outside of the wicket and adapted to draw through the wicket such selected tray as may have been brought opposite the wicket by the rotation of the wheel carrying the trays, a locking device carried by the extracting mechanism entirely independent of the wheel and the trays carried by the wheel and serving to normally lock the extracting mechanism against withdrawal from the casing, and means carried by the extracting mechanism for automatically disengaging such locking device when the extracting mechanism is connected with a selected tray, combined substantially as set forth.

5. A rotary account-file comprising, a cas-

ing having a wicket, a wheel disposed within the casing and having spokes, an account tray telescopically connected with each spoke of the wheel and adapted for outward movement through the wicket in the casing when a selected tray is brought opposite the wicket, extracting mechanism carried by the casing exterior to the wicket and adapted to engage and move through the wicket such selected tray as may have been brought opposite the wicket, a locking device carried by the extracting mechanism and adapted to lock the extracting mechanism to a selected tray when the extracting mechanism and such tray are withdrawn from the casing, and means carried by the casing and extracting mechanism to permit the unlocking of the extracting mechanism from the tray when the extracting mechanism has pushed the tray into the casing, combined substantially as set forth.

6. A rotary account-file comprising, a casing having a wicket, a wheel disposed within the casing and having spokes, an account tray telescopically connected with each spoke of the wheel and adapted for outward movement through the wicket in the casing when a selected tray is brought opposite the wicket, extracting mechanism carried by the casing exterior to the wicket and adapted to engage and move through the wicket such selected tray as may have been brought opposite the wicket, a locking device carried by the extracting mechanism and adapted to lock the extracting mechanism into engagement with a tray when the extracting mechanism is moved outwardly from the casing, and a locking device carried by the extracting mechanism and adapted to cooperate with the casing and lock the extracting mechanism to the casing when the extracting mechanism is in inward position and disengaged from any tray, combined substantially as set forth.

7. A rotary account-file comprising within its mechanism, a casing provided with a wicket, a spoked wheel mounted for rotation within the casing, an account-tray carried by each spoke and adapted for outward movement through the wicket when a given tray is brought opposite the wicket, a spring compressor having its heel hinged at the inner portion of the tray and adapted to have its forward portion bear upon papers disposed within the tray, a loop secured to the casing and projecting downwardly from the top of the wicket, and an upwardly and forwardly projecting tail-piece formed on each compressor and adapted to engage said loop and cause the elevation of the compressor of any tray which has been brought opposite to and withdrawn through the wicket, combined substantially as set forth.

8. A rotary account-file comprising within its mechanism, a casing provided with a

wicket, a spoked wheel disposed within the casing, a tray carried by the outer end of each spoke and adapted for movement outwardly through the wicket when a selected tray is brought opposite the wicket, a label carried by the outer end of each tray and serving to indicate individual accounts in the system, and a window formed in the casing above the wicket and adapted to show the tray-labels as the wheel is turned, the labels being arranged upon the trays in such order that when an individual account tray is opposite the wicket a tray-label appearing at the window will correspond with the individual account tray opposite the wicket, combined substantially as set forth.

9. A rotary account-file comprising within its mechanism, a casing having a wicket, a spoked wheel disposed within the casing, a shaft supported by the casing and carrying the wheel, a tray carried by each spoke and adapted to be moved outwardly through the wicket when a selected tray is brought opposite the wicket, a hood disposed in front of the wicket and lying normally against the casing, extracting mechanism carried by the hood and adapted to engage and withdraw a tray which has been brought opposite the wicket, and telescopic guide-mechanism carried by the extracting mechanism and by the shaft independent of the trays and serving to cause the extracting mechanism to move in a direction radial to the shaft, combined substantially as set forth.

10. A rotary account-file comprising, a casing provided with a wicket, a wheel mounted for rotation within the casing, trays carried by the wheel and adapted for individual movement outwardly through the wicket, a hood disposed in front of the wicket and lying normally against the casing, extracting mechanism carried by the hood and adapted to engage with and withdraw a tray which has been brought opposite the wicket, guide-tubes secured to the hood at each side of the wicket and working through the casing, and a guide-rod fixedly supported within the casing and engaging within each tube, combined substantially as set forth.

