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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
No. 06-065571- -00004-0000
Fecha 2008-06-17 16.27 52 Dep 2020 NUECREACIONE
Tra 11 PATENTEIYII Eve 378 FASENACIONALI
Act 538 PETICION Folios 2

Señora Jefe de la
DIVISION DE NUEVAS CREACIONES
Superintendencia de Industria y Comercio
E. S. D.

Trámite : **011** Evento : **378** Actuación : **538**

Referencia : Expediente No. 06065571
Asunto : Solicitud de patente para CONTADOR LLENABLE DE LIQUIDO PARA UN CAUDALIMETRO
Solicitante : ELSTER METERING LIMITED
Publicada en : La Gaceta No. 583 del 18 de diciembre de 2007

SOLICITUD EXAMEN DE PATENTABILIDAD

1. Yo, Emilio FERRERO, identificado como aparece al pie de mi firma, actuando como apoderado de la sociedad ELSTER METERING LIMITED, atentamente solicito se efectúe el examen de patentabilidad de la solicitud en referencia presentada de acuerdo con las reglas del Capítulo I del PCT y según lo establecido en el artículo 44 de la Decisión 486 de la Comisión de la Comunidad Andina.

Para tal efecto presento junto con este escrito el recibo No. 08-46,076 por valor de $420.000.oo que corresponde a la tasa legal fijada para el efecto.

2. Por lo anterior, comedidamente solicito se prosiga con el trámite de este asunto.

Señora Jefe,

EMILIO FERRERO
T.P.A. No. 31.929

COLO-15411-841-001-3
SCT\SCT\ID-128396\WPC15411
No. M-2008-128396\SCT

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
No. 06-065571- -00004-0000
Fecha 2008-06-17 16 27 52 Dep 2020 NUECREACIONE
Tra 11 PATENTEIYII Eve 378 FASENACIONALI
Act 538 PETICION Folios. 2

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

RECIBO OFICIAL DE CAJA : 08 - 46,076
FECHA : JUNIO 9 DE 2008

***** C O N S I G N A C I O N *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
CAVELIER ABOGADOS	CONSIGNACION	BANCO DE BOGOTA	062754387	2678328	09/06/2008	89,445,000.00

***** C O N C E P T O *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-01 SOLICITUDES	85 EXAMEN DE PATENTABILIDAD DE INVEN	420,000.00
		TOTAL : $	420,000.00

SON: CUATROCIENTOS VEINTE MIL PESOS

RESPONSABLE : _____

RECIBO DE CAJA APLICADO AL EXPEDIENTE No._____

Colo 15411-841-001-3

Industria y Comercio
SUPERINTENDENCIA

62

61

DIVISIÓN DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No. 06-65571

EL EXTRACTO DE LA PRESENTE SOLICITUD DE **PATENTE DE INVENCIÓN**

FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No **583** DE

FECHA **18 DE DICIEMBRE DE 2007** EL TÉRMINO HÁBIL SEÑALADO POR LA

LEY EXPIRA EL **14 DE MARZO DE 2008**

NOTA: Dentro del plazo de los seis (6) meses siguientes a partir de la fecha de publicación en la gaceta de Propiedad Industrial, deberá solicitar y cancelar el examen de patentabilidad so pena de que la solicitud caiga en abandono, de acuerdo con lo establecido en el Artículo 44 de la Decisión 486/2000.

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI _____ NO ____X____

United States Patent Office 3,067,612
Patented Dec. 11, 1962

3,067,612
METER REGISTER ASSEMBLY INCLUDING INTERNAL SPACER COLLAR

Grover H. Smith, 4042 39th St., SW., Seattle, Wash.

Filed Mar. 17, 1958, Ser. No. 721,936
12 Claims. (Cl. 73—273)

This invention is an improvement in certain respects over the register assembly for fluid meters disclosed in the prior patent to myself and Richard D. Wans, No. 2,738,672, of March 20, 1956. As in the prior patent, the present invention contemplates a register assembly wherein register mechanism is wholly enclosed within a register box which is intended to be almost completely filled with oil for the purposes of preventing fogging of the transparent window or lens at the top through which the register mechanism is visible, and of preventing corrosion of the register mechanism such as may occur if moisture is permitted access to the same. This invention contemplates a completely self-contained register assembly which may be completed and filled with oil at the shop or factory, as a separate assembly ready for application to a meter housing in the field. When so applied, the register mechanism of such assembly is coupled to the meter mechanism.

The register assembly includes a transparent lens or disk urged outwardly, or upwardly, by a spacer sleeve or collar within the register box which at its upper end engages the lens, and at its lower end is pressed upwardly by securing and sealing to the lower end of the register box a separate pan which constitutes the bottom of the register box. The upward pressure of the lens clamps an O-ring or similar seal between facing flanges at the upper end of the register box casing and the lens, to seal the register box effectively at its upper end. Also, according to the present invention, special provisions are provided for insuring the evacuation of almost all the air from the interior space of the register box and the filling of that space with oil through a filler opening in the bottom pan, special constructional features within the register box insuring such evacuation and filling.

Further, a triple seal of a particular nature is provided around the driving shaft which protrudes from the register mechanism through the bottom pan for engagement with a complemental coupling element of the meter mechanism. This seal seals the aperture in the oil-filled register assembly around the driving shaft passing through it and maintains the same against leakage of oil during shipment and in use.

