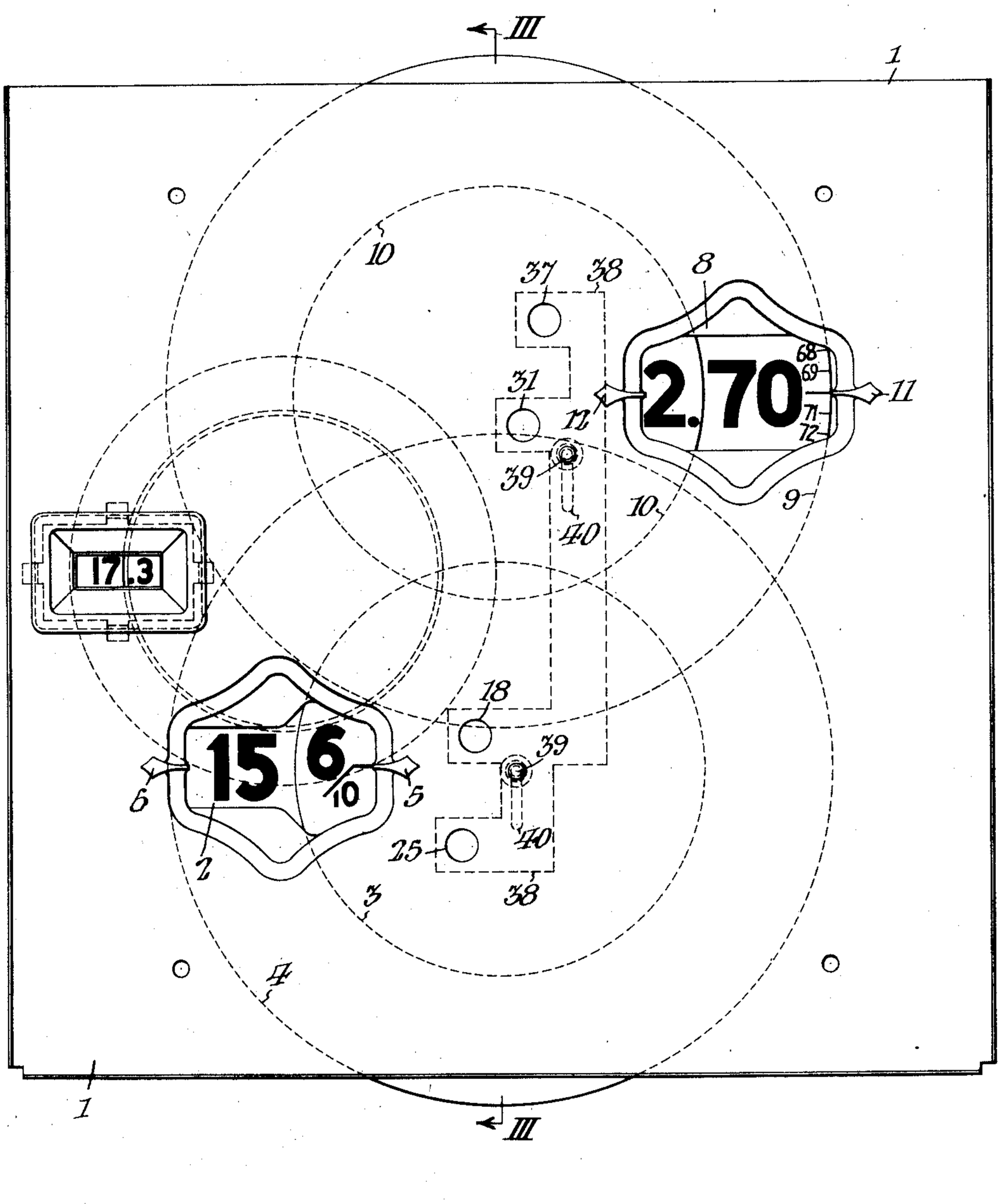
Nov. 26, 1935. J. C. WOODFORD 2,022,632

DIAL STRUCTURE

Original Filed Oct. 31, 1934 3 Sheets-Sheet 1

FIG. I.



