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AS: 104.609

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 07-069281- -00004-0000

Fecha: 2008-08-21 18:47:25 Dep. 2020 NUECREACIONE
Tra. 2 PATENTES Eve: 1 REGDEPOSITO
Act. 538 PETICION Folios: 2

Señores

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISION DE NUEVAS CREACIONES

E. S. D.

REF.: Expediente No. 07 069.281 - Solicitud de Patente

a nombre de: **SIMON, S.A.**

Titulada: BASE DE ENCHUFE CON OBTURADOR DE SEGURIDAD.

JUAN PABLO CADENA SARMIENTO, vecino de Bogotá, portador de la tarjeta profesional No. 57492 del Consejo Superior de la Judicatura, obrando como apoderado de la Sociedad **SIMON, S.A.**, según lo acredita el documento de poder presentado en esa División, de acuerdo con el Artículo 44 de la Decisión 486 de la Comisión de la Comunidad Andina, me permito solicitar que se examine si la invención contenida en la solicitud en referencia es patentable.

De acuerdo con lo anterior, me permito anexar el recibo oficial de caja No. 08-60,852 por valor de \$420.000.

De la Señora Jefe atentamente,

JUAN PABLO CADENA SARMIENTO

C.C. No. 80.410.337 de Usaquén

T.P. No. 57492 del C.S.J.

Cra 7 No. 71-21 Torre B, Piso 4

Bogotá, 21 de agosto de 2008

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

RECIBO OFICIAL DE CAJA : 08 - 60,852
FECHA : JULIO 29 DE 2008

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 07-069281- -00004-0000

Fecha: 2008-08-21 16:47:25 Dep. 2020 NUECREACIONE
Tra. 2 PATENTES Eve: 1 REGDEPOSITO
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***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
BRIGARD & CASTRO LTDA	CONSIGNACION	BANCO DE BOGOTA	062754387	7435956	29/07/2008	34,469,000.00

***** CONCEPTO *****

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. _____

82
62

DIVISIÓN DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No. 07-69281

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

FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No **590** DE

FECHA **31 DE MARZO DE 2008** EL TÉRMINO HÁBIL SEÑALADO POR LA LEY

EXPIRA EL **27 DE JUNIO 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



US006893275B2

(12) **United States Patent**
Ng et al.

(10) **Patent No.:** US 6,893,275 B2
(45) **Date of Patent:** May 17, 2005

(54) **ELECTRICAL RECEPTACLE WITH SHUTTER**

(75) **Inventors:** Kenneth Ng, Los Angeles, CA (US);
Edmund Ng, Los Angeles, CA (US)

(73) **Assignee:** Koncept Technologies Inc., Monterey
Park, CA (US)

(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** 10/374,503

(22) **Filed:** Feb. 26, 2003

(65) **Prior Publication Data**

US 2004/0147148 A1 Jul. 29, 2004

Related U.S. Application Data

(63) Continuation of application No. 10/354,949, filed on Jan. 29,
2003.

(51) **Int. Cl.⁷** H01R 13/44

(52) **U.S. Cl.** 439/137; 439/140

(58) **Field of Search** 439/137-145

(56) **References Cited**

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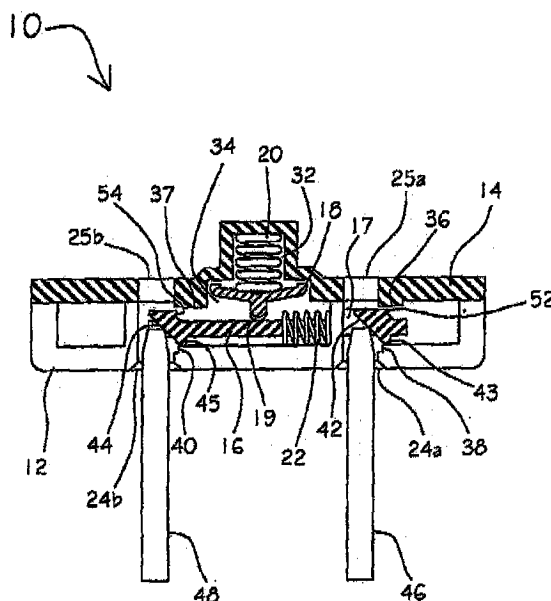
Primary Examiner—Chandrika Prasad

(74) *Attorney, Agent, or Firm*—Foley & Lardner LLP

(57) **ABSTRACT**

A shutter assembly for a receptacle. The shutter assembly may include a first plate, a second plate disposed adjacent the first plate, a shutter disposed between the first plate and the second plate, a first spring that provides lateral movement of the shutter, a second spring that provides transverse movement of the shutter and a plunger for providing a pivot point to the shutter. The plunger may be disposed between the second spring and the shutter. According to an embodiment of the invention, when there are no pins or there is one pin inserted into the shutter assembly, the shutter is in a first position and lugs on the shutter abut locks disposed on the first plate and the second plate, thereby barring access to apertures in the assembly. When two pins, other than the ground pin, either sharp or round edges, are inserted into the shutter assembly, the shutter slides laterally to expose apertures in the assembly, making the receptacle available for use.