The features and combinations which constitute the present invention will be best understood after a description of the same in this specification, having reference to the accompanying drawings, and which are defined in the claims at the end of this specification.

FIGURE 1 is an isometric view of the fully assembled meter, including the meter casing and register box.

FIGURE 2 is an axial sectional view through the register assembly and through the upper portion of the meter assembly, the plane of section being indicated at 2—2 in FIGURE 1.

FIGURE 3 is an exploded isometric view of the register assembly, parts being broken away.

FIGURE 4 is an axial sectional view, enlarged, of the special seal, shown in its relaxed condition, and FIGURE 5 is a similar view of the same, showing parts in the position of use, with the sealing cup deformed.

The register mechanism may be a standard or known device, composed of the gears, disks or numbered wheels, pointers and the like, together with the immediate supports therefor and a driving shaft, by means of which register mechanism the quantity of water passing through the meter is indicated. This register mechanism is received within a register box which, according to the present invention, is completely separable from the meter housing but which in use seats upon the top of the latter. The register box is preferably of metal so that it thoroughly protects the register mechanism within it, and normally would be provided with a cover hingedly or otherwise movably supported whereby a transparent lens or disk, closing the top of the register assembly, may be accessible for viewing the register mechanism within, but can be protected from injury. The meter mechanism is housed within a meter housing, and the details are not pertinent to the present invention, other than it has a drive coupling arrangement which engages with a complemental coupling element projecting below the register assembly for driving the register mechanism.

The meter housing 9 is, as usual, provided with connections such as the one at 91 and another, not shown, opposite 91, one of which is for inlet of water to the meter and the other of which is for the discharge of the water therefrom. It is assumed that the fluid being metered is water, for the meter illustrated is a typical water meter. The meter mechanism is not shown other than a terminal spur gear 95 which couples with and drives a complemental gear described later, which is part of the register mechanism. The meter housing is open at its upper end and the register box, indicated in general by the numeral 1, closes the top of the meter housing, and is secured on it by means such as the screws 19.

The register box includes primarily an outer casing 18 which is open at its top and at its bottom, a separate bottom closure formed as a pan 10, and a transparent lens or disk 2 closing its top. The pan 10 is sealed to the bottom of the casing 18 by a gasket 11 which, for a purpose that will be made clear hereinafter, preferably projects slightly inwardly of the inner wall of the casing 18. The pan 10 and casing 18 are held together, and the gasket 11 is clamped, by means such as the screws shown in FIGURES 1 and 3. The casing 18, at its upper end, has inwardly extending flanges 12.

The transparent disk 2 which closes the upper end of the register box 1 fits within the casing 18, and is formed with a circumferential flange 20 complemental to the casing flange 12. A deformable sealing ring, such as the O-ring 22, is interposed between the flanges 12 and 20, and when parts are assembled this O-ring is deformed by being urged upwardly, and effects an oil-tight seal about its circle. Thus the flange 12 constitutes sealing ring retainer means.

The register mechanism is indicated generally by the numeral 3. Its details of construction are in the main not material, and any standard register mechanism may be provided, usually including numbered disks, a pointer, a dial, and gearing to effect proper movements of its component parts. However, the register mechanism does include a base plate 30 whereon all the remainder of the register mechanism is mounted. A drive shaft 32 for the register mechanism penetrates the base plate 30, and protrudes beneath the pan 10, where it mounts a spur gear 33 or other suitable coupling or driven member for engagement with the terminal element of the meter mechanism, which is the spur gear 95.

Since the gears 33 and 95 must be quite exactly located to remain in proper driving engagement, it follows that the base plate 30 must be accurately located within the register box and held immovably in such position. The base plate rests upon circumferentially short ledges 13 spaced circumferentially around the pan 10, which space it from the bottom of the pan. Axially and inwardly directed ridges 14 space the edge of the base plate inwardly from the inner wall of the pan, and center the base plate within the pan. It is pressed down upon the ledges 13, and held in this position, by an inner sleeve or collar

4, of a height when resting upon the base plate 30 to engage and be pressed downwardly by the lens 2. The tightening of the screws, it will be seen, clamps the seals 22 and 11, and anchors the base plate 30 in its proper position within the register assembly through the spacer collar 4.

In order to avoid fogging of the inner surface of the lens 2 by exclusion of moisture from the register box, and in order to avoid corrosion of the register mechanism from access of water to it during use, it is desirable that the interior of the register box be substantially filled with oil, preferably at the factory or in the shop. To this end, a filler opening normally closed by the plug 15 is provided in the bottom of the register box, that is, in the pan 10. While the presence of a small air bubble within the register box is not harmful, and indeed may be helpful in compensating for pressure variations due to thermal effects, most of the air should be evacuated from the register box, and the space filled with oil. Since there are subdivisions or small chambers within the register box that can trap unwanted volumes of air, it is important that provision be made for venting each such subdivision through the single filler opening.

