

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO	
RAD: 14-12305- -4	FECHA: 2015-06-19 19:30:19
DEP: 2020 DIRECCION DE NUEVAS CREACIONES	EVE: 378 FASE NACIONAL INCLUIDO CAPITULO I
TRA: 11 PCT-PATENTE DE INVENCION CAPITULOS I Y II	FOLIOS: 6
ACT: 476 TRASTITULARSOLI	

DIRECCIÓN DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado(a)/Señor(a)
ALICIA LLOREDA RICAURTE

Asunto: Radicación: 14-12305- -4
 Trámite: 11
 Evento: 378
 Actuación: 476
 Oficio: 6955
 Folios: 6

Patente de Invención	X			Patente de Modelo de Utilidad	
Vía Nacional					
Vía PCT (Fase Nacional)	X	Capítulo I	X	Capítulo II	
No. Solicitud Internacional	PCT/EP2012/063358				
Fecha de Presentación Internacional	09/07/2012				

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 comunica:

1. Documentos estudiados

Reivindicaciones:	Rad. N° 14-012305-00000-0000	22/enero/2014
	Rad. N° 14-012305-00001-0000	21/julio/2014
Descripción:	Rad. N° 14-012305-00000-0000	22/enero/2014
Dibujos:	Rad. N° 14-012305-00000-0000	22/enero/2014
Prioridad:	US 61/ 506, 306	11/julio/2011
	EP 11/ 176 306.6	02/Agosto/2011

2. Análisis de la Prioridad

Se acepta la reivindicación de prioridad porque ésta solicitud fue presentada dentro del plazo establecido (Art. 9 D 486) y su contenido técnico corresponde con el de la prioridad reivindicada.

3. Objeto de la invención

De acuerdo con lo establecido en el numeral 1.2.2.2 del Capítulo Primero del Título X de la Circular Única para efectos del examen de patentabilidad, se tendrá en cuenta la tasa pagada por el solicitante al momento de comenzar el examen para las reivindicaciones adicionales; esto es que cuando la solicitud contenga más de diez (10) reivindicaciones y no se haya pagado la tasa complementaria, sólo se estudiarán las cubiertas por la tasa pagada. Por lo tanto, se estudiarán las reivindicaciones 1 a 29.

Título de la solicitud: "Dispositivo de boquilla de un atomizador, procedimiento de atomización y uso" (Ver página 1 del radicado N°14-012305-00000-0000).

El problema planteado en esta solicitud consiste en la necesidad de diseñar un nuevo dispositivo atomizador en un solo paso con una formación mejorada de las gotitas, es decir que aumente el volumen micronizado.

Para resolver este problema técnico, la solicitud en estudio proporciona un dispositivo atomizador con formación mejorada de gotitas, estas se forman más pequeñas con un aumento de la producción del volumen micronizado, en donde se alimentan altos volúmenes de aire a un líquido rociado desde una boquilla para líquidos.

El objeto de la presente solicitud se relaciona con la Clasificación Internacional de Patentes (CIP): B05B7/00.

4. De la solicitud de patente

Reivindicaciones (Art 30 D 486, Art 22 PCT)

Las reivindicaciones 1, 4 y 8 no están caracterizadas por sus características esenciales sino por resultados a alcanzar y/o funcionalidades definidos por los términos: "...para suministrar un gas como un anillo en el sentido de la corriente alrededor de la boquilla..." (Reiv. 1), "...la conexión al alojamiento es establecida por un alojamiento translapado con piezas móviles..." , "...para suministrar un gas como un anillo de flujo paralelo alrededor de la boquilla..." (Reiv. 4), "...porque el ajuste de la boquilla para líquidos 2 en relación...entre los dispositivos de montaje MDI y MD2, o por una combinación de ambos" (Reiv. 8). Es así que estos términos no definen características estructurales esenciales, puesto que la reivindicación incluiría no sólo la solución propuesta por el solicitante, sino todas las alternativas presentes o futuras que lleguen a esos resultados. Se sugiere reemplazarlos por las características esenciales estructurales que contribuyen a la obtención de esos efectos. Es oportuno aclarar que, las funcionalidades pueden estar presente en la reivindicación pero no le pueden dar novedad y/o nivel inventivo a un producto, dado que, que cuando se reivindica un producto, las funcionalidades sirven para entender la relación que hay entre los diferentes elementos estructurales de un producto, pero son solo los elementos estructurales los que definen a dicho producto haciendo a las funcionalidades opcionales.

Las reivindicaciones 17 a 29 no son claras porque presentan una falsa dependencia al hacer referencia a la reivindicación 1. Al ser la reivindicación 1 una reivindicación de producto y las reivindicaciones 17 a 29 reivindicaciones de procedimiento o método, las reivindicaciones 17 a 29 no puede heredar la característica de la reivindicación 1 porque los productos y los métodos se definen de forma diferente.

La reivindicación 17 no es clara porque presenta el término “..., and...” mal traducido y/o redactado.

Se le sugiere al solicitante definir en el preámbulo la categoría de la invención, producto o procedimiento, donde las reivindicaciones de producto deben ser definidas por sus elementos estructurales y las de procedimiento por los pasos que la componen. Por lo tanto, se le sugiere al solicitante presentar un nuevo capítulo reivindicatorio teniendo en cuenta lo mencionado.