51 Claims, 21 Drawing Sheets



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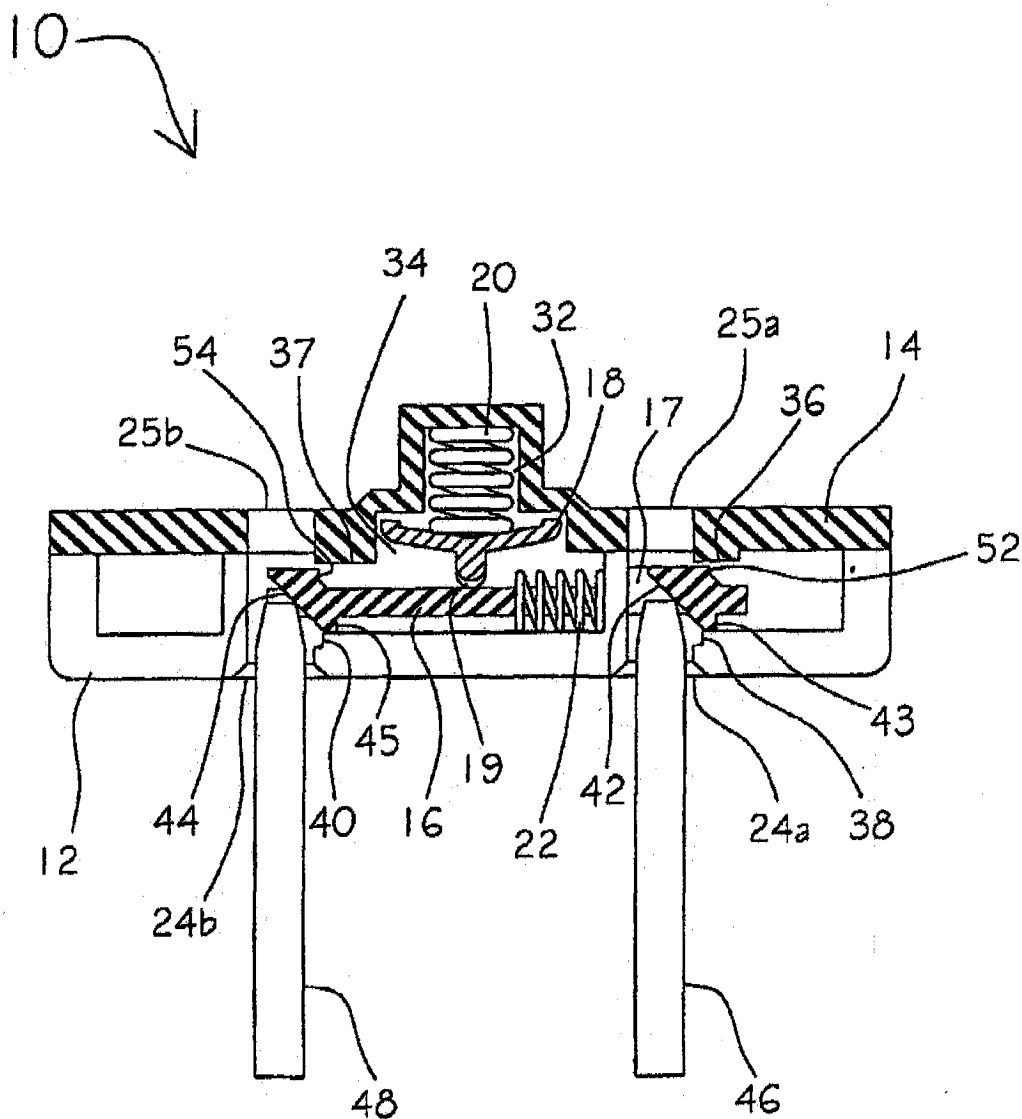