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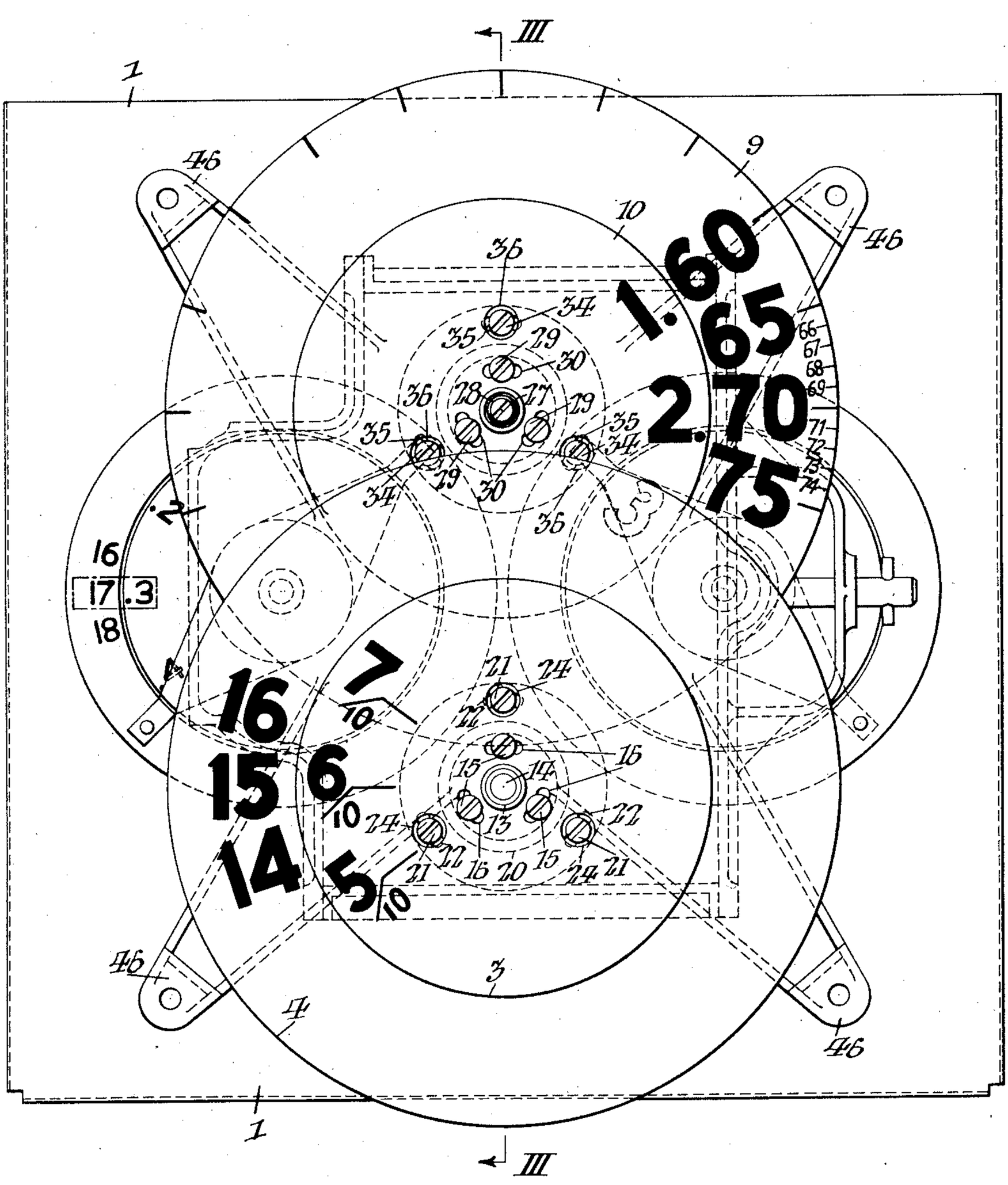
Original Filed Oct. 31, 1934 3 Sheets-Sheet 2

FIG. II.



