

Feb. 7, 1950

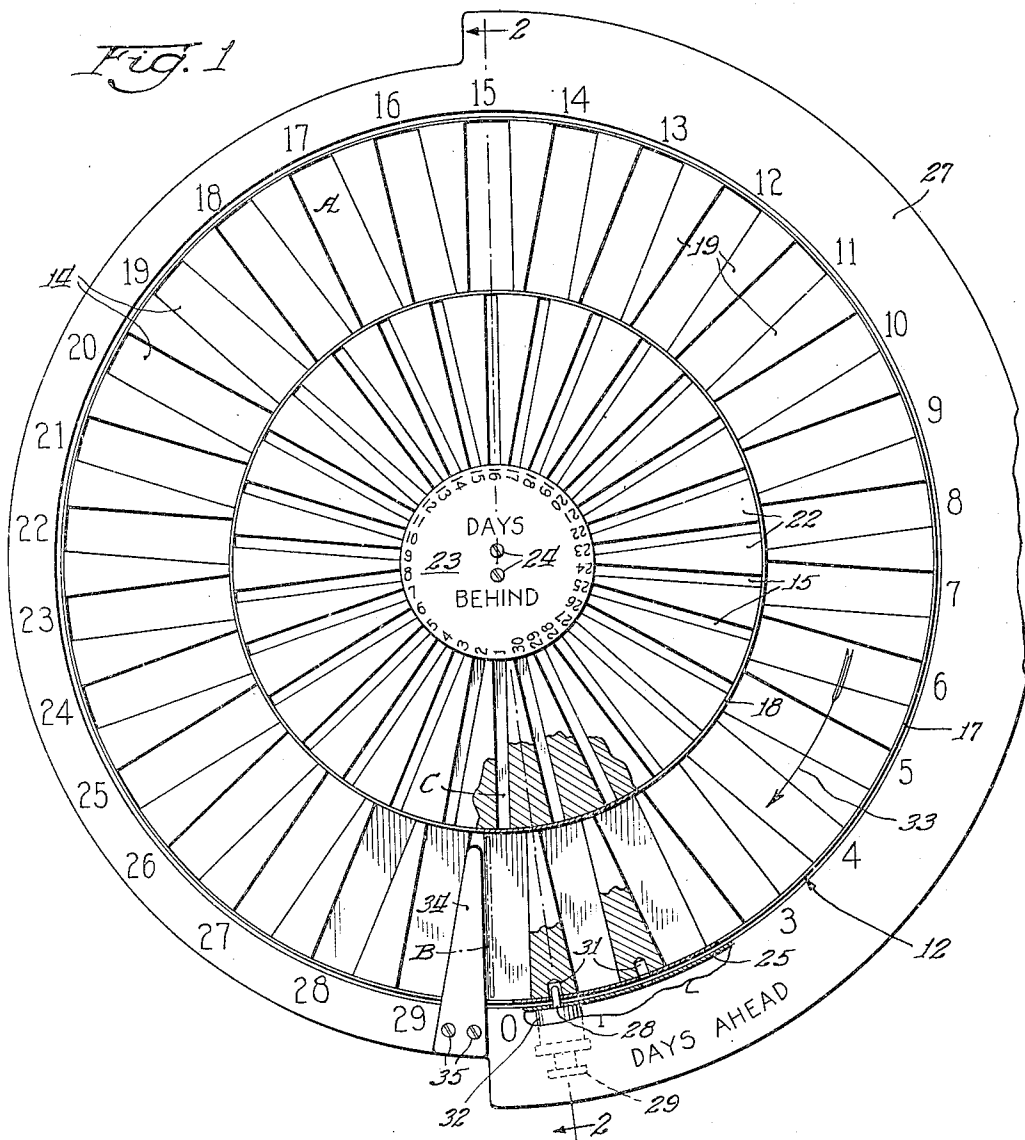
J. J. PHILLIPS

2,496,490

PERPETUAL STATUS CYCLE WHEEL

Filed June 11, 1945

2 Sheets-Sheet 1



Inventor:
Joseph J. Phillips
By: Paul C. Pippel atty.