Las reivindicaciones 1, 4, 9, 11 a 13, 16, 18 a 21 no son claras porque:

- El término: “aproximadamente” (Reiv. 13), “alrededor” (Reiv. 12, 18 a 21), es impreciso, por lo cual no permite distinguir la invención del estado de la técnica. Se sugiere sustituirlo por un término preciso o un rango concreto.
- La expresión: “opcionalmente” (Reiv. 1), “preferentemente”, “por lo menos” (Reiv. 1, 4, 9, 11, 16l 18 a 21), precediendo una característica no es limitativo, porque hace opcional a la característica y no limita el alcance de la reivindicación.

La reivindicación 8 no es clara, porque es una reivindicación de producto, y sólo puede ser definidas en términos de su proceso de fabricación si: el producto es nuevo e inventivo y no se puede definir por sus características estructurales; se sugiere definirlo por sus características esenciales, estructurales o funcionales.

Las reivindicaciones 1 a 8, 13, a 16 y 18 no son claras porque hacen referencia a la descripción o a los dibujos, con números o letras, pero estos no se encuentran indicados entre paréntesis. Se sugiere corregir las referencias a la descripción o a los dibujos.

5. Determinación del Estado de la Técnica

El estado de la técnica se determinó con base en la fecha de prioridad: 11 de julio de 2011 y se encontraron los siguientes documentos que anticipan el objeto de esta solicitud:

Ítem	Documento	Título	Fecha de Publicación
D1	DE10126100	“Production of a coating or a molded part comprises injecting powdered particles in a gas stream only in the divergent section of a Laval nozzle, and applying the particles at a specified speed”	05/Diciembre/2002

D2	GB 661054	"Improvements in or relating to Devices for Atomising Liquid under Pressure"	14/Noviembre/1951
----	-----------	--	-------------------

El documento D1¹ divulga un método y dispositivo de pulverización de gas frío, en donde las partículas pulverizadas se aceleran en un flujo de gas (Resumen).

El documento D2² divulga un dispositivo para atomizar líquido bajo presión (Descripción).

6. Examen de Patentabilidad (Art 14 D486)

Es importante mencionar que el siguiente análisis de patentabilidad se realizó teniendo en cuenta las objeciones del numeral 4 de la presente comunicación.

Nivel inventivo (Art18 D486)

La reivindicación 1 consiste en “*Dispositivo atomizador caracterizado porque...*” (Ver página 6 del radicado N° 14-012305-00001-0000).

Comparación de las características técnicas esenciales, con las del estado de la técnica:

Características esenciales	D1	D2
Punta de boquilla 1	Punta de boquilla (Fig. 1)	Punta de boquilla (17) (Fig. 1 y 2)
Boquilla para líquidos 2	No se menciona	Boquilla para líquidos (9) (Fig. 1 y 2, Pág. 2)
Alojamiento que contiene un múltiple de aire convergente, con un cono A de transición de aire que rodea de manera circular la boquilla 2	Alojamiento (1) con un cono A que rodea la boquilla (Fig. 1)	No se menciona
La boquilla 2 está conectada a una lanza central 4 que es alimentada por una entrada 6	La boquilla se conecta a una lanza central (2) por donde circula el gas (Fig. 1, Párr. 25)	no se menciona
El alojamiento 3 tiene una entrada de aire 9	El alojamiento (1) tiene una entrada de aire (Fig. 1)	No se menciona

Los documentos D1 y D2 se consideran el estado de la técnica cercano a la invención definida en la reivindicación 1 porque divulgan dispositivos de atomización de líquidos y gases.

La diferencia entre la invención, definida en la reivindicación 1 y el producto de D1 consiste en que no especifica una boquilla para líquidos.

1[http://worldwide.espacenet.com/publicationDetails/biblio?](http://worldwide.espacenet.com/publicationDetails/biblio?DB=EPODOC&II=2&ND=3&adjacent=true&locale=en_EP&FT=D&date=20021205&CC=DE&NR=10126100A1&KC=A1)
DB=EPODOC&II=2&ND=3&adjacent=true&locale=en_EP&FT=D&date=20021205&CC=DE&NR=10126100A1&KC=A1
2[http://worldwide.espacenet.com/publicationDetails/biblio?](http://worldwide.espacenet.com/publicationDetails/biblio?CC=GB&NR=661054A&KC=A&FT=D&ND=3&DB=EPODOC&locale=en_EP)
CC=GB&NR=661054A&KC=A&FT=D&ND=3&DB=EPODOC&locale=en_EP

La diferencia entre la invención, definida en la reivindicación 1 y el producto de D2 consiste en que no especifica un alojamiento con un múltiple de aire convergente dentro del que se une la boquilla para líquidos con una lanza central.

El efecto que logra el incluir boquilla para líquidos es que permite atomizar góticas de líquido.

Por lo tanto, el problema técnico objetivo que pretende resolver esta invención se puede formular así: “¿cómo modificar el producto conocido en D1 para conseguir atomizar góticas de líquido?”.

Sin embargo, la utilización de una boquilla para líquidos para aumentar atomizar góticas de líquido, ya está divulgada en el documento D2.

En consecuencia, la persona del oficio normalmente versada en la materia, incluiría la boquilla para líquido del documento D2 en el producto divulgado en el documento D1 para llegar así al objeto de la reivindicación 1 de la solicitud. Por lo cual, se considera obvia.

Asimismo, el documento D1 divulga las características de las reivindicación dependiente 2 así: la punta de boquilla y la punta en A (1) están conectados (Fig. 1).