The oil is supplied through the opening normally closed with the plug 15 while the register box is inverted. The spacer collar 4 is slit lengthwise, at 40, diametrically opposite this filler opening. This is advantageous in that the collar can fit within outer casings of slightly varying diameter, but the slit 40 is quite important in that in the filling position oil may pass through it from the annular space between the collar 4 and the casing 18 to the space within the interior of the collar. If the register box is tilted somewhat, as it is naturally in the filling operation, the slit 40 will be lowermost so that the oil may flow upward through it into the lower portion of the space within collar 4. Air from the upper portion of the space within collar 4 can escape into the upper portion of the small annular chamber between the base plate 30 and the sealing washer 11 through the notch 41 which, during filling, is at the top of the chamber. Finally, the air escapes about the periphery of the base plate 30 into the space between the pan 10 and the base plate, it being remembered that the base plate rests only upon ledges 13 and as its periphery spaced from the wall of casing 18 by the ridges 14. Almost all the air can thus escape through the filling opening, leaving the register box almost completely oil-filled. Oil sufficient only to cover the gears of the register mechanism will inhibit corrosion, but the almost complete filling described is preferred to reduce as much as possible the air content of the casing which may carry water vapor.

Seals 22 and 11 are adequate to seal the upper and lower ends of the casing 18 at its periphery, but it is necessary also to provide a seal against leakage of oil around the rotative shaft 32. A special sealing element 5 is provided for this purpose. Preferably it is in the form of a cup of resiliently deformable material, such as elastomer material, having wall portions 51 and 52 of different diametral extent, joined by a rather abrupt ledge 50. The lip of the larger cup wall portion 52 engages one of the two parallel oppositely facing surfaces constituted by the upper surface of the pan 10 and the lower surface of the base plate 30, and the bottom 53 of the cup, which closely surrounds the shaft 32, engages the other such surface. As shown, the lip at the edge of the portion 52 engages about a circle with the lower surface of the base plate 30, and the bottom 53 engages the upper surface of the pan 10.

It will be remembered that the pan 10 is drawn axially towards the sleeve 4 to clamp the sealing ring 11, utilizing screws for the purpose, and this axial approach of the pan and base plate 30, which serves to seat the latter firmly, serves also to collapse the interposed sealing cup 5 axially, from the position of FIGURE 4 to that of FIGURE 5. When so collapsed, the ledge 50 is folded upwardly and slightly inwardly, and the circumferentially smaller wall portion 51 is of a height that it makes contact with the lower surface of the base plate 30 about a second line of contact inwardly from the location at which the lip of the portion 52 engages such surface, to effect a double seal.

In addition, the bottom 53 is reentrant, as a central dished or coned web terminating in a sleeve snugly embracing the shaft 32. Such central portion extends axially sufficiently so that the end of such sleeve also contacts the lower surface of the base plate and this constitutes a further seal. In addition, such pressure of the sleeve end endwise against the surface swells the sleeve radially to hug the shaft closely and effect a seal around it. The bottom 53 of the cup is also flattened somewhat more by deformation where it presses about a broad zone against the upper surface of the pan 10. The combined effect of the wall, bottom and web-sealing components is to create a thoroughly fluid-tight seal surrounding the shaft 32.

The register mechanism is well protected by the register box consisting of the casing 18 and pan 10, but in order to protect the disk or lens 2, which may be of plastic or heat-treated glass, from breakage, scratching or other injury, it is desirable to provide a cover hingedly supported on the casing 18 as shown in FIGURES 1, 2 and 3.

I claim as my invention:

1. A register box for a meter, comprising an upright casing open at its upper and lower ends, a pan seated upon and closing the lower end of said casing, a transparent disk received within the upper portion of said casing, the upper end of said casing and said disk having complemental facing flanges, a deformable sealing ring interposed between said flanges, and a spacer collar within said casing, reacting from said pan, and of a length to press upwardly on said disk and clamp said sealing ring between said flanges when said pan is seated upon said casing for closing the upper end of said casing.

2. The register box defined in claim 1, in which the pan has a normally closed filler opening therein.

3. The register box defined in claim 2, in which the spacer collar is spaced from the inner wall of the casing, the filler opening is in communication with the space between the spacer collar and the casing, and the spacer collar is split lengthwise to afford communication between the space within it and the space between the spacer collar and the casing.

4. The register box defined in claim 1, and register mechanism enclosed within the register box including a supporting base plate resting upon the pan, the lower end of the spacer collar bearing on said base plate.

5. The register box defined in claim 4, the register mechanism including a shaft extending downwardly through the pan, and a contractable sealing cup surrounding said shaft between the pan and the base plate and being of an unstressed height exceeding the distance therebetween when the base plate is resting on the pan, so that said sealing cup is contracted by engagement with the pan and the base plate.

6. The register box defined in claim 5, wherein the sealing cup includes a deformable stepped wall, the height of the wall portion at one side of such step approximating the distance between the pan and the base plate when the base plate is resting on the pan so that such wall portion bears against both the base plate and the pan.

7. A register assembly comprising a base, register mechanism mounted thereon, an open-ended casing surrounding said register mechanism, a transparent disk within and closing one end of said casing for viewing the register mechanism, a collar within said casing having one end bearing against said disk and its other end bearing against said base, each of the casing and disk having flanges each facing the other, a resiliently deformable sealing ring interposed between said flanges, a pan clos-