Feb. 7, 1950

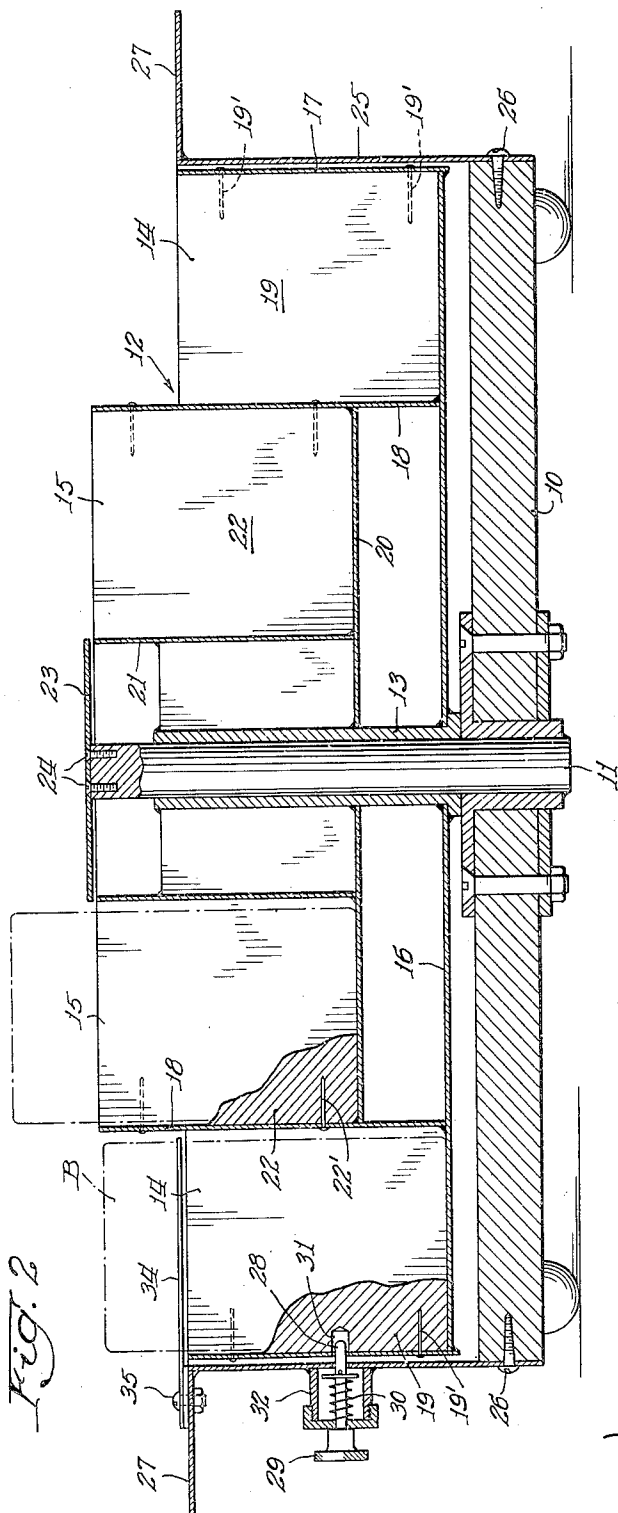
J. J. PHILLIPS

2,496,490

PERPETUAL STATUS CYCLE WHEEL

Filed June 11, 1945

2 Sheets-Sheet 2



Inventor:
Joseph J. Phillips
By: Paul O. Pippel
Att.

UNITED STATES PATENT OFFICE

2,496,490

PERPETUAL STATUS CYCLE WHEEL

Joseph J. Phillips, Orland Park, Ill.

Application June 11, 1945, Serial No. 598,821

5 Claims. (Cl. 129—16)

1

This invention relates to a new and improved perpetual status cycle wheel and has for one of its principal objects the provision of means for determining upon visual inspection the status of an object or the like at any time from receipt of requirement for the object to completion of the finished object or the like.

It is an important object of this invention to provide a device for use particularly in shops, offices, and factories which will instantaneously give information as to the time remaining to complete a job or the time past due for completing a job. Shops of all descriptions work on the principle of a written order for each job which they receive. These orders are preferably on cards so that they may be readily filed. However, the regular filing of these cards in a drawer or cabinet does not permit visual periodic inspection without considerable nuisance, and even then it is impractical to have a card file so arranged that it would be able to indicate the time required to do a certain job and also whether or not the job was completed within the allotted time.

Another important object of this invention is to provide a job card filing device which will permit movement of all the cards as a unit, one unit per each one unit of time, such as a day, week, or month. It is to be understood that the word card includes cards, sheets, envelopes or any other article which may be filed.