De acuerdo con el análisis anterior, la reivindicación dependiente 2 no mencionan alguna característica que le dé nivel inventivo al objeto de la reivindicación 1, por lo cual, se considera que no tienen nivel inventivo.

De igual manera, las reivindicaciones dependientes 8, 17 a 29 no mencionan características técnicas tangibles adicionales que puedan brindarle novedad al objeto de la reivindicación 1, puesto que se encuentran redactadas en términos de usos y/o resultados.

7. Conclusión

Los requisitos de patentabilidad de la presente solicitud están afectados de acuerdo a las objeciones del numeral 4 y así:

Item	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	DE10126100	1, 2, 8	Nivel inventivo
D2	GB 661054	1, 2, 8	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 del día siguiente 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.

Se invita al solicitante se sirva indicar, si así lo considera, su renuncia al término faltante de sesenta (60) días para dar respuesta a este requerimiento y presentarla por escrito.

Finalmente, se le recuerda al solicitante que si como respuesta a este requerimiento llegara a modificar el capítulo reivindicatorio y éste contenga más de diez (10) reivindicaciones, no pagará la tasa de modificación voluntaria pero sí la correspondiente al pago por reivindicación adicional.

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 No. 10 de 2001.



JOSÉ LUIS SALAZAR LÓPEZ
Director de Nuevas Creaciones (c)

El anterior requerimiento fue notificado por fijación en lista, de fecha 2015-06-23

Elaboró: Diana Melisa Avila

Revisó: Sonia Andrea Diaz Pirazan

Search history

Search 1: TAC=(atomizing and device and nozzle) (Results 5624)

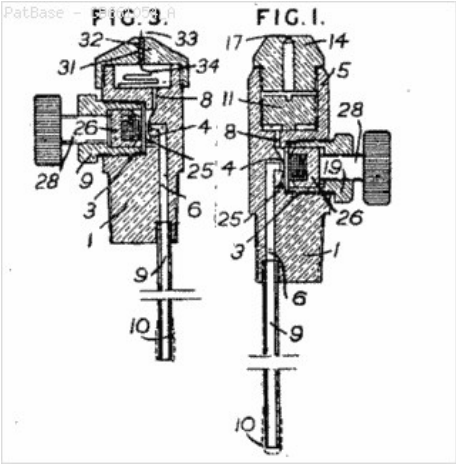
Search 2: TAC=(atomizing and device and nozzle and (liquid or suspension)) (Results 2773)

Search 3: TAC=(atomizing and device and nozzle and (liquid or suspension)) and IC=(b05b) (Results 1102)

Title: No. 9139/49. Class 69 (iii). A liquid atomizing device comprising a resilient diaphragm 25 adapted to be forced by a thrust...

Abstract: Source: GB661054A 661,054. Spray producers. BIGINELLI, O. F. A. April 4, 1949. No. 9139/49. Class 69 (iii). A liquid atomizing device comprising a resilient diaphragm 25 adapted to be forced by a thrust member 26 against a seat having an orifice therein which communicates with a liquid admission duct 6 is characterized in that said seat, orifice, thrust member and resilient diaphragm are coaxial and the thrust member has a bearing surface of considerably larger area than that of the orifice of the admission duct. Liquid under pressure enters the tube 9 through a strainer 10 and passes through a passage 6 in a body 1 ending in the centre of a convex surface 4. The diaphragm 25 is held by a nut 19 in a tapped hole 3 and is deformed by the thrust member 26, actuated by a screw 28, to control the flow of the liquid which continues through a passage 8, round the thread of a loosely fitting stub screw 11 in a tapped hole 5 and through a nozzle 17 in a head 14 which is screwed in on top of the stub screw. In a modification, Fig. 3, the stub screw and head are replaced by a head 31 with a nozzle 32 through which extends a needle 33 held in position by an integral spiral spring 34.

Classifications:
International (IPC 1-7): B05B1/30



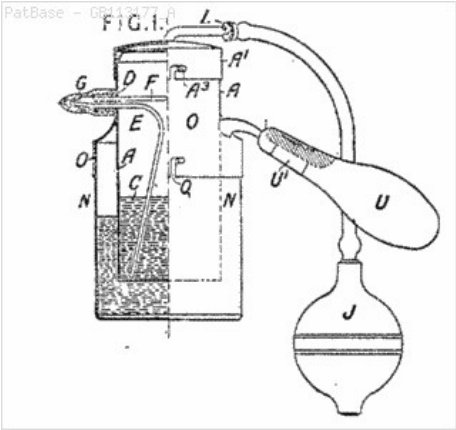
Family:

Publication number	Publication date	Application number	Application date
GB661054 A	00000000		00000000

Title: Method and Means for Applying Protective Antiseptic Substances to Flesh Burns and Wounds

Abstract: Source: GB113177A Air-pressure sprayers. -Relates to means for applying paraffin wax and c. to wounds or burns so as to produce a protective film thereon by spraying it while in a liquid condition upon the part affected. The wax and c. C is placed in a container A having a hot-water jacket N and provided with a spray-producing nozzle G. This latter is screwed on to a nipple D, through which pass the wax tube E and the air tube F. An air bulb J is connected by means of a detachable plug L to the container, which has a lid A' secured by a bayonet-joint A <3> and a hood O secured to the jacket N by a similar joint Q. The handle U is also detachable by means of a screwed ferrule U <1> .