Dec. 11, 1962 G. H. SMITH 3,067,612

METER REGISTER ASSEMBLY INCLUDING INTERNAL SPACER COLLAR

Filed March 17, 1958

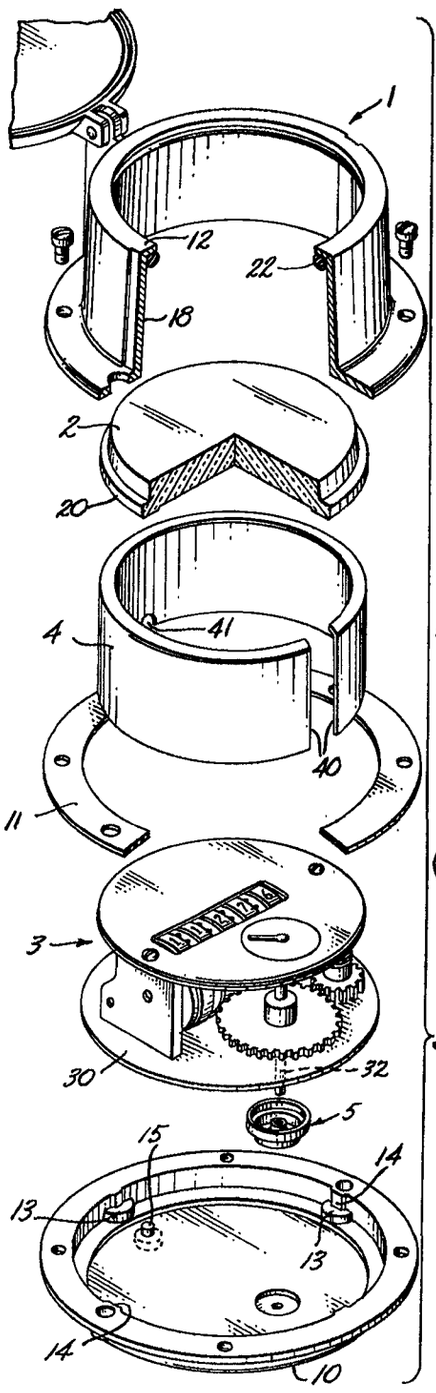
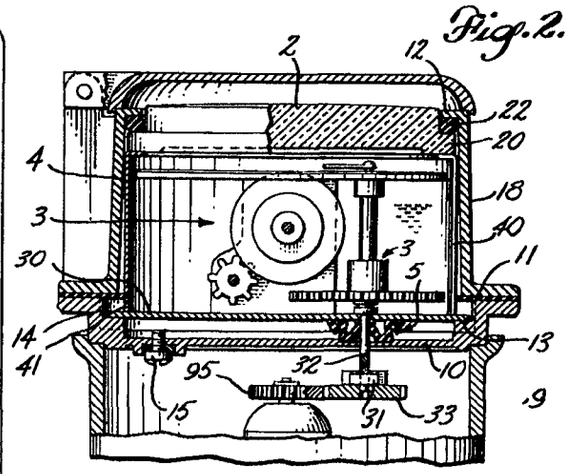


Fig. 2.



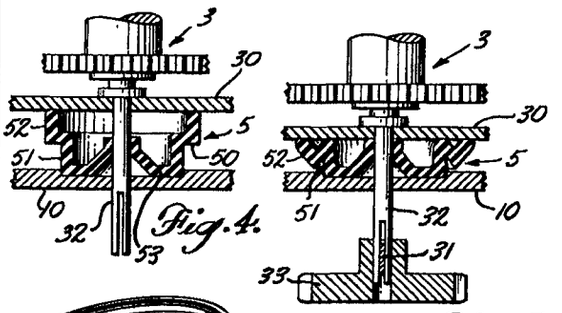


Fig. 4.

Fig. 5.

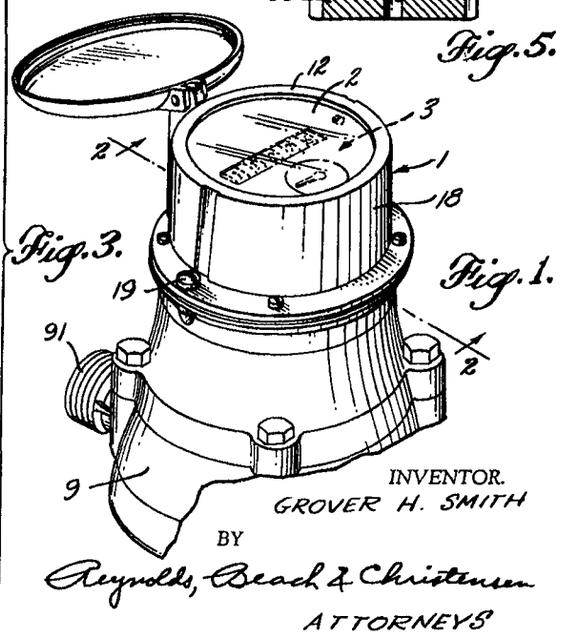


Fig. 3.

Fig. 1.

INVENTOR.
GROVER H. SMITH

BY

Reynolds, Beach & Christensen

ATTORNEYS

United States Patent Office 3,389,857 Patented June 25, 1968

3,389,857

MOTOR-DRIVEN SCORE DRUMS

Henry S. Ross and Marcine P. Wolverton, both of 10136 Pacific, Franklin Park, Ill. 60131

Filed July 5, 1966, Ser. No. 562,689
10 Claims. (Cl. 235—144)

This invention relates to motor-driven score drums and more particularly to indicia-bearing score drums utilized in apparatuses wherein a progressive number counting or registration is to be visually indicated.

A principal object of the invention is to provide in a device of this character a motor-driven means for advancing a single numbered drum or a plurality of numbered drums through various positions and, by reversible action of the motor-driven means, return or reset the drum or drums to either the original or zero position.