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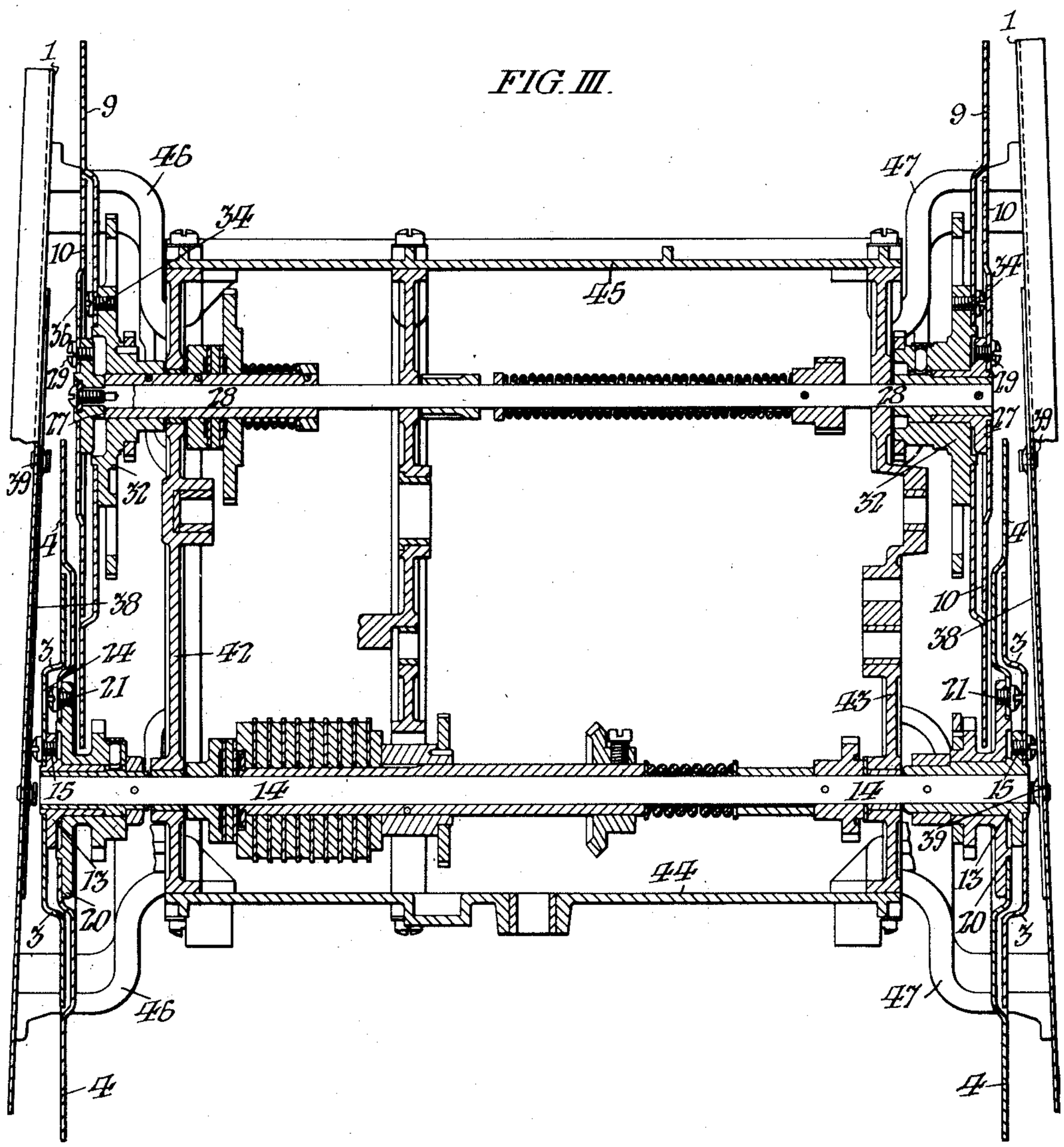
DIAL STRUCTURE

Original Filed Oct. 31, 1934 3 Sheets-Sheet 3

FIG. III.



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UNITED STATES PATENT OFFICE

2,022,632

DIAL STRUCTURE

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Original application October 31, 1934, Serial No. 750,805. Divided and this application March 19, 1935, Serial No. 11,770

5 Claims. (Cl. 40—70)

This is a division of my application Serial No. 750,805 filed October 31, 1934, for Letters Patent of the United States for improvement in computing and registering mechanism for liquid dispensing apparatus. Said registering mechanism includes pairs of rotary dials, supported in coaxial relation one behind the other for cooperative display of numbers on the dials of each pair through windows in a stationary panel; one pair of dials respectively representing gallons and fractions of a gallon dispensed and the other pair of dials representing dollars and fractions of a dollar, value of the liquid dispensed. In order to facilitate the relative rotary adjustment of said dials with respect to their supports, in the initial calibration of the registering mechanism, or thereafter, without removal of said panel, I provide each dial with screw means for detachably connecting it with its rotary support and provide holes in said panel and in the outer dials with which the screw means may be registered for manipulation by a screw driver inserted through the holes. Moreover, I find it convenient to provide said panel with a movable slide cover by which said holes through the panel may be opened or closed; said cover being accessible only from the back of the panel; whereby unauthorized adjustment of said screw means may be prevented.

My invention includes the various novel features of construction and arrangement hereinafter more definitely specified.

In said drawings; Fig. I is an elevation of said panel and the dial structure provided with indicating means adapted for registration with the windows and screw holes in said panel.

Fig. II is an elevation of said dial structure with the panel removed.

Fig. III is a fragmentary vertical sectional view, taken on the line III, III in Figs. I and II, showing an axial sectional view of the dials and their supporting means.

Referring to Fig. I, the stationary panel 1 has the window 2 for the display of rotary dials 3 and 4 respectively graduated with circumferential series of marks indicating fractions of a gallon and gallons, which marks are caused to successively register with the stationary index pointers 5 and 6. Said panel has the window 8 for the display of rotary dials 9 and 10 graduated with circumferential series of marks indicating fractions of a dollar and dollars, which marks are caused to successively register with the stationary index pointers 11 and 12.