11. A rotary account-file comprising within its mechanism, a casing provided with a wicket, a shaft axially disposed therein, a wheel mounted on said shaft, trays carried by said wheel and adapted to be individually moved outwardly through the wicket when brought opposite the wicket, a hood closing the wicket and bearing normally against the casing, extracting mechanism carried by the hood, guide-tubes carried by the hood at each side of the wicket and sliding through the casing, collars loose on the shaft, and guide-rods secured to said collars and engaging within said guide-tubes, combined substantially as set forth.

12. A rotary account-file comprising, a casing provided with a wicket, a wheel mounted for rotation within the casing, trays carried by the wheel and adapted for individual movement outwardly through the wicket, a hood disposed in front of the wicket and lying normally against the casing, extracting mechanism carried by the hood and adapted to engage with and withdraw a tray which has been brought opposite the wicket, guide-tubes secured to the hood at each side of the wicket and working through the casing, a guide-rod fixedly supported within the casing and engaging within each tube, and collars on the inner ends of the tubes to limit the outward movement of the hood, combined substantially as set forth.

13. A rotary account-file comprising, within its mechanism, a casing provided with a wicket, a wheel mounted within the casing, trays carried by the wheel and adapted to be individually withdrawn through the wicket when brought opposite the wicket, a hood disposed in front of the wicket and lying normally against the casing, devices for guiding the hood as it is moved outwardly from the casing, a spindle journaled in the hood, a hook carried by the spindle and engaging within the casing and serving to normally prevent the withdrawal of the hood, a hook carried by the spindle and adapted to engage with a tray brought opposite the wicket when the spindle has been so turned as to unhook the hood from the casing, a spring coöperating with the spindle and serving to normally maintain in engagement the hook which locks the hood to the casing and to maintain out of normal engaging position the hook which is to engage a tray, and a handle exterior to the hood to serve in turning the spindle against the resistance of the spring, combined substantially as set forth.

14. A rotary account-file comprising within its mechanism, a casing provided with a wicket, a wheel mounted for rotation within the casing, trays carried by the wheel and adapted for outward movement through the wicket when brought opposite the wicket, a hood disposed in front of the wicket and bearing normally against the casing, a spindle journaled in the hood, a hook carried by the spindle and adapted to project into the wicket and engage a tray brought opposite the wicket, a handle for turning the spindle, a groove in the spindle, a latch-plate mounted in the hood and bearing normally against the casing and adapted to move forward relative to the hood when the hood is moved away from the casing, a tooth carried by the latch-plate and adapted to engage the groove in the spindle when the latch-plate moves forwardly relative to the hood, and a spring coöperating between the hood and latch-plate

and adapted to serve in holding the tooth of the latch-plate into engagement with the groove of the spindle, combined substantially as set forth.

- 5 15. A rotary account-file comprising, a casing provided with a wicket, a shaft supported by the casing, a hub on the shaft, spokes secured rigidly to the shaft in radial relation thereto and formed of sheet metal
10 having inwardly turned edges, rings disposed concentric with the shaft and secured to the outer edges of the spokes, a shank fitted to slide telescopically in each of the spokes under the inturned edges thereof, and
15 a tray secured to each of said shanks and adapted to ride over the inturned edges of the spokes, combined substantially as set forth.

- 20 16. A rotary account-file comprising, a casing provided with a wicket, a spoked wheel mounted within the casing, a tray carried by each spoke of the wheel and adapted to be moved outward through the wicket when brought opposite the wicket, a

shank secured to the bottom of each tray 25 and projecting from the rear and front thereof and adapted to engage and slide in said spokes, and an extracting device adapted to slide to and from the casing and provided with mechanism adapted to engage 30 with the front projection of a tray brought opposite the wicket, combined substantially as set forth.

17. A rotary account-file comprising, a spoked wheel, an account tray fitting tele- 35 scopically in each spoke, a compressor having its heel pivoted to the rear of the tray, and a tail-piece connected with the rear portion of the compressor and adapted to make contact with the under surface of the next 40 upper spoke and force the compressor flexibly to the tray when the tray is telescoped inwardly relative to its spoke, combined substantially as set forth.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."