Another object of this invention is the provision in an apparatus of this character of rotatably mounting a a plurality of individual score-indicating drums on a single continuously rotating shaft and electromagnetic means for releasably holding each drum against rotation with the shaft and a friction clutch for each drum for independently effecting rotation of the individual drums with the shaft in either direction when the same are released for rotation by the electromagnetic means.

Presently the accepted method of advancing a plurality of indicating drums includes an electromagnetic solenoid for each drum operable in a manner such that with each energization of the solenoid the drum is mechanically stepped a predetermined distance. To accomplish a multitude of steps or a predetermined distance of rotation of each of the drums, the electromagnetic solenoid must be periodically energized. This arrangement requires a large quantity of parts and electrical connections and results in a slow and blatant operation. The present invention overcomes these objections by the structural arrangement herein described.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings showing the preferred form of construction, and in which:

FIG. 1 is a perspective view of one unit of indicating drums and the mounting structure therefor;

FIG. 2 is a perspective view of one of the indicating drums;

FIG. 3 is a side elevational view of one drum and its associated mounting and operative structure;

FIG. 4 is an elevational view showing the compact mounting frame for a plurality of units as well as the motor-driven means therefor;

FIG. 5 is a side elevational view of the motor-driven mounting means;

FIG. 6 is a side elevational view of the motor-driven mounting means with a side cover removed;

FIG. 7 is a fragmentary exploded view of the friction clutch arrangement as employed in this invention.

The structural arrangement of this invention includes a drum **10** which is constructed of a light-weight one-piece molded unit formed of a translucent thermo-plastic material. The drum **10** consists of a hollow hub **11** and radially extending spokes **12** which in turn support a peripheral flange **13**. On one edge of the peripheral flange **13** is formed a plurality of raised stop shoulders **14** as well as a recessed lock port **15**. In the opposite edge of the peripheral flange **13** is carried a cam member **16** which has a cam surface **17** extending tangentially beyond the surface of the peripheral flange **13**.

Indicia-bearing drums of the type just described may

be utilized singly or as a unit U comprising a plurality of identically designed drums. Such a unit of drums is indicated in FIG. 1, wherein there is shown a mounting comprising end plates **18** and **19** connected together by an L-shaped support **20**.

Journalled through the end plates **18** and **19** as well as the hub **11** of each of the drums **10** is a shaft **21**. The shaft **21** extends beyond the end wall **19** and provides a flat portion **22** which by a suitable sleeve **23** (see FIG. 4) may be mounted to a driving shaft **24** hereinafter described.

The support **20** which extends between the end walls **18** and **19** provides a base **25** and a vertical wall **26** to which is connected by means of a screw **27** or the like a plurality of electromagnetic means **28**. The electromagnetic means **28** includes a magnetically attracted latch plate **29** having at its free end a latch finger **30** which is adapted to engage either the stop shoulders **14** or the recessed lock port **15** formed on the one edge of the peripheral flange **13** of the drum **10**. The latch plate **29** is maintained in latching position by means of a spring **31** which extends between one end of the latch plate **29** and a lug **32** provided by the base **25** of the support **20**. As shown in FIG. 1, there is an electromagnetic means **28** for each of the individual drums **10** mounted as a unit.

Referring to FIG. 7, there is shown the shaft **21** which supports the plurality of drums **10** as a unit. This shaft is provided with a longitudinally extending slot **33**, forming a keyway which receives an internal key **34** formed on the inner wall **35** of an aperture **36** formed in an anti-friction washer **37**. The anti-friction washer **37** is disposed on the shaft **21**, with the key **34** in the slot **33** and with the washer **37** in facial abutment with one edge of the hub **11** of the drum **10**. Embracing the shaft **21** between washers **37** of the endmost drums **40** and **41** and the inner adjacent drums, is a coil spring **38** having sufficient expansion force to create a rotating movement between the drums and the shaft when the former are released as hereinafter described. To maintain all of the hereinbefore described parts in assembled relation, the end of the shaft **21** has formed therein an annular groove **39** which receives a split O-ring fastener **39'**.

The frictional clutch connection between the shaft **21**, washers **37** and drums **10** is sufficient to cause rotation of each or all of the drums when they are released from their latched position. Thus, when viewing the unit as shown in FIG. 1, when the electromagnetic means **28** which is associated with the endmost drum **40** is caused to be energized, its latch plate **29** will be pivoted so that its latch finger **30** is withdrawn from holding contact with either the stop shoulder **14** or withdrawn out of the lock port **15**, permitting such drum to rotate with the shaft **21** until the electromagnetic coil **28** is de-energized and its latch plate **29** again engages a stop shoulder **14** or is displaced into the lock port **15**. By this arrangement, the rotation of the drum is controlled through a period of time, which is that period that its associated electromagnetic means is energized. If all of the electromagnetic means shown in FIG. 1 were simultaneously energized, all of the score drums would be free to rotate. Thus, there is provided a simple yet effective method of rotating a drum or a plurality of drums for a predetermined time.