Referring to Figs. II and III, said dial 3 is detachably rigidly connected with the hub 13, which is pinned on its axial shaft 14, by a circumferential series of three screws 15 extending through arcuate slots 16 in said dial 3, and said screws 15 are accessible from the exterior of said panel 1 by selectively registering them with the hole 18 in said panel so that a screw driver may be inserted through said hole 18 in engagement with any one of said screws 15 to remove or replace them. Said dial 4 is similarly rigidly connected with the hub 20, which is journaled on said hub 13, by a circumferential series of three screws 21 extending through arcuate slots 22 in said dial 4. Said screws 21 may be registered with holes 24 in said dial 3 and with the hole 25 in said stationary panel 1 so that a screw driver may be inserted through said holes 24 and 25 in engagement with any one of said screws 21 to remove or replace them.

Said dial 10 is similar to said dial 3 in that it is rigidly connected with its hub 27, pinned on its axial shaft 28, by a circumferential series of three screws 29 extending through arcuate slots 30 in said dial 10. Said screws 29 are accessible from the exterior of said panel 1 by selectively registering them with the hole 31 in said panel so that a screw driver may be inserted through said hole 31 in engagement with any one of said screws 29 to remove or replace them. Said dial 9 is similar to said dial 4 in that it is rigidly connected with the hub 32, which is journaled on said hub 27, by a circumferential series of three screws 34 entered through arcuate slots 35 in said dial 9. Said screws 34 may be brought into registry with holes 36 in said dial 10 and with the hole 37 in said stationary panel 1 so that a screw driver may be inserted through said holes 37 and 36 in engagement with any one of said screws 34 to remove or replace them.

Said stationary panel 1 supports the slide cover 38 by means of studs 39 rigidly connected with said panel and extending through slots 40 in said cover, and, as indicated in Fig. I, said cover is so shaped that it may be used to simultaneously open and close all of said holes 18, 25, 31, and 37 in said panel to afford or prevent access to the dial screws aforesaid.

As indicated in Fig. III, said shafts 14 and 28 are journaled in the opposite end walls 42 and 43 connected by the bottom wall 44 and top wall 45 to form a casing for mechanism for actuating said dials, and I find it convenient to duplicate said stationary panel and rotary dials at opposite ends of said casing so as to simultaneously manifest the similar dial numbers upon said op-

posite ends. Said panels are respectively supported in rigid relation with said end walls 42 and 43 by brackets 46 and 47.

However, I do not desire to limit myself to the precise details of construction and arrangement herein set forth, as it is obvious that various modifications may be made therein without departing from the essential features of my invention, as defined in the appended claims.

I claim:

1. In a computing registering mechanism for liquid dispensing apparatus, a stationary panel having a window opening for displaying indicating means; indicating means for effecting such display including a rotary dial; an axial shaft for said dial; screw means for detachably connecting said dial with said shaft; a hole in said panel with which said screw means may be registered for removal by a screw driver inserted through said hole; and a slide cover for said hole carried by said panel; whereby, when said slide cover is moved to open said hole, said dial may be removed and replaced without removal of said panel.

2. In a computing registering mechanism, a stationary panel having a window opening for displaying indicating means; indicating means for effecting such display including a rotary dial; an axial shaft for said dial; screw means for detachably connecting said dial with said shaft; and a hole in said panel with which said screw means may be registered for removal by a screw driver inserted through said hole; whereby said dial may be removed and replaced without removal of said panel.

3. In a dial structure, the combination with a dial provided with an axial shaft, of a second dial behind said first dial having rotary means for supporting it for rotation in coaxial relation with said shaft; screw means for detachably connecting said second dial with said rotary supporting means; said first dial having a hole with which said screw means may be registered for removal by a screw driver inserted through said hole; whereby said second dial may be adjusted upon its support without removal of said first dial.

4. In a dial structure, the combination with a stationary panel having a window opening for displaying indicating means; of indicating means for effecting such display including two rotary dials in coaxial relation, one behind the other; an axial shaft for the outer one of said dials; screw means for detachably connecting that dial with said shaft; a hole in said panel with which said screw means may be registered for removal by a screw driver inserted through said hole; a rotary support for the other dial; screw means for detachably connecting that dial with said support; holes respectively in said panel and in said outer dial with which the latter screw means may be registered for removal by a screw driver inserted through said holes; whereby said outer dial may be removed and replaced without removal of said panel, and said rear dial may be adjusted upon its support without removal of said outer dial.

5. A structure as in claim 1, wherein the slide cover is accessible only from the back of said panel; whereby unauthorized adjustment of said screw means may be prevented.

JOSEPH C. WOODFORD.