Classifications:
International (IPC 8-9): A61M11/02 (Advanced/Invention);
A61M11/00 (Core/Invention)
International (IPC 1-7): A61M11/02 B05B7/30
CPC: A61M11/02
European: A61M11/02



Family:

Publication number	Publication date	Application number	Application date
GB113177 A	19180214	GB19170004789	19170403

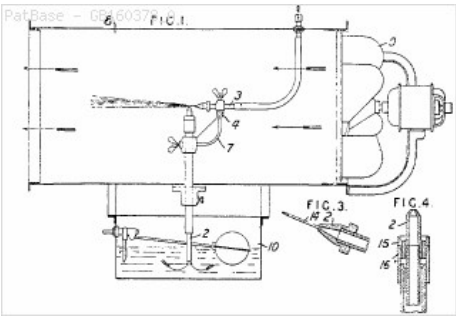
Priority:
GB19170004789 19170403

Probable Assignee: MASLOF ALEXANDER
Assignee(s): (std): MASLOF ALEXANDER
Assignee(s): ALEXANDER MASLOF
Inventor(s): (std): MASLOF ALEXANDER
Inventor(s): ALEXANDER MASLOF

Title: A method of and apparatus for mixing air and liquids for moistening the air

Abstract: Source: GB160378A 160,378. Kr³ger, J. [Firm of], and Kr³ger, J. J. May 13, 1920. Air-pressure sprayers. - Air is driven by a fan 9, Fig. 1, through a casing 8 into contact with a liquid sprayed from a nozzle 2, Figs. 1 and 3, by air under pressure from a pipe 3. The pipe 3 may be turned on a pivot 4 and may be raised or lowered by moving a bracket 7 so as to alter the inclination of the liquid and air nozzles. The liquid nozzle 2 has a fitting 15, which catches overflowing drops of liquid and returns them by passages 16 to the liquid tank 10. The air nozzle 14 is flattened out at its extremity as shown in Fig. 4.

Classifications:
International (IPC 8-9): B05B7/24 F24F6/12 (Advanced/Invention)
International (IPC 1-7): B05B7/00 F24F3/14
CPC: B05B7/2429 F24F6/12
European: B05B7/24A3S F24F6/12



Family:

Publication number	Publication date	Application number	Application date
GB160378 A	19210324	GB19200013210	19200513

Priority:
GB19200013210 19200513

Probable Assignee: JORGEN JORGENSEN KRUEGER

Assignee(s): (std): JORGEN JORGENSEN KRUEGER ; KRUEGER J

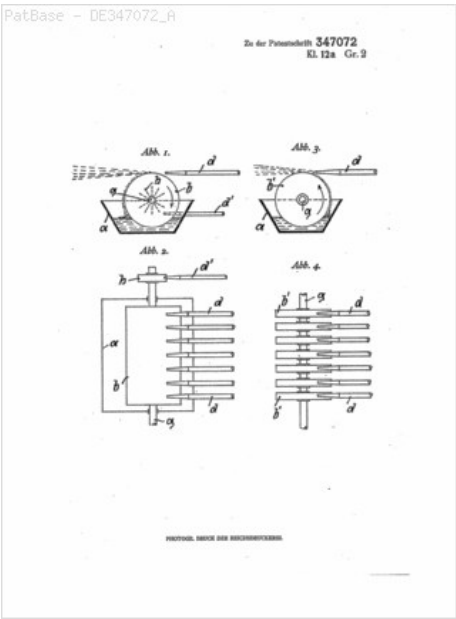
Assignee(s): J KRUEGER

Title: Verfahren zum Zerstaeuben von Fluessigkeiten A method of spraying **liquids** (Machine translation)

Abstract: Source: DE347072A (Claim 1) 1. PATENT-ANSPRUECHE: I. Verfahren zum Zerstaeuben von Flues sigkeiten und fluessigen Stoffen, dadurch gekennzeichnet, dass die zu zerstaebende Fluessigkeit und fluessigen Stoffe mittels umlaufender Flaechen aus dem Fluessigkeits behaelter gehoben und in gleichmaessiger Verteilung der Geblaeseduese zugefuehrt werden.

Machine translation: (claim 1) 1 PATENT CLAIMS I. A method for **atomizing liquids** of Flues and **liquids**, wherein the **liquid** to be **atomized** and **liquid** substances by means of rotating **liquid** column manometer Total area of the elevated tank and supplied to the blow **nozzle** is in gleichmaessiger distribution.

Classifications:
International (IPC 8-9): B01D1/18 (Advanced/Invention);
B01D1/16 (Core/Invention)
International (IPC 1-7): B01D1/18 B05B3/10 B05B7/00
CPC: B01D1/18
European: B01D1/18



Family:

Publication number	Publication date	Application number	Application date
DE347072 A	19220112		19200427

Priority:

19200427

Probable Assignee: ARMIN STELZNER

Assignee(s): (std): ARMIN STELZNER

Title: Improvements in liquid sprayers or atomisers

Abstract: Source: GB178356A 178,356. Smethurst, H. June 1, 1921. Filtering.-An atomizing apparatus which may be readily assembled and disconnected comprises a fitting y with liquid and air pipe connections a, and a second fitting z, Figs. 1 and 2, which supports liquid and air filters i, u, Fig. 1. Air similarly passes through the filter u provided with a gauze cylinder v and thence to the nozzle. The filters are provided with screw-caps 4 to facilitate insertion of the filtering cylinders.