When the unit as shown in FIG. 1 is caused to be actuated so as to register a numeric value greater than 9, 99, or 199 it is necessary to effect a rotation of two or more, or all of the drums **10A**, **10B**, **10C** and **10D**. This may be accomplished notwithstanding that only one of the electromagnetic means, i.e. that associated with drum **10A**, is caused to be energized. The means by which this is accomplished is the cam **16** which is positioned on the edge of the peripheral flange **13** of the respective

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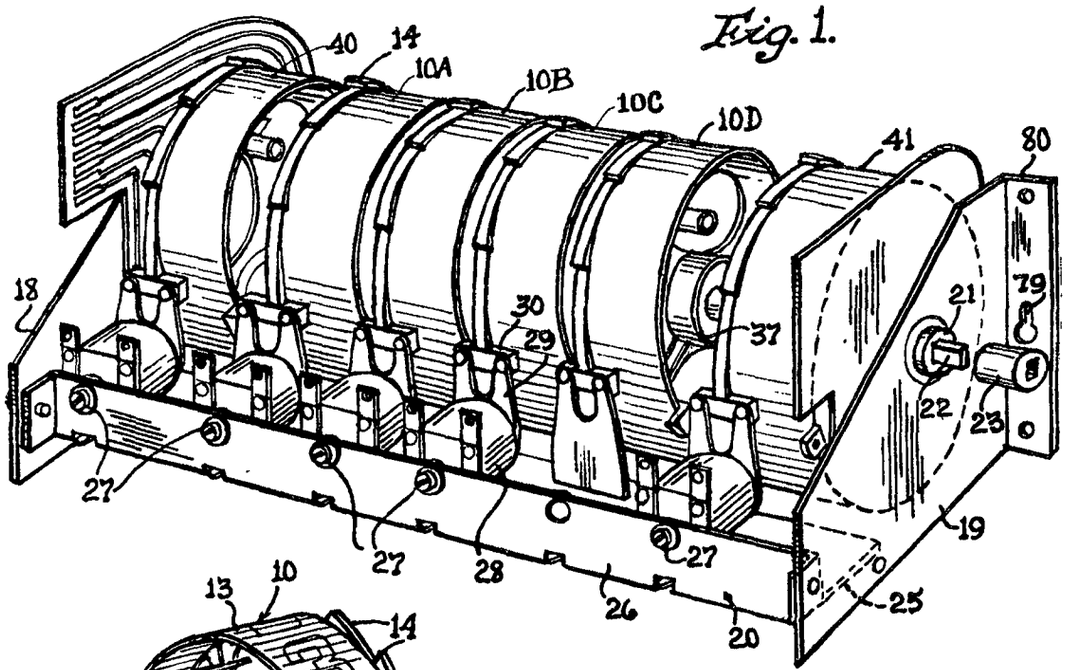
June 25, 1968 H. S. ROSS ET AL 3,389,857

MOTOR-DRIVEN SCORE DRUMS

Filed July 5, 1966 3 Sheets-Sheet 1

Fig. 1.



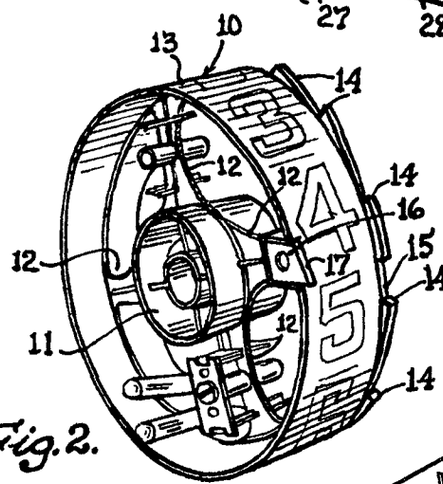


Fig. 2.

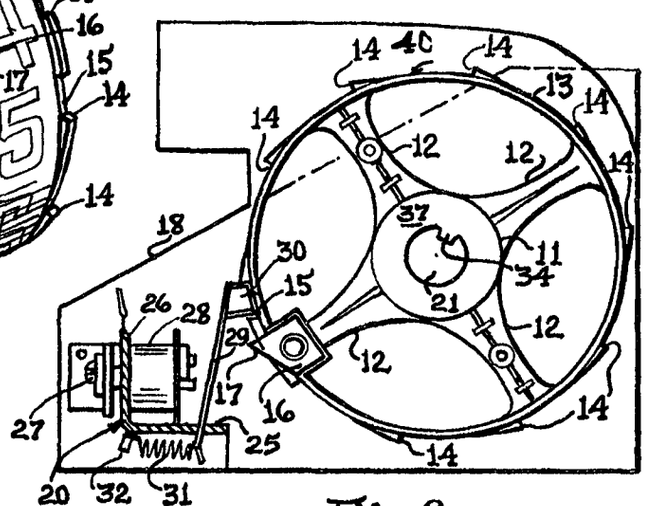


Fig. 3.