A further important object of the invention is the provision of circular concentric filing spaces movable together and having stationary members adjacent the inner and outer portions of the circular concentric filing spaces in order to receive legends indicative of the time allotted and required for objects in process of completion.

A still further important object of this invention is the provision of a filing device having a stationary supporting structure and a rotatable member journaled on said structure and having circumferentially arranged file pockets open at one axial face.

Other and further important objects will become apparent from the disclosures in the following specification and accompanying drawings, in which:

Figure 1 is a top plan view of the perpetual status cycle wheel of this invention; and

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

As shown in the drawings:

Reference numeral 10 indicates generally a circular base or frame supporting structure carrying a fixed shaft 11 on which is journaled a ro-

2

tatable structure or cycle wheel 12. The cycle wheel 12 has a sleeve 13 journaled for rotation on the shaft 11. The body portion of the wheel 12 consists of series of concentric card holding chambers arranged circumferentially, the outer annular series of which is indicated by the numeral 14 and the inner annular series of which is indicated by the numeral 15. These inner and outer series of annularly arranged pockets 14 and 15 are open at one axial face and are closed at their rear by a disk-like back member 16 having an outer annular flange 17 welded to the outer edge thereof and the flange portion extending outwardly away from the back 10. A concentric flange 18 is welded to the back plate 16 around an annular circumference spaced inwardly from the outer flange 17. The outer annular series of pockets 14 is defined by the flanges 17 and 18 and the pockets themselves are formed within this annular space by a series of spacers 19. These spacers 19 may be of any material but are preferably wood and are retained in position by small nails 19'. The pockets 14 and the spacers 19 are regularly and alternately spaced around this annular space defined by the flanges 17 and 18. It should be realized that the size of the spacers could be increased or decreased and also that the spacers in the wheel could be replaced by various sized spacers to get a greater or less number of pockets.

A second disk member 20 parallel to the disk member 16 is likewise welded to the sleeve 13 and forms the back plate for the inner annular series of chambers 15. The outer periphery of this disk 20 is welded to the inner side of the annular flange 18. A third concentric annular flange 21 is welded to the disk member 20 and is spaced inwardly from the flange 18, a distance approximately equal to the distance between the flanges 17 and 18. Similarly to the annular space defined by the flanges 17 and 18, this inner annular space defined by the flanges 18 and 21 is divided into a series of pockets 15 which are formed by spacers 22, spaced alternately of each pocket 15, and these spacers 22 are held in position by nails 22'. Similarly to the spacers 19 these spacers 22 may be replaceable by other size spacers and thus obtain larger or smaller intermediate pockets. A circular disk 23 is fastened to the shaft 11 by means of screws 24. This disk 23 is therefore stationary with the back supporting member 10 and inasmuch as it is radially greater than the inner radius for the flange 21, the entire cycle wheel is held in journaled position on the shaft 11.

3

The back support 10 is equipped with an annular flange 25 which is spaced outwardly from and concentric to the outer flange 17 for the cycle wheel 12. This outer flange 25 is fastened to the back support 10 by means of screws or the like 26. A face comprising a circular flat strip 27 is welded perpendicularly to the flange 25 at the edge opposite the back support 10. The outer face 27 and the inner face or disk 23 are designed to receive legends, such as dates opposite each pocket 14 or 15 as the case may be. Opposite each pocket 14 is a number and, as shown in the drawing, these numbers range from 0 to 29 with one number adjacent each pocket or card receiving slot.