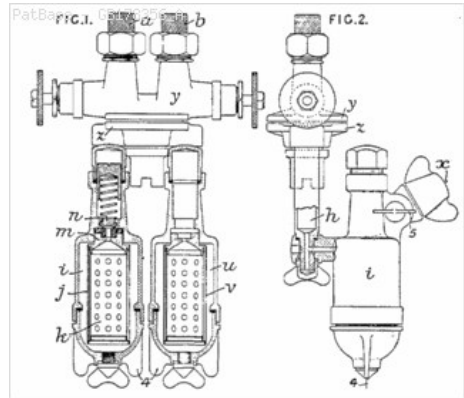
Classifications:

International (IPC 8-9): B05B15/06 B05B7/06 B05B7/12 B05B7/24 (Advanced/Invention); B05B15/00 (Advanced/Non-invention); B05B15/00 B05B7/02 B05B7/24 (Core/Invention)

International (IPC 1-7): F23D11/14

CPC: B05B7/065 B05B7/1254 B05B7/2489 B05B15/008 B05B15/066

European: B05B15/00G B05B15/06B1 B05B7/06C2 B05B7/12K B05B7/24G L05B15/00Y30



Family:

Publication number	Publication date	Application number	Application date
GB178356 A	19220420	GB19210015224	19210601

Priority:

GB19210015224 19210601

Probable Assignee: HERBERT SMETHURST

Assignee(s): (std): HERBERT SMETHURST

Title: MEANS FOR APPLYING **LIQUID** MEDICAMENTS UNDER PRESSURE ACTION

Abstract: Source: GB194356A 194,356. Mobley, L. K. Nov. 30. 1921. Gas-pressure sprayers.-Apparatus for spraying anMusthetics, antiseptics, and other medicaments by means of compressed gas according to the method described in Specification 156,846 comprises an outer casing carrying the valve head and spray-**nozzle** and interchangeable cartridges for the **liquids** under gas pressure. The outer casing comprises a tubular chamber 1, Fig. 5, having a cap 2 connected thereto by a bayonet joint and carrying a tubular port containing a conical valve 17 controlling the passage to the spray head and also a conical sealing provided with a packing 15 against which a conical part of the inner cartridge 42 bears. The valve 17 is operated by a push button 28 against the action of a spring 23. The cartridge is retained in position in the outer container by means of a spring 8 and is provided with a tube 46 through which the contents are ejected by gas pressure, the outlet being normally closed by a conical valve 48 which is operated by means of an extension 44 of the valve 17. When not in use the outlet of the cartridge 42 may be closed by a cap. The outlet of the apparatus may be provided with an **atomizing**-head comprising a block 33, Fig. 7, having a spiral groove 37 therein leading to a chamber 40 formed by a centrally perforated cap 41 which screws on the tube 29 and holds the block 33 in place.

Classifications:

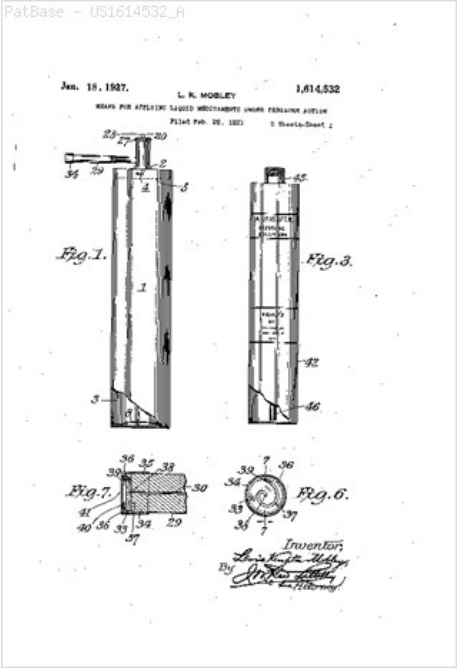
International (IPC 8-9): B65D83/14 (Advanced/Invention);
B65D83/00 (Advanced/Non-invention);
B65D83/14 (Core/Invention);
B65D83/00 (Core/Non-invention)

International (IPC 1-7): A61M11/00 B05B9/04

CPC: Y10T137/87981 B65D83/48 B65D83/303 B65D83/384 B65D83/752 B65D2583/005

European: B65D83/14Z3 B65D83/30B B65D83/38E B65D83/48 B65D83/752
L65D583/00R

US: 128/200.19 128/200.23 137/614.11 222/325 222/402.25 222/464.1 222/509
222/545 239/486 239/574 604/140 604/24



Family:

Publication number	Publication date	Application number	Application date
DE393168 A	19240331	DE1922M076369	19220112
FR544454 A	19220922		00000000
GB194356 A	19230228	GB19210032128	19211130
US1614532 A	19270118	US19210448216	19210226

Priority:

US19210448216 19210226 GB19210032128 19211130 DE1922M076369 19220112

Probable Assignee: JOSEPH REED LITTELL

Assignee(s): (std): JOSEPH REED LITTELL ; LEWIS KEMPTON MOBLEY

Inventor(s): (std): KEMPTON MOBLEY LEWIS ; MOBLEY LEWIS KEMPTON

Title: Improved method of and apparatus for producing mist or fog for irrigating or treating crops