Figure 4

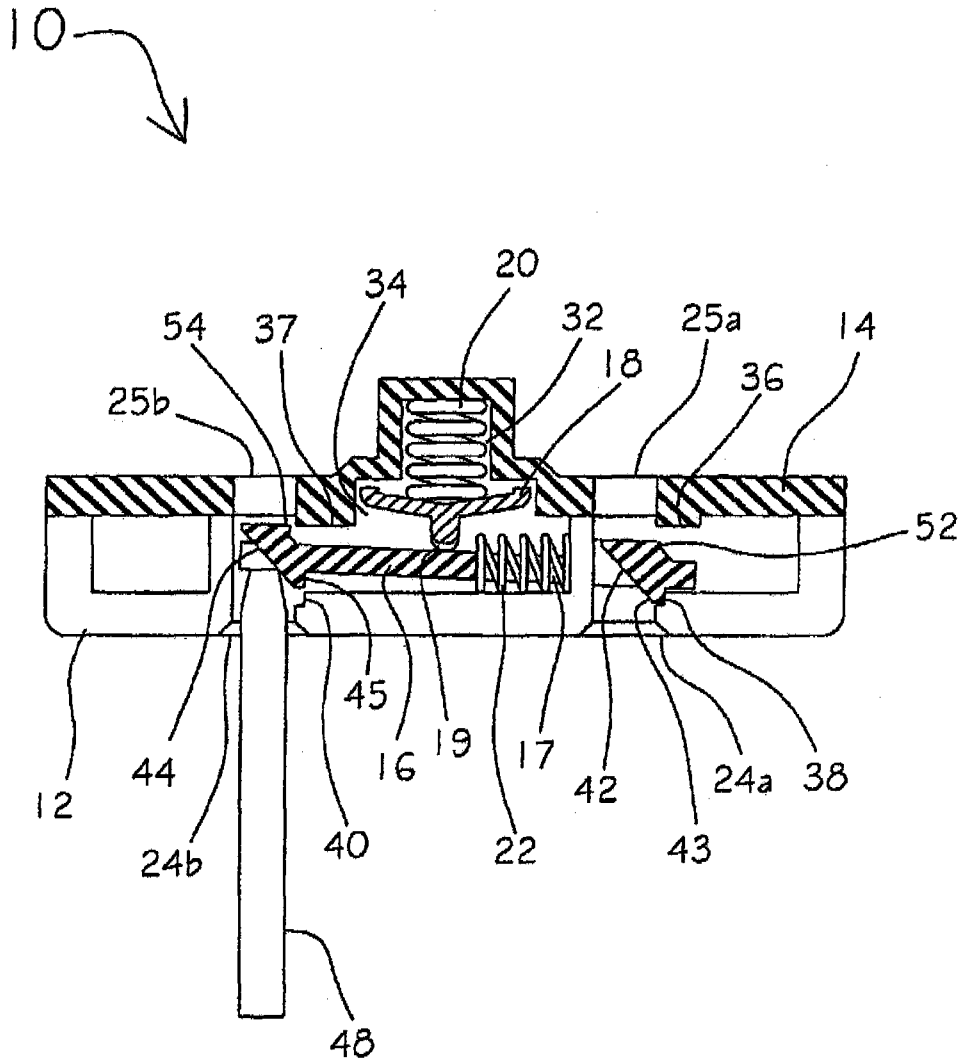


Figure 7

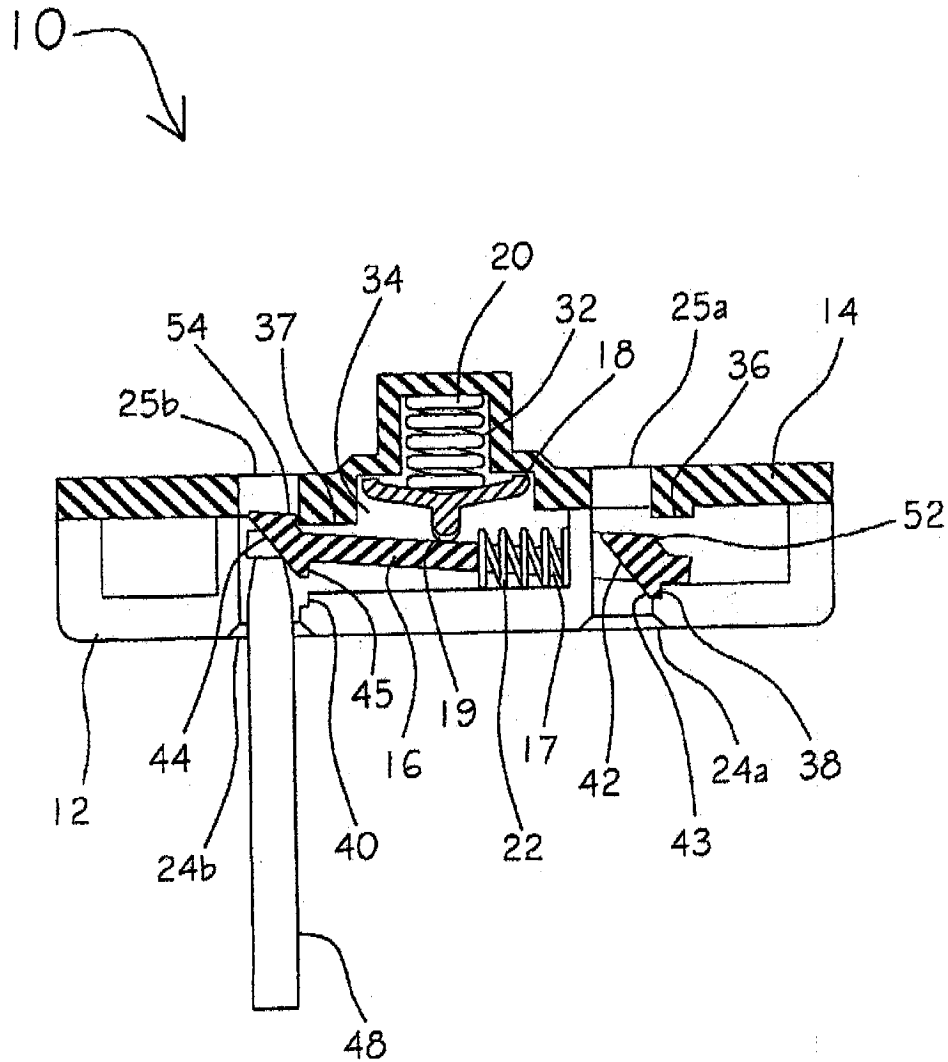
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Figure 8