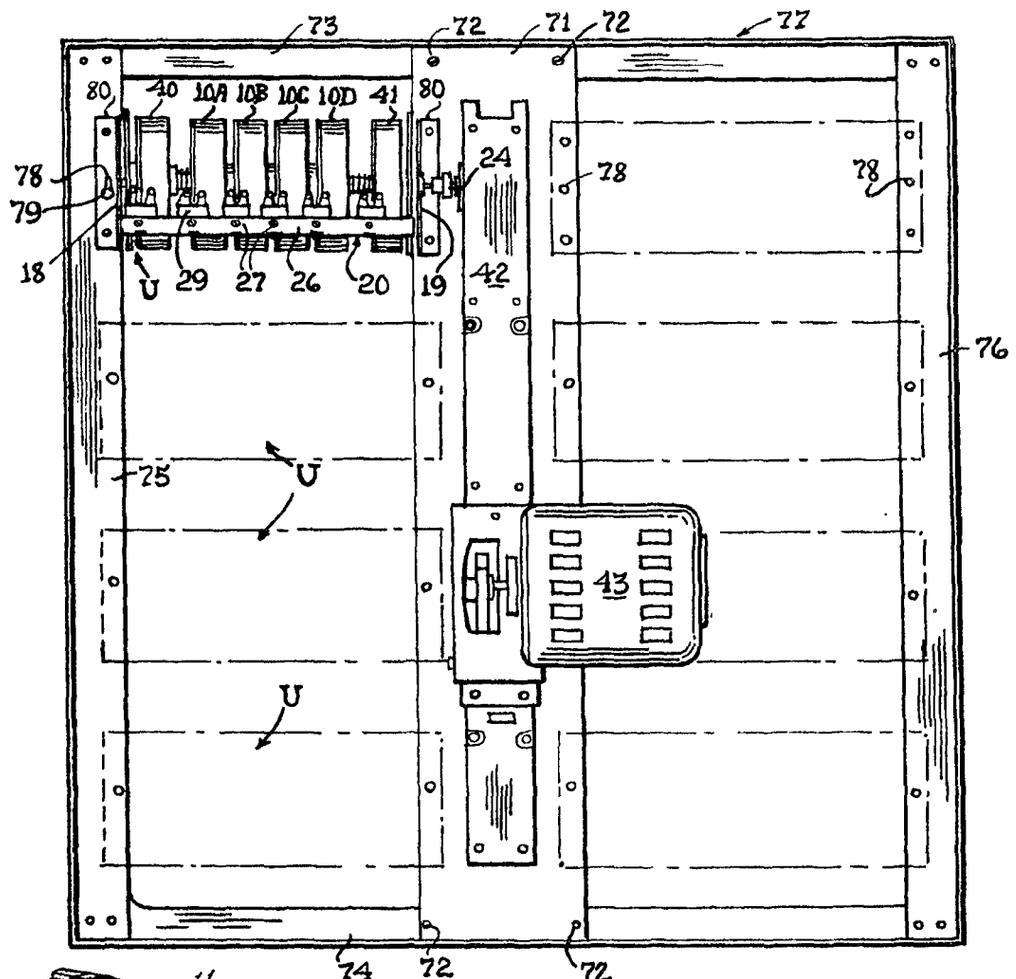

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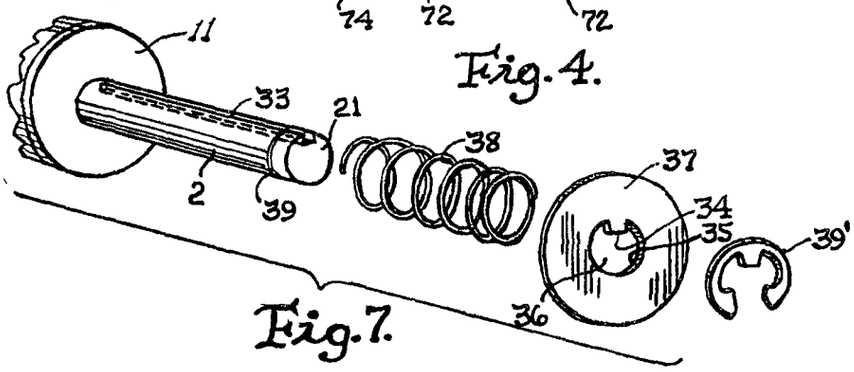
Fig. 4.


11
33
21
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2
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35
39'
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Fig. 7.

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIRECCION DE NUEVAS CREACIONES

202086
Bogotá, D.C.,

Abogado
EMILIO FERRERO

ASUNTO	Radicación	06-065571
	Trámite	011
	Evento	379
	Actuación	430
	Oficio	14425
	Folios	10

Patente de Invención	[X]	Patente de Modelo de Utilidad			[ ]
Vía Nacional	[ ]				
Vía PCT (fase nacional)	[X]	Cap.I	[ ]	Cap. II	[X]

No. Sol. Internacional PCT/GB2004/005161
Fecha de Presentación Internal. 10-12-2004

Como resultado del examen de fondo, realizado conforme a lo establecido por el artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le comunica:

1. Documentos estudiados

Descripción:	Folios: 18 a 28
Reivindicaciones:	Folios: 29 a 31
Dibujos:	Folios: 14 a 17
Prioridad:	Folios: 4 a 17
	12-12-2003. GB 0328882.6

2. Objeto de la invención

- Título de la solicitud: "CONTADOR LLENABLE DE LIQUIDO PARA UN CAUDALIMETRO" (folio 18).

- Objeto de la invención: según el autor existe la necesidad de un caudalimetro que posea una forma de eliminar la condensación dentro del aparato y que permita liberar todo el aire dentro de dicha carcasa (evacuar el gas indeseado).

  El solicitante propone entonces un contador con una rueda que posee unas aberturas que permiten la evacuación de las burbujas de gas formadas dentro del dispositivo.

- El objeto de esta invención se clasifico como *G01F3/08; G01F15/07* según la Clasificación Internacional de Patentes (IPC.).