Abstract: Source: GB202647A 202,647. Balinsky, P. de, (Assignee of Djavakhow, A., and Hlasko, V.). Aug. 18, 1922, [Convention date]. Air and gas pressure sprayers rotary apparatus.-Artificial mist or fog for irrigating a large area of land or similar treatment of crops is formed by pulverizing water or other **liquid** and submitting the pulverized **liquid** to the action of a current of air under pressure sufficient to produce an intimate mixture between the **liquid** particles and air. Such apparatus may be mounted upon a lower. Fig. 3. The **atomizer** may comprise a conical body 3, Fig. 1, against which **liquid** is pulverized and acted upon by compressed air issuing from a circular slot 4. As shown in Fig. 2, **liquid** fed from the chamber 18 is pulverized in the slot 14 and acted on by air from the cylindrical casing 11, the air being given a whirling motion by means of a tangential inlet 12. The mist may be acted upon by an adjustably-mounted aerial screw propeller or other pneumatic arrangements. The Specification as open to inspection under Sect. @91 (3) (a) comprises also means for **atomizing** water in which a rotating circular disc is supplied with water at its centre, a form, Fig. 3 (Cancelled), in which **liquid** is distributed over a cone 3 on to a rotating body 4, and a form in which a rotating fan skims the surface of **liquid** in a tank. It also describes a form shown in Fig. 6 (Cancelled) in which the **liquid** is **atomized** by explosion apparatus. A tube 1 of the form shown is mounted to pivot upon the bearing 3. Concentric with the tube 1 is a similar tube 5 provided with a water inlet tube 6 communicating therewith through an annular slot 7. Axially mounted is a tube 8 communicating with a combust on chamber 9, in which an **explosive mixture** fed by the tubes 12. 13 is exploded by means of a sparking plug 11. On explosion the gases escape through the pipe 8, **atomizing liquid** delivered through the tube 6 and at the same time inducing air between the tubes 8 and 5. The ejector action causes a fresh introduction of explosive mixture into the chamber 11 and the operation is repeated. This subject-matter does not appear in the Specification as accepted.

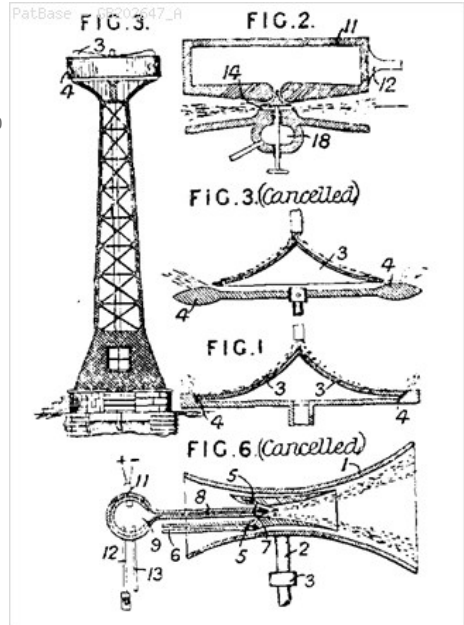
Classifications:

International (IPC 8-9): B01D45/08 B02C13/00 B05B3/02 B05B3/06 B05B3/10 B05B7/04 B05B7/12 B05B7/24 C09D195/00 F02N9/00 F22B27/14 G08B3/00 H02K13/10 (Advanced/Invention); B01D45/00 B02C13/00 C09D195/00 H02K13/10 (Core/Invention)

International (IPC 1-7): A01G9/26 B05B1/14

CPC: B05B3/06 B05B7/0416 B05B7/12 B05B7/2483 C09D195/00 H02K13/10 B02C13/00 B01D45/08 F22B27/14 A47B3/0912 A47B3/0915 G08B3/00 F02N9/00 B05B3/1021 B05B3/02

European: 46C24B A47B3/091B2 A47B3/091B6 B01D45/08 B02C13/00 B05B3/02 B05B3/06 B05B3/10A2 B05B7/04C B05B7/12 B05B7/24B C09D195/00 F02N9/00 F22B27/14 G08B3/00 H02K13/10



Family:

Publication number	Publication date	Application number	Application date
AT100057 B	19250610		00000000
AT100752 B	19250825		00000000
AT97713 B	19240825		00000000
DE426163 A	19260305	DE1924B113198D	19240314
DE433249 A	19260825	DE1923B110774D	19230816
FR26748 E	19240306		00000000
FR26749 E	19240306		00000000
FR27220 E	19240524		00000000
FR27225 E	19240524		00000000
FR27261 E	19240531		00000000
FR27589 E	19240731		19230104
FR27917 E	19240927		00000000
FR27918 E	19240927		19230710
FR28476 E	19250227		00000000
FR28559 E	19250311		00000000
FR571701 A	19240522		19220818
FR590912 A	19250625		00000000
GB202647 A	19241117	GB19230020913	19230817
GB218979 A	19250409	GB19240010373	19240426
GB229993 A	19250521	GB19240007069	19240319

Priority:

19230104

Probable Assignee: VATSLAV HLASKO

Assignee(s): (std): BALINSKY PIERRE DE ; PIERRE DE BALINSKY ; MUELLER CARL ; MARCHEGGER MASCHINENFABRIK UND ; THOMSON HOUSTON COMP FRANCAISE ; PROCEDES W A LOTH SOC IND DES ; SOC IND DES PROCEDES LOTH ; VATSLAV HLASKO