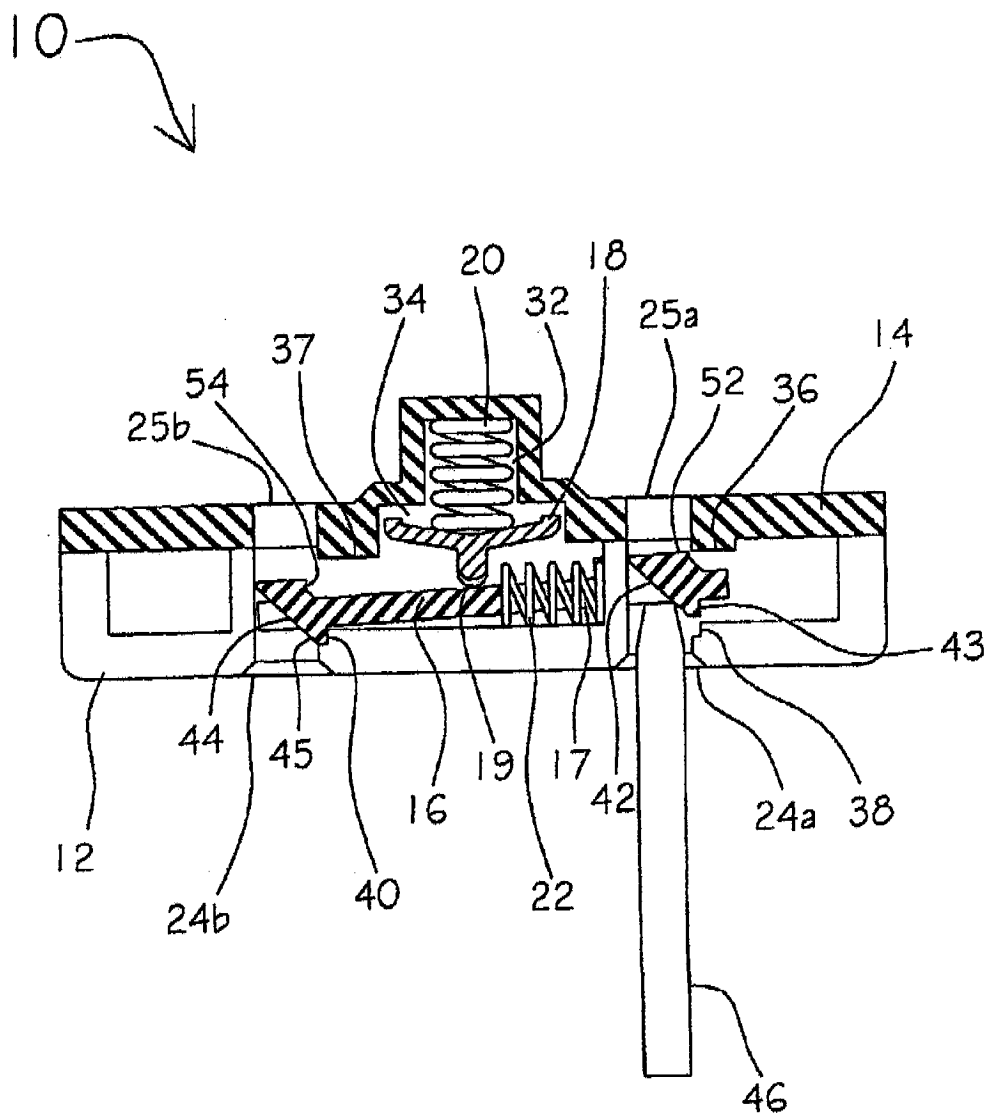


Figure 9

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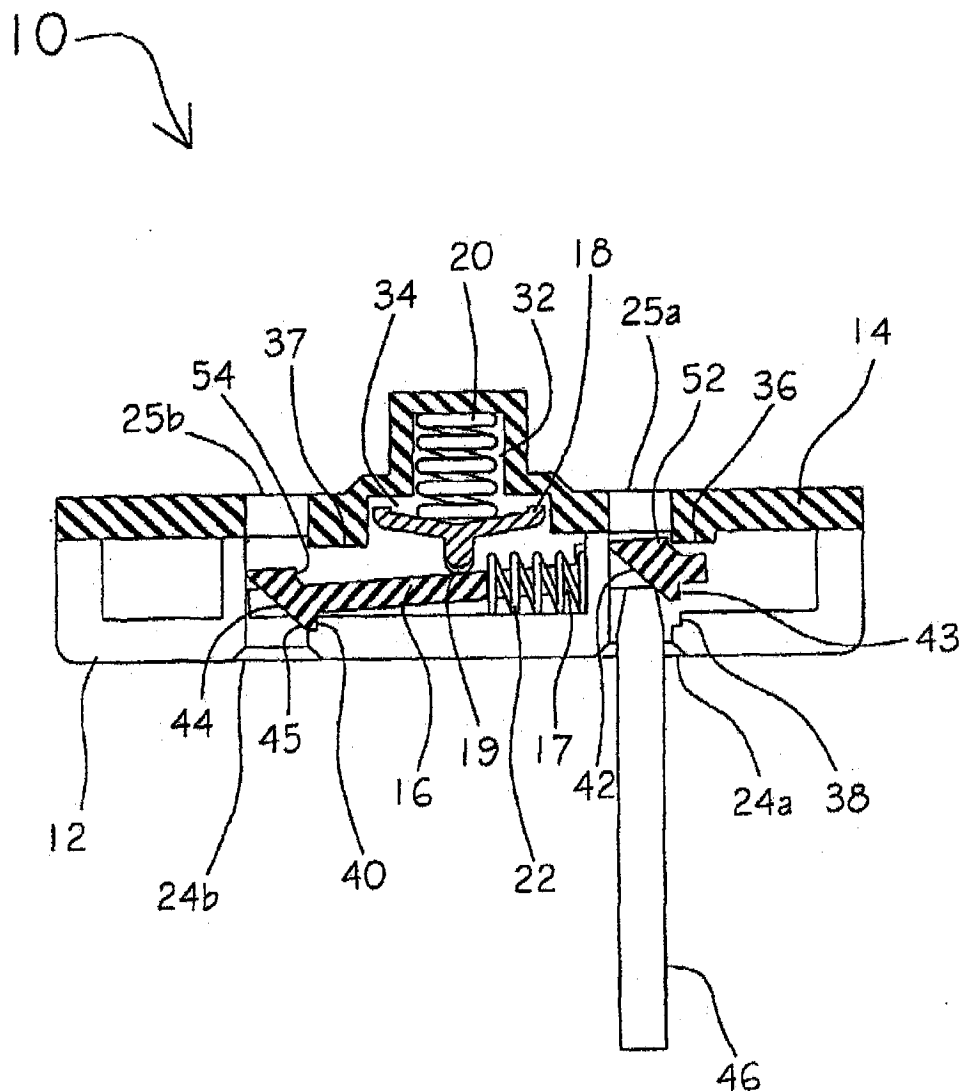


Figure 10

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ELECTRICAL RECEPTACLE WITH SHUTTER**CROSS-REFERENCE TO RELATED APPLICATIONS**

This application is a continuation of an application entitled "Shutter Assembly for Receptacle," Ser. No. 10/354, 949 filed Jan. 29, 2003, from which priority is claimed and the contents of which are hereby incorporated herein by reference.

BACKGROUND

The present invention relates to shutter assemblies for receptacles and, in particular, to shutter assemblies that may prevent access to common household AC outlets.

Virtually every household in the industrialized world is equipped with sockets, outlets or receptacles supplying electrical power. Electrical power is generally considered a necessity and, thus, virtually no modern home is ever designed without access to electrical power. Also, with the rapid increase in the number of electrical and electronic products in a typical home, power strips employing multiple power outlets have become commonplace, resulting in an increase in the number of electrical power outlets in the typical, modern home.

In addition, the increase in the number of electrical and electronic products in the typical home has increased not only the number of power outlets in the home, but also the number of electronic sockets and receptacles generally. Computers, stereo equipment, DVD players, television sets and the like are replete with plugs, pins, receptacles and sockets that must mate for effective operation of the equipment.

The natural curiosity of children can make the common household power outlet a dangerous device. Although children may not likely insert a standard three-prong plug of an electrical device into a wall outlet, it is not uncommon for a child to insert a single metal object, such as, for example, a key or a paper clip, into a wall outlet. Given the high voltage that typically exists in a common AC power outlet, such a scenario could be dangerous or even deadly. When children attempt to insert metal objects into computer or entertainment equipment receptacles, damage to the device may result.