If, for example, a shop receives an order for so many pieces of a finished product which ordinarily requires seventeen days to complete, then the clerk in charge of records will make out a card which includes the necessary indicia regarding the order and the card will also contain the number of days, weeks or months allotted for the completion of the job. This number, of course, must be determined by past records of similar jobs and will probably be an average arrived at by production charts now in general use. The clerk will then take this card and insert it into one of the pockets 14 which is opposite the numeral 17 and is indicated in the drawing at the letter A. The job is then started on its route through the shop. The component parts of the product are made by the several departments and ordinarily no one is constantly advised regarding the date of expected completion of the job until the job is actually finished. However, in the present system, it is possible for the shop clerk to maintain visual production control with the aid of this cycle wheel. At the end of each day, or other period such as a week, or a month, the shop clerk or other attendant will manually rotate the cycle wheel on its spindle 11 so that the pocket A originally opposite the number 17 will, at the end of one day, be opposite the number 16 and likewise at the end of seven days will be opposite the number 10 and so on until this pocket A arrives at the position opposite the number 0. In order to rotate the cycle wheel 12 a retractable locking pin 28 is pulled outwardly by a knob 29 against the action of a spring 30, tending to normally push the locking pin radially inwardly towards the center of the cycle wheel 12. As shown in both of the figures of the drawings, the spacer members 19 are equipped with sockets in the form of holes 31 for the reception of the locking pin 28. This locking pin 28 is preferably positioned at the bottom of the cycle wheel and is mounted on the outer flange 25 in a casing 32 welded to the flange 25. The attendant moving the cycle wheel will retract the pin 28 by the knob 29 and will instigate rotation of the cycle wheel 12 in the direction indicated by the arrow 33. Immediately after the wheel is started, the locking pin is released and hence it is permitted to spring into the socket 31 in the succeeding spacer 19. This assures that the wheel will be moved only one pocket at a time. A card B is shown in dot-dash lines in one of the pockets 14 which is opposite the numeral 0 on the outer face 27. In order that the card may not proceed beyond the number 0, and thus pass around the cycle wheel twice, a stop member 34 is extended from the outer face 27 inwardly to a point just short of the flange 18, as shown in both of the figures of the drawing. This stop member 34 is in the form of a finger and is attached to the outer face 27 by means of

4

a bolt or the like 35. The cards employed in this device are of such a size that they project beyond the surface of the pockets 14 as defined by the stationary face 27. It is obvious that when the card extends out from the pocket, as indicated in Figure 2 of the drawings, it may not pass the stop finger 34 without causing bending or mutilating of the card. The numerals on the outer face 27 indicate the days or other periods of time ahead of assigned completion date or, in other words, the number of days ahead of the date when the job should be completed. Hence, when the cards, and their may be any number of these cards traveling around the cycle, will at the same time reach the pocket opposite the number 0 then the job should be completed. However, if the job is not finished, the cards in this last pocket are then moved to the inner portion of the cycle wheel 12 and into the one of the pockets 15 designated by the letter C. It will be noted that a number is placed opposite each of these card compartments 15 on the inner disk 23, as indicated in Figure 1 of the drawings. These numbers run consecutively from 1 to 30 and run in a clockwise direction which distinguishes from the counter-clockwise direction of the numbers on the outer face 27. The numbers on the disk 23 indicate days or other periods of time behind the date when the job should have been completed. After the cards have been removed from the outer pockets 14 to pocket C of the inner series of pockets 15, the cycle wheel continues to be moved one pocket every day or other desired unit of time. Hence on continued clockwise rotation of the cycle wheel 12, as indicated by the arrow 33, the number of days behind will successively increase rather than decrease as did the days ahead of schedule in the outer series of pockets 14. The placing of the numbers on the stationary plates 27 and 23 in opposite directions permits the rotation of the unitary cycle wheel in one direction for accomplishing the two purposes.

It is apparent that this cycle wheel may be used in any one of a number of different adaptations in addition to the job card adaptation as indicated. Further the wheel may be hung on a wall in a vertical position or may be set on some horizontal table support. Employment of this cycle wheel permits visual inspection of all cards to determine the status thereof and any card that is in the days behind series of pockets 15 should be pulled out and investigated quite frequently in order to determine why the job has not been completed in the allotted time. Whereas, if the card is in the days ahead of schedule, then there is probably not much interest in investigating the progress of this job. It is to be understood, of course, that as the job is completed, the card is removed from the cycle wheel.

Numerous details of construction may be varied throughout a wide range without departing from the principles disclosed herein, and I therefore do not propose limiting the patent granted hereon otherwise than as necessitated by the appended claims.

What is claimed is:

1. A card filing device comprising a frame structure, a wheel journaled for rotation on said frame structure, a pair of concentric series of card pockets in one face of said wheel, a stationary dial positioned adjacent the outer periphery of the outer series of pockets, a second stationary dial positioned adjacent the inner periphery of the inner series of pockets, and both of said stationary dials carried by said frame structure, said pockets

5

being sufficiently shallow so that cards filed therein will project beyond the surface of the wheel, and a card stop finger attached to the outer stationary dial and extending radially inwardly across only the outer series of pockets, whereby cards in the outer pockets may not pass this stop finger.