Assignee(s): SOCIETE INDUSTRIELLE DES PROCEDES W A LOTH ; MARCHEGGER MASCHINENFABRIK UND EISENGIESSEREI AKT GES ; MARCHEGGER MASCHINENFABRIK UND EISENGIESSEREI AKT ; FRANCAISE POUR L EXPLOITATION DES PROCED COMP ; CARL MUELLER ; COMPAGNIE FRANCAISE POUR L EXPLOITATION DES PROCEDES THOMSON HOUSTON

Inventor(s): (std): CORNIERE PAUL ; DUPONT GEORGES HONORE ; LESIGNE ERNEST ; LORiot HENRI JEAN MARIE ; MUELLER CARL ; PLAUSON HERMANN ; SCHULZ JACQUES GUSTAVE ; VIELLE JOHN AMABLE ; HLASKO VATSLAV ; DJAVAKHOW ALEXANDRE ; BALINSKY PIERRE DE ; ANTIN ARTHUR

Inventor(s): CARL MUELLER ; PIERRE DE BALINSKY

Title: **LIQUID**-SPRAYING **DEVICE**

Abstract: Source: GB276996A 276,996. Hundertfeuer Ges. f3r Moderne Bautentechnik, (Assignees of Ludwig, K.). Aug. 31, 1926, [Convention date]. Air-pressure sprayers; rotary apparatus. - A hand - directed **liquid** spraying **device** is provided with an impeller rotated by a current of air by which **liquid** is sprayed into the air stream. The air supply may be taken from the compressed air side of a dust suction **device**. In an air inlet pipe a, which widens towards the bottom, are secured guide vanes b, carrying a boss h provided with a spindle d on which a rotary impeller wheel c is mounted. **Liquid** from a tank k or supplied by a flexible tube, not shown, falls in drops on the impeller wheel which sprays it into the air stream. The apparatus may be used for spraying oil, colour, polishing-wax, and c. on floors, or disinfectants on ceilings, walls, furniture, and c. For use on floors the **device** may terminate at the opening determined by the edge e, while for walls, ceilings and c. the apparatus is extended by a funnel g to which a flexible tube is attached.

Classifications:

International (IPC 8-9): B05B3/10 B05B7/04 (Advanced/Invention);

B05B3/04 (Advanced/Non-invention);

B05B3/02 B05B7/04 (Core/Invention);

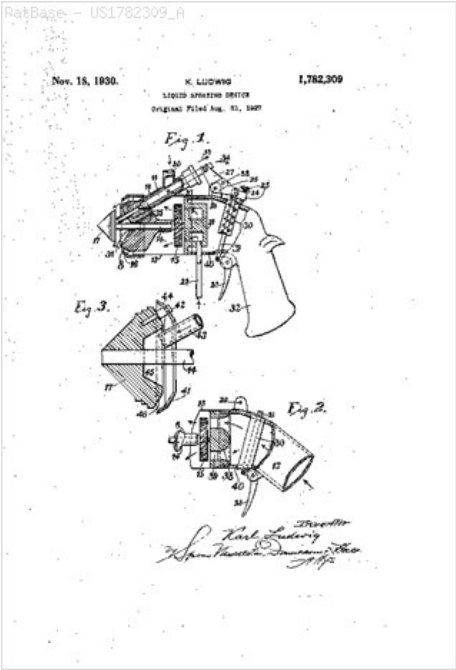
B05B3/02 (Core/Non-invention)

International (IPC 1-7): B05B3/04 B05B3/10 B05B3/12 B05B7/10 B05B7/12 E21F5/04

CPC: B05B3/1014 Y10S239/14 B05B7/0441 B05B3/04 B05B3/10 B05B3/1035

European: B05B3/10 B05B3/10A1 B05B7/04C3 L05B3/04 L05B3/10B

US: 159/4.01 239/222.17 239/290 239/417.5 239/422 239/DIG.14



Family:

Publication number	Publication date	Application number	Application date
CH132391 A	19290415		19280419
DE457115 A	19280307	DE1926L066655D	19260831
DE459519 A	19280504	DE1927L068568	19270423
DE464925 A	19280830	DE1927L068801D	19270511
FR653612 A	19290323		00000000
GB276996 A	19280329	GB19270022709	19270829
GB287783 A	19280329	GB19270022859	19270831
GB288904 A	19280419	GB19270025980	19271001
NL21314 C	00000000		00000000
US1782309 A	19301118	US19280316305	19281031

Priority:

DE1926L066655	19260831	DE1927L068568	19270423	US19270216637	19270831
DE1927L068801	19270511	DE1927L068801	19270511	DE1927L068801	19270511
US19280316305	19281031				

Probable Assignee: HUNDERTFEUER GES FUR MODERNE B

Assignee(s): (std): HUNDERTFEUER GES FUR MODERNE ; HUNDERTFEUER GES FUR MODERNE B ; HUNDERTFEUER GES F MODERNE

Assignee(s): HUNDERTFEUER GES F MODERNE BAUTENTECHNIK MIT BESCHRAENKTER HAFTUNG ; HUNDERTFEUER GESELLSCHAFT FUR MODERNE BAUTECHNIK M ; HUNDERTFEUER GESELLSCHAFT FUR MODERNE BAUTENTECHN ; HUNDERTFEUER GESELLSCHAFT FUR MODERNE BAUTENTECHNI ; "HUNDERTFEUER" GESELLSCHAFT FUR MODERNE... ; HUNDERTFEUER GESELLSCHAFT FUR MODERNE BAUTENTECHNIK M B H ; HUNDERTFEUER GESELLSCHAFT FUR MODERNE BAUTECHNIK M B H ; HUNDERTFEUER GESELLSCHAFT FUR MODERNE BAUTENTECHNIK MIT BESCHRAENKTER HAFTUNG ; HUNDERTFEUER GES FUR MODERNE BAUTENTECHNIK MIT BESCHRAENKTER HAFTUNG ; HUNDERTFEUER GESELLSCHAFT FUR MODERNE BAUTENTECHNIK MIT BESCHRAENKTER HAFTUNG