Several attempts have been made in the prior art to preclude unwanted insertion of objects into power outlets. Some prior art devices employ a shutter plate that locks when a single pin is inserted into the outlet. However, in these devices, the normal position of the shutter plate is in an unlocked position. Thus, by carefully inserting a pin into the outlet, or by just being lucky (or, more accurately, unlucky), the shutter plate may be subverted and the safety of the device compromised.

Other prior art devices have employed multiple shutters to prevent unwanted access to power outlets. However, in electrical sockets, the distance between the front surface of the socket to the electrical contact inside the socket is limited. Thus, multiple shutters must share this limited space, and performance may be compromised. In addition, because multiple shutters of some prior art devices have relatively large contact surfaces, relatively large amounts of friction are generated when the shutters slide as a result of plugs being inserted into the socket and against the contact surfaces. As a result, the contact surfaces and other surfaces can wear out quickly, especially when plugs with relatively sharp edges are inserted into the socket.

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SUMMARY

It is therefore an object of the present invention to provide a shutter assembly that prevents unwanted, undesired or improper access to receptacles.

It is another object of the present invention to provide a shutter assembly that prevents unwanted, undesired or improper insertion of a single pin into an AC voltage outlet.

According to embodiments of the present invention, a shutter assembly for a receptacle may include a first plate, a second plate disposed adjacent the first plate, a shutter disposed between the first plate and the second plate, a first spring for providing lateral movement of the shutter, the first spring abutting a first extension of the first plate; a second spring for providing transverse movement of the shutter; and a plunger for providing a pivot point to the shutter, the plunger disposed between the second spring and the shutter. The receptacle may be an AC outlet.

According to an embodiment of the present invention, the first plate and the second plate may include a plurality of apertures for accepting pins. The pins may be AC plug pins.

The shutter may include a first angled surface, a second angled surface; and an aperture, the aperture disposed between the first angled surface and the second angled surface. In a first position of the shutter, the first angled surface may be aligned with one of the plurality of apertures of the first plate and the second angled surface may be aligned with another of the plurality of apertures of the first plate.

The first plate may further include a first lock and a second lock and the second plate may further include a third lock and a fourth lock. The shutter may further include a first lug, a second lug, a third lug and a fourth lug. When the shutter is in the first position, the first lug may abut the first lock of the first plate and the second lug may abut the second lock of the first plate.

In a second position of the shutter, the aperture of the shutter may align with one of the plurality of apertures of the first plate and one of the plurality of apertures of the second plate as pins are inserted through at least two of the plurality of apertures of the first plate, the pins being simultaneously inserted against the first angled surface and the second angled surface. The shutter may compress the first spring when the shutter is in the second position. The second spring may cause the first lug and the second lug to abut the first lock and the second lock when the shutter is in the first position.

The shutter may pivot about the plunger when one pin is inserted into one of the plurality of apertures of the first plate. The first lug may abut the first lock when the shutter pivots about the plunger. The second lug may abut the second lock when the shutter pivots about the plunger. The third lug may abut the third lock when the shutter pivots about the plunger. The fourth lug may abut the fourth lock when the shutter pivots about the plunger.

The shutter may cover the plurality of apertures of the first plate and the second plate when the shutter is in the first position. The shutter may remain in the first position when only one pin is inserted through an aperture in the first plate.

The second spring may include two springs. The first lock and the second lock may be protrusions of the first plate. The first lock and the second lock may be attached to the first plate. The third lock and the fourth lock may be a protrusion of the second plate. The third lock and the fourth lock may attach to the second plate. The second plate may further include a first compartment for housing the plunger and a second compartment for housing the second spring.

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According to other embodiments of the present invention, a shutter assembly for a receptacle may include a first plate, a second plate disposed adjacent the first plate, a shutter disposed between the first plate and the second plate, a first spring for providing lateral movement of the shutter, the first spring abutting a first side of the shutter; a second spring for providing transverse movement of the shutter; and a plunger for providing a pivot point to the shutter, the plunger disposed between the second spring and the shutter. The receptacle may be an AC outlet.

According to another embodiment of the present invention, the first plate and the second plate may include a plurality of apertures for accepting pins. The pins may be AC plug pins.

The shutter may include a first angled surface, a second angled surface; and an aperture, the aperture disposed between the first angled surface and the second angled surface. In a first position of the shutter, the first angled surface may be aligned with one of the plurality of apertures of the first plate and the second angled surface may be aligned with another of the plurality of apertures of the first plate.

The first plate may further include a first lock and a second lock and the second plate may further include a third lock. The shutter may further include a first lug, a second lug. When the shutter is in the first position, the first lug may abut the first lock of the first plate and the second lug may abut the second lock of the first plate.

In a second position of the shutter, the aperture of the shutter may align with one of the plurality of apertures of the first plate and one of the plurality of apertures of the second plate as pins are inserted through at least two of the plurality of apertures of the first plate, the pins being simultaneously inserted against the first angled surface and the second angled surface. The shutter may compress the first spring when the shutter is in the second position. The second spring may cause the first lug and the second lug to abut the first lock and the second lock when the shutter is in the first position.

The shutter may pivot about the plunger when one pin is inserted into one of the plurality of apertures of the first plate. The first lug may abut the first lock when the shutter pivots about the plunger. The second lug may abut the second lock when the shutter pivots about the plunger. A portion of the shutter may abut the third lock when the shutter pivots about the plunger.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a perspective view of a shutter assembly according to an embodiment of the present invention.

FIG. 2 shows a perspective view of a shutter assembly according to an embodiment of the present invention.

FIG. 3 shows a cutaway plan view of a shutter assembly according to an embodiment of the present invention.

FIG. 4 shows a cutaway plan view of a shutter assembly with two pins inserted into the shutter assembly according to an embodiment of the present invention.

FIG. 5 shows a cutaway plan view of a shutter assembly with two pins inserted into the shutter assembly according to an embodiment of the present invention.

FIG. 6 shows a cutaway plan view of a shutter assembly with two pins inserted into the shutter assembly according to an embodiment of the present invention.

FIG. 7 shows a cutaway plan view of a shutter assembly with one pin inserted into the shutter assembly according to another embodiment of the present invention.