3. De la solicitud de Patente

3.2 Reivindicaciones *(artículo 30 D 486)*

Después de realizar el estudio completo de la solicitud, se hacen las siguientes observaciones a este capítulo:

- Se sugiere al solicitante incluir entre paréntesis ( ) los números de referencia de cada uno de los elementos que hacen parte de la invención de acuerdo con la numeración empleada en los dibujos (figuras 1 a 7), con el fin de hacer mas fácil y sencilla la comprensión de la materia objeto reivindicada. Adicionalmente eliminar y no incluir términos imprecisos como. "al menos", "por lo menos", "alrededor" etc.

- El capitulo reivindicatorio (folios 74-80) posee un número innecesario de reivindicaciones independientes (Reiv. 1 y14) definiendo el mismo objeto. Se sugiere al solicitante presentar una única reivindicación independiente con su respectivo grupo de reivindicaciones dependientes.

- No se aceptan dentro de las reivindicaciones ventajas, resultados o efectos a alcanzar, por lo tanto, se sugiere al solicitante eliminar la siguiente expresión: "para permitirle a las burbujas de gas en la carcasa moverse alejándose de la rueda cuando la carcasa está llena con líquido." (reiv. 1, folio 29). Esta expresión no será tenida en cuenta dentro del examen de patentabilidad.

- Se sugiere al solicitante incluir dentro de la reivindicación independiente las características mencionadas en las reivindicaciones 2 y 3 definiendo mejor dichas características, con el objetivo de resaltar la novedad de la solicitud con el estado de la técnica.

4. Determinación del Estado de la Técnica

Teniendo en cuenta que la fecha de prioridad reivindicada es 12-12-2003, se encontraron los siguientes documentos relevantes:

N.	Documento	Titulo	Fecha de pub.
D1	US3067612	Meter register assembly including internal spacer collar	11-12-1962
D2	US3389857	Motor-driven score drums	25-06-1968

5. Análisis de patentabilidad (artículo 14 D486)

5.1 Novedad (artículo 16 D486)

El estudio se realizo comparando elemento por elemento de la invención tal como esta definida en la reivindicación modificada uno (1, folio 29) con el documento D1, encontrando que el mencionado documento revela todos los elementos y características de dicha reivindicación:

Reivindicación Uno (1, folio 29)	*D1*
1.Un contador para un caudalímetro, el contador comprende una carcasa llenable con líquido y sellable al líquido.	SI Ver: elementos 1, 18, figuras 1-3.
2. Que contiene al menos una rueda contadora rotable.	SI Ver: elementos 1, 18, 3 figuras 1-3.
3. Que tiene al menos una abertura.	SI Ver: elementos 15 figuras 1-3.

De acuerdo con lo anterior, todos los elementos y características que forman parte del "CONTADOR LLENABLE DE LIQUIDO PARA UN CAUDALIMETRO" mostrados en la reivindicación independiente uno (1, folio 29) ya fueron divulgados en D1, por lo cual se podría considerar que carece de novedad. La reivindicación uno (1) esta formulada de manera muy general y no se está caracterizando adecuadamente los elementos.

Las reivindicaciones 1-16 (folios 29 a 30) no muestran en forma clara lo nuevo que se pretende aportar a la técnica ni aporta diferencias a lo ya existente. El análisis anterior permitiría afirmar que este grupo de reivindicaciones no cumplirían con lo estipulado en el artículo 16 de la Decisión 486 de la Comisión de la Comunidad Andina de Naciones.

5.2 Nivel Inventivo (artículo 18 D486)

Continuando con el estudio, las reivindicaciones dependientes 2, 3 (folio 29) definen una abertura descentrada y definida por dos radios para la rueda del contador. Esta configuración para un tambor de una maquina de conteo fue revelada por D2 que sugiere y demuestra una abertura similar para cilindros de este tipo (Ver en D2: elementos 10, 12, 11, figura 2-3).

Así las cosas, la solicitud se vería afectada por nivel inventivo ya que no seria difícil para un experto en la materia tomar como base la invención propuesta por D1 dándole al cuerpo del cilindro una abertura como la sugerida por el documento D2 logrando así evacuar las burbujas de gas acumuladas dentro de la carcasa del contador. Hecho que no constituye un resultado sorprendente e inesperado y que por el contrario se ubica en el desarrollo normal de la tecnología. El análisis anterior permitiría afirmar que la presente solicitud no cumpliría con lo estipulado en el artículo 18 de la Decisión 486 de la Comisión de la Comunidad Andina de Naciones.

6. Conclusión:

Los requisitos de patentabilidad de la presente solicitud se encuentran afectados así:

N°	Documento N°	Reivindicaciones afectadas	Requisito que afecta
D1	US3067612	1-16	NOVEDAD
D1	US3067612	1-16	NIVEL INVENTIVO
D2	US3389857	1-16	NIVEL INVENTIVO

- Se sugiere al solicitante tener en cuenta las observaciones hechas en el numeral tres (3) y realizar el cambio de modalidad de patente de invención a patente de modelo de utilidad, debido a que la presente solicitud no cumpliría con el requisito de nivel inventivo

En cumplimiento del artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le indica que debe dar respuesta dentro del término de sesenta (60) días contados a partir de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única N° 10 de 2001.

ALIX CARMENZA CÉSPEDES DE VERGEL
Directora de Nuevas Creaciones (C)

El anterior requerimiento fue notificado por fijación en lista, de fecha 11 DIC. 2009

CONCEPTO TÉCNICO No 3841	**EXAMINADOR TÉCNICO** Código No.202086