Inventor(s): (std): KARL LUDWIG ; HUNDERTFEUER GESELLSCHAFT FUR ; HUNDERTFEUER GES F

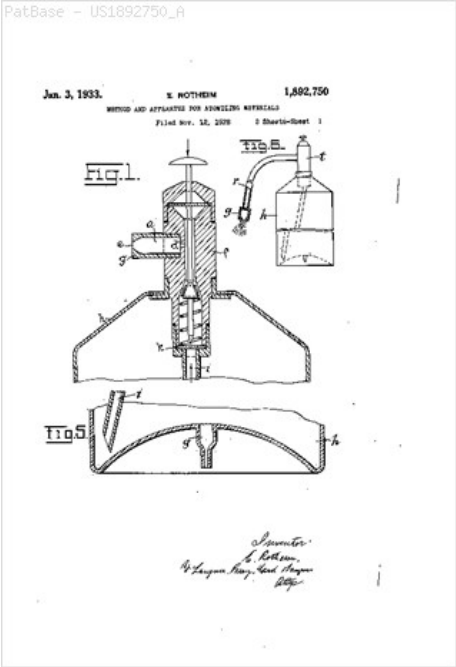
Inventor(s): LUDWIG KARL ; HUNDERTFEUER GES F MODERNE ; HUNDERTFEUER GESELLSCHAFT FUR MODERNE BAUTENTECHNIK M B H

Title: Coating composition

Abstract: Source: GB278733A 278,733. Rotheim, E. Oct. 8, 1926, [Convention date]. Direct gas pressure apparatus, non-automatic.- Disinfectants, fire-extinguishing materials, paints, and c. are delivered in jet or spray by the vapour pressure of di- Methyl ether, either alone or together with other gases condensible at ordinary temperature at a pressure less than forty atmospheres. The material to be sprayed is mixed with or dissolved in the condensed dimethyl ether and introduced through a tube 7, Fig. 1, into a container 1; the tube 7 is then sealed. When a valve 4 is opened by pressing down a cap 5. a spike 10 on the valve punctures a disc 11 closing a tube 3 which extends to the bottom of the container, a mixture of material and solvent being then sprayed through the **nozzle** 6. To open the valve the cap is rotated until a slot 12 coincides with the **nozzle** 6, or the cap may have a bayonet slot engaging the **nozzle**. A diaphragm 9 is inserted between the cap and valve. to prevent leakage. In a modification, Fig. 2, the container is adapted to produce a spray when inverted and pressed on to the surface to be sprayed, a knob 5 on the valve spindle projecting from the end 15 of the container. The tube 3 is bent so as to extend to the top of the container, which has a rounded surface 16 to assist in spreading the material sprayed. According to the Specification as open to inspection under Sect. 91 (3) (a) the **liquid** is sprayed by the vapour pressure of a substance which is a gas at normal temperature, and pressure but condenses at normal temperature and under pressures below forty atmospheres, such as methyl chloride, methyl nitrite vinyl chloride and certain petroleum distillates. This subjectmatter does not appear in the Specification as accepted.

Classifications:

International (IPC 8-9): B05D1/02 B65D83/14 C09D7/00
C09K3/30 (Advanced/Invention);
B05D1/02 B65D83/14 C09D7/00 C09K3/30 (Core/Invention)
International (IPC 1-7): A47L13/56 A47L25/00 A61K7/11 B01J19/26 B01J3/02
B05B1/02 B05B9/00 B05B9/04 B05B9/08 B05D1/02 C09D7/00
CPC: C09D7/001 Y10T29/53552 B65D83/303 B05D1/02 B65D83/14 B65D83/752
C09K3/30
European: B05D1/02 B65D83/14 B65D83/14Z3 B65D83/30B B65D83/752 C09D7/00B
C09K3/30
US: 106/163.01 106/239 106/243 106/267 106/285 106/38.6 128/200.23 222/394
239/11 239/309 239/337 239/573 251/321 29/213.1 427/421 427/421.1 516/8 516/8.1
524/575.5



Family:

Publication number	Publication date	Application number	Application date
DE471705 A	19290227	DE1927R072607	19271008
DE527137 A	19310613	DE1928R076366	19281123
FR642084 A	19280821		00000000
GB278733 A	19281101	GB19270026555	19271007
GB351214 A	19310625	GB19300017187	19300604
NL23694 C	00000000		00000000
NL31006 C	00000000		00000000
US1800156 A	19310407	US19270223143	19270930
US1892750 A	19330103	US19280318878	19281112
US1945998 A	19340206	US19320606469	19320420

Priority:

US19280318878 19281112 GB19300017187 19300604 US19320606469 19320420

Probable Assignee: ERIK ROTHEIM DIPL ING

Assignee(s): (std): ERIK ROTHEIM ; ERIK ROTHEIM DIPL ING

Assignee(s): DIPL ING ERIK ROTHEIM