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FIG. 8 shows a cutaway plan view of a shutter assembly with one pin inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 9 shows a cutaway plan view of a shutter assembly with one pin inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 10 shows a cutaway plan view of a shutter assembly with one pin inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 11 shows the angles of the angled surfaces.

FIG. 12 shows a perspective view of a shutter assembly according to another embodiment of the present invention.

FIG. 13 shows a cutaway plan view of a shutter assembly according to another embodiment of the present invention.

FIG. 14 shows a cutaway plan view of a shutter assembly with two pins inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 15 shows a cutaway plan view of a shutter assembly with two pins inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 16 shows a cutaway plan view of a shutter assembly with two pins inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 17 shows a cutaway plan view of a shutter assembly with one pin inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 18 shows a cutaway plan view of a shutter assembly with one pin inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 19 shows a cutaway plan view of a shutter assembly with one pin inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 20A shows a cutaway plan view of a shutter assembly with one pin inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 20B shows a force diagram of the forces present in the embodiment of the invention shown in FIG. 20A.

FIG. 21A shows a cutaway plan view of a shutter assembly with one pin inserted into the shutter assembly according to another embodiment of the present invention.

FIG. 21B shows a force diagram of the forces present in the embodiment of the invention shown in FIG. 21A.

DETAILED DESCRIPTION

In the following description of preferred embodiments, reference is made to the accompanying drawings which form a part hereof and in which are shown by way of illustration specific embodiments in which the invention may be practiced. It is to be understood that other embodiments may be utilized and structural changes may be made without departing from the scope of the preferred embodiments of the present invention.

Although the following description is directed primarily to an AC voltage outlet commonly found in homes and offices, shutter assemblies according to embodiments of the present invention may be used in any receptacle for which the prevention of unwanted or improper access is desired. For example, shutter assemblies according to embodiments of the present invention may be used in receptacles in electrical or electronic equipment such as computers, stereo equipment, DVD players, VCRs, musical equipment and the like.

A shutter assembly 10 according to an embodiment of the present invention is shown in FIGS. 1 and 2. The shutter

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assembly 10 includes a front plate 12, a back plate 14, a shutter 16, a plunger 18, one or more plunger springs 20 and a shutter spring 22. According to the embodiment of the present invention shown in FIGS. 1 and 2, the shutter assembly 10 is used for a common household AC outlet.

According to the embodiment of the invention shown in FIGS. 1 and 2, the front plate 12 includes front plate apertures 24a, 24b and 24c. The front plate apertures 24a, 24b and 24c shown in the embodiment of the invention of FIGS. 1 and 2 are configured to accept a standard two-prong AC plug and a standard three-prong AC plug. However, embodiments of the invention may have front plate socket apertures configured in a variety of ways. For example, the front plate socket apertures may be configured to accept a standard two-prong AC plug, to conform to the characteristics of AC plugs in any country, or to accept the plugs of any type of cable used in a variety of industries. The front plate apertures may be configured to accept computer plugs, musical equipment plugs and the like.

The front plate 12 also includes one or more shafts 28 that may be useful in adjoining the front plate 12 with the back plate 14. In addition, the front plate 12 may include a variety of shafts, pins or brackets that may correspond to guides on the back plate 14, all of which may be used to maintain the position of the shutter 16 when the shutter 16 is disposed between the front plate 12 and the back plate 14.

The front plate 12 may also include a first front plate extension 23a and a second front plate extension 23b. The shutter spring 22 may be disposed between the first front plate extension 23a and the second front plate extension 23b and may abut the first front plate extension 23a.

According to an embodiment of the present invention, the back plate 14 includes back plate apertures 25a, 25b and 25c. The back plate apertures 25a, 25b and 25c of the embodiment of the invention shown in FIG. 1 align with the front plate apertures 24a, 24b and 24c and are also configured to conform to a standard three-prong AC plug. The back plate 14 also includes one or more shaft guides 30 that serve as a receptacle for the shafts 28 of the front plate 12 when adjoining the front plate 12 and the back plate 14. The back plate 14 also includes mounts 26 that aid in holding the metal contacts behind the socket outlet. Brackets 31 may also be used for alignment when adjoining the front plate 12 to the back plate 14.

The back plate 14 may also include one or more plunger spring compartments 32 and a plunger compartment 34. The one or more plunger spring compartments 32 may be used to provide a place for disposing the one or more plunger springs 20. The plunger compartment 34 may be used to provide a place within the back plate 14 for disposing the plunger 18.

The back plate 14 may also include one or more back plate locks 36, 37 that aid in securing the shutter when undesired, unwanted or improper access to the receptacle is attempted.

The shutter 16 may include a first angled surface 42 and a second angled surface 44. At one end of the first angled surface 42 is a first lug 4 and at the other end of the first angled surface 42 is a third lug 52. Similarly, at one end of the second angled surface 44 is a second lug 45 and at the other end of the second angled surface 44 is a fourth lug 54. In the embodiment of the invention shown in FIGS. 1 and 2, the lugs 43 and 52 form an integral part of the first angled surface 42, the lugs 45 and 54 form an integral part of the second angled surface 44. However, the lugs 43, 45, 52, 54 need not be so formed. The lugs 43, 45, 52, 54 may be

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formed as another part of the shutter 16 or may be separate parts that are attached or affixed to the shutter 16.

The first angled surface 42 and the second angled surface 44 may be fabricated at a variety of angles. According to embodiments of the present invention, the angle of the first angled surface 42 and the second angled surface 44 may be greater than 45°. According to one embodiment of the present invention, the angle of the first angled surface and the second angled surface may be 47°. Angles of 45° or greater provide for minimal wear on the first angled surface 42 and the second angled surface 44 when pins or plugs are inserted into the shutter assembly 10 and up against the first angled surface 42 and the second angled surface 44.

The shutter 16 also includes at least one shutter aperture 17. The shutter aperture 17 may align with the first front plate aperture 24a and the first back plate aperture 25a, as will be explained in more detail below.