2. A card filing device comprising a frame structure, a wheel journaled for rotation on said frame structure, a pair of concentric series of card pockets in one face of said wheel, said wheel having apertures alternately of each pocket in the outer series, a stationary dial positioned adjacent the outer periphery of the outer series of pockets, a second stationary dial positioned adjacent the inner periphery of the inner series of pockets, both of said stationary dials carried by said frame structure, said pockets being sufficiently shallow so that cards filed therein will project beyond the surface of the wheel, a card stop finger attached to the outer stationary dial and extending radially inwardly across only the outer series of pockets, whereby cards in the outer pockets may not pass this stop finger, and a retractible locking pin in the frame support adapted to engage the apertures alternately of each pocket, whereby the wheel may be rotated in one pocket intervals.

3. In a status cycle wheel comprising a circular base, an annular flange attached to the outer periphery of said circular base, an outwardly extending rim on the end of said flange, a shaft attached centrally of said circular base and extending in the same direction as the annular flange, a disc fixed to the outer end of said shaft, a sleeve journaled for rotation on said shaft, structural means mounted on said sleeve forming a pair of annular series of concentric pockets opening in the direction of the outer rim and disc, consecutive numbers on said outer rim one adjacent each pocket in the outer of the pair of annular series, consecutive numbers on said disc one adjacent each pocket in the inner of the pair of annular series, whereby rotation of said sleeve and structural means will automatically decrease the number adjacent a pocket in the outer series and will increase the number adjacent a pocket in the inner series, and a finger attached to said outer rim and projecting inwardly across an outer of the pair of annular series of pockets, whereby cards of a size greater than the depth of the pockets cannot pass the finger on rotation of sleeve and structural means.

4. In a status cycle wheel comprising a circular base, an annular flange attached to the outer periphery of said circular base, an outwardly extending rim on the end of said flange, a shaft attached centrally of said circular base and extending in the same direction as the annular flange, a disc fixed to the outer end of said shaft, a sleeve journaled for rotation on said shaft, structural means mounted on said sleeve forming a pair of annular series of concentric pockets opening in the direction of the outer rim and disc, consecutive numbers on said outer rim one adjacent each pocket in the outer of the pair of annular series, consecutive numbers on said disc one adjacent each pocket in the inner of the pair of annular series, whereby rotation of said sleeve and structural means will automatically decrease the number adjacent a pocket in the outer series

6

and will increase the number adjacent a pocket in the inner series, a finger attached to said outer rim and projecting inwardly across an outer of the pair of annular series of pockets, whereby cards of a size greater than the depth of the pockets cannot pass the finger on rotation of sleeve and structural means, said structural means having an aperture intermediate each of the pockets in the outer series on the outer periphery thereof, and retractible pin means on said annular flange for engaging any one of said apertures, whereby the sleeve and its attached structural means may be rotated and locked in one pocket intervals.

5. A card filing device comprising a frame, a rotatable member journaled on said frame, said rotatable member having a plurality of circumferentially arranged file pockets for containing work to be given consideration at a specified time, said pockets being open at one axial face, a stationary structure for carrying series of index marks adjacent the rotatable member mounted on said frame, an index means on said structure indicating a zero position and time interval, one series of index marks corresponding in circumferential spacing to the spacing of the file pockets and being numbered numerically and consecutively from said zero point in one angular direction, another series of index marks corresponding in circumferential spacing to the spacing of the file pockets and being numbered numerically and consecutively from said zero position in the opposite angular direction, said rotatable member being rotated during use of the device the angular distance of one pocket for a unit time, the index numbers in the one angular direction serving as indicators to show the number of units of time before a pocket adjacent to a number at any given time will reach the zero position, the index numbers in the opposite angular direction serving as indicators to show the number of units of time elapsed since a pocket adjacent to a number at any given time has passed the zero position, and a file card stopping means attached to said frame and extending between two adjacent file pockets to prevent rotation of said rotatable member when file cards are positioned in one of the pockets adjacent the stopping means.

JOSEPH J. PHILLIPS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
823,202	Boye	June 12, 1906
875,366	Moore	Dec. 31, 1907
936,287	Antilotti	Oct. 12, 1909
1,032,111	Caverly	July 9, 1912
1,275,655	Boye	Aug. 13, 1918
1,281,380	Ise	Oct. 15, 1918
1,531,358	Thompson et al.	Mar. 31, 1925
2,168,323	Bruen	Aug. 8, 1939
2,314,705	Johnson	Mar. 23, 1943

FOREIGN PATENTS

Number	Country	Date
752,581	France	1933