According to the embodiment of the invention shown in FIGS. 1 and 2, the plunger 18 is disposed between the back plate 14 and the shutter 16. The plunger 18 may also include one or more ridges 19 for providing a pivot point to the shutter 16. The ridge 19 may be formed in a triangular shape, a rounded shape, or any shape what will allow the shutter 16 to pivot about the ridge 19 while the ridge 19 is forced against one side of the shutter 16 due to the force applied by the plunger spring 20, as will be explained in more detail below.

Operation of the shutter assembly 10 when access to the receptacle is desired may be seen in FIGS. 3-6. In the embodiment of the invention shown in FIG. 3, the front plate 12 is disposed adjacent to and abuts the back plate 14. Disposed in a hollow area between the front plate 12 and the back plate 14 is the shutter 16. The plunger spring 20 is disposed in the plunger spring compartment 32 and is configured such that it exerts a force plunger 18, which itself is disposed between the plunger spring 20 and the shutter 16. In turn, the ridge 19 of the plunger 18 exerts a force against the shutter 16 due to the force exerted by the plunger spring 20. When there are no pins present within the shutter assembly 10, there is no force external to the shutter assembly 10 acting on the shutter 16. Thus, the shutter 16 is disposed against the front plate 12 due to the force acting on it exerted by the plunger spring 20 through the plunger 18 and the ridge 19.

When the shutter 16 is in the position shown in FIG. 3, the first lug 43 and the second lug 45 of the shutter 16 abut a first front plate lock 38 and a second front plate lock 40, respectively. The first front plate lock 38 and the second front plate lock 40 may be fabricated as an integral portion of the front plate 12. According to another embodiment of the present invention, the first front plate lock 38 and the second front plate lock 40 may be fabricated as separate parts that are affixed or otherwise attached to the front plate 12. As can be seen in FIG. 3, the first front plate lock 38 and the second front plate lock 40 provide resistance for the first lug 43 and the second lug 45, respectively, thereby preventing the shutter 16 from moving toward its open position.

However, as can be seen in FIG. 4, if a substantially equal force is applied to the first pin 46 and the second pin 48, the first pin 46 and the second pin 48 will simultaneously push against the first angled surface 42 and the second angled surface 44, respectively. In so doing, the first lug 43 and the second lug 45 are pushed away from the first front plate lock 38 and the second front plate lock 40, respectively. When the positions of the first lug 43 and the second lug 45 are clear of the first front plate lock 38 and the second front plate lock

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**SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIRECCIÓN DE NUEVAS CREACIONES**

2020
Bogotá, D.C.,

Abogado:
JUAN PABLO CADENA SARMIENTO

ASUNTO	Radicación	07-69281
	Trámite	002
	Evento	003
	Actuación	430
	Oficio	08856
	Folios	010

Patente de Invención ☒ Patente de Modelo de Utilidad ☐

Vía Nacional ☒

Vía PCT (fase nacional) ☐ Cap. I ☐ Cap. II ☐

Como resultado del examen de fondo, realizado con fundamento en el artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se le comunica:

1. Documentos estudiados

Descripción: Folios: 6 a 17 como se radicó inicialmente

Reivindicaciones: Folios: 18 a 21 como se radicó inicialmente

Dibujos: Folios: 22 a 29 como se radicó inicialmente

Prioridad: Folios: 43 a 56
(2006-07-21, ES, No. MU200601731)

2. Objeto de la invención

La presente solicitud se titula "BASE DE ENCHUFE CON OBTURADOR DE SEGURIDAD" Folio N° 1.

El objeto de la presente solicitud se refiere a una base para un toma corriente formada por un cuerpo base y una tapa de placa, provista esta tapa de aberturas para la conexión de dos espigas cilíndricas o espigas planas y opcionalmente una tercera espiga para la toma de tierra. Donde la tapa de placa posee un dispositivo obturador que impide el acceso accidental de cualquier objeto por alguna de las aberturas de la placa de tapa.

De otra parte, el pliego reclama: una base de enchufe con obturador de seguridad relacionada en las reivindicaciones 1 a 10.

El objeto de la solicitud definido anteriormente se clasificó en la IPC H01R 24/00.

3. De la solicitud de Patente

3.1. Título

El título de la solicitud debe reflejar el objeto y el campo industrial con el cual se relaciona la invención y debe ser concordante con la materia descrita y las reivindicaciones de la solicitud.

La presente solicitud comparte el mismo título con las solicitudes No. 07-68716 y No. 07-69278; "*Base de Enchufe con Obturador de Seguridad*". Distintas solicitudes con títulos iguales no son aceptables, por lo cual se recomienda acumular (unir) los tres expedientes o cambiar los títulos de manera que cada título refleje el campo industrial y especialmente el objeto que se pretende proteger.

3.2. Reivindicaciones (artículo 30 D 486)

La materia contenida en el pliego reivindicatorio calificado presenta los siguientes problemas de definición y claridad:

Las reivindicaciones deben definir las características técnicas de la base, no el resultado o el uso de algunos de los componentes de esta. Así las cosas, especificar que el obturador impide el acceso accidental de objetos extraños es un resultado, que se puede definir de manera detallada en el capítulo descriptivo, pero que no debe reclamarse como característica del objeto de la solicitud.

De acuerdo a la materia descrita, se puede establecer que el aporte de la solicitud radica en el acople y estructura del obturador, de manera que las características de este elemento deben estar especificadas en la reivindicación principal. Las reivindicaciones dependientes deben utilizarse para delimitar o aclarar las características técnicas, no para presentar nuevos elementos del objeto reclamado.

La reivindicación 2 se refiere a un obturador "*de forma sensiblemente prismática y dimensiones adecuadas*", estos términos indefinidos afectan negativamente la claridad del pliego.

Las reivindicaciones 5 y 6 reclaman el resultado alcanzado con el uso del obturador. El bloqueo de la base cuando se introduce un objeto extraño por una de las aberturas, es un resultado debido a la estructura presentada. La estructura puede reclamarse, el resultado no.

Las reivindicaciones 7, 8 y 10 se refieren a la forma de operación (uso) de la base lo cual tampoco se protege por patente.

En conclusión, el pliego reivindicatorio calificado no cumple los requisitos exigidos en el Art. 30 de la Decisión 486.

4. Determinación del Estado de la Técnica

Considerando que la solicitud reclama prioridad del 21 de julio de 2006, se buscaron documentos del estado de la técnica relacionados, con fecha de publicación anterior a esta. Se realizó búsqueda de documentos relevantes dentro del estado de la técnica, entendiendo como estado de la técnica la definición provista en el Art. 16 D 486, y las excepciones fijadas en el Art. 17 de la misma.

No obstante la solicitud presenta problemas de claridad, se realizó una búsqueda de

anterioridades parcial que se completará una vez se realicen los ajustes a la solicitud.

Se encontró como anterioridades los documentos relacionados a continuación que afectan la patentabilidad del objeto de la presente solicitud

N°	Documento*	Título	Fecha de publicación
D1	US6893275	ELECTRICAL RECEPTACLE WITH SHUTTER	2005-05-17

*El documento se anexa con el requerimiento.

5. Análisis de patentabilidad (artículo 14 D486)

En cumplimiento del Art. 14 D486 se procedió a evaluar los requisitos de novedad, nivel inventivo y aplicabilidad industrial, con el fin de establecer la patentabilidad de la invención reivindicada de la solicitud en estudio.

5.1. Novedad (artículo 16 D486)

El requisito de novedad se evaluó por comparación entre lo solicitado y los documentos encontrados en el estado de la técnica y que se relacionan con el objeto reivindicado.

Las reivindicaciones 1 a 10 se refieren a una base con obturador de seguridad formada por un cuerpo base, una placa tapa provista de aberturas para la conexión de clavijas normalizadas, que se caracteriza por:

- Poseer un dispositivo obturador situado bajo la placa de tapa posicionado y guiado por los tabiquillos de su dorso y apoyado sobre los tabiquillos que posee el cuerpo base.
- Un muelle cilíndrico situado por su extremo opuesto contra un tabiquillo vertical situado en el dorso de la tapa.
- Donde el dispositivo obturador esta provisto de una rampa descendiendo al exterior en un extremo, y en el otro extremo una rampa descendiente hacia el interior, teniendo un fondo abierto.
- Una saliente del dispositivo obturador donde se aloja el muelle cilíndrico
- Situado el obturador con sus zonas de rampa bajo las aberturas de la placa de tapa.
- Donde el obturador posee en uno de sus bordes inferiores un encaje alargado rectangular.
- Donde la rampa inclinada del obturador posee un borde posterior.
- Donde el posee un reborde de enclavamiento situado en el borde superior del tabiquillo del cuerpo base.

La anterioridad D1 se refiere a un montaje de obturador para un toma corriente. El montaje posee una primera placa 12 y una segunda placa 14 dispuesta adyacente a la primera placa. Donde la primera placa 12 tiene aberturas 24a, 24b dispuestas para la conexión de clavijas normalizadas 46, 48 (Fig. 4) y una abertura adicional 24c para recibir la toma de tierra. El montaje presentado en D1 comparte las siguientes características con el objeto reclamado en la presente solicitud:

- Un dispositivo obturador 16 situado bajo la primera placa 12 posicionado y apoyado sobre un embolo 18 que posee el cuerpo base 14 (Fig. 1).

- Un muelle cilíndrico **22** situado por su extremo opuesto contra un soporte vertical situado en la placa **12** (ver Fig. 4).
- Donde el dispositivo obturador **16** esta provisto de una rampa descendiente **44** al exterior en un extremo, y en el otro extremo una rampa descendiente **42** hacia el interior, formando un fondo abierto **17** entre las dos rampas (Fig. 1).
- Una saliente del dispositivo obturador donde se aloja el muelle cilíndrico.
- Situado el obturador **16** con sus zonas de rampa **42, 44** bajo las aberturas de la placa de tapa **24a, 24b**.
- Donde el obturador posee en su parte inferior bordes **52, 54** que se traban con los rebordes **36 y 37** ubicados sobre la placa posterior **14** cuando se introduce solamente un objeto por las aberturas **24a, 24b** (Figs. 7 a 10)
- La rampa inclinada **44** del obturador posee un borde posterior **45**.
- Donde el borde **45** se traba con un reborde **40** de la placa superior **12** cuando se introduce solamente un objeto por las aberturas **24a, 24b** (Figs. 7 a 10)

De acuerdo a lo anterior, se puede concluir que el documento D1 comprende las mismas características reclamadas en la solicitud, razón por la cual está no tiene novedad.

En conclusión, al hacer la comparación elemento por elemento entre lo solicitado y el estado de la técnica, se encuentra que las características esenciales del objeto de esta solicitud son idénticas a lo comprendido en el documento D1, razón por la cual la solicitud no cumple con lo requisitos de novedad establecidos en el artículo 16 de la Decisión.

6. Conclusión:

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

N°	Documento N°	Reivindicaciones afectadas	Requisito que afecta
D1	US6893275	1 a 10	Novedad

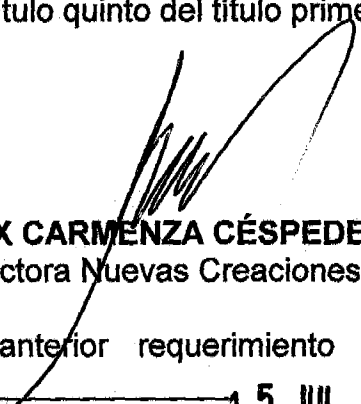
Se recomienda, que tenga en cuenta que el replanteamiento de esos apartes NO podrá implicar una ampliación de la protección que correspondería a la divulgación contenida en la solicitud inicial, de acuerdo a lo que establece el artículo 34 de la Decisión 486.

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 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.

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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 Nuevas Creaciones (C)

El anterior requerimiento fue notificado por fijación en lista, de fecha
_____ 5 JUL. 2010

CONCEPTO TÉCNICO No. 2370	EXAMINADOR TÉCNICO Código No. 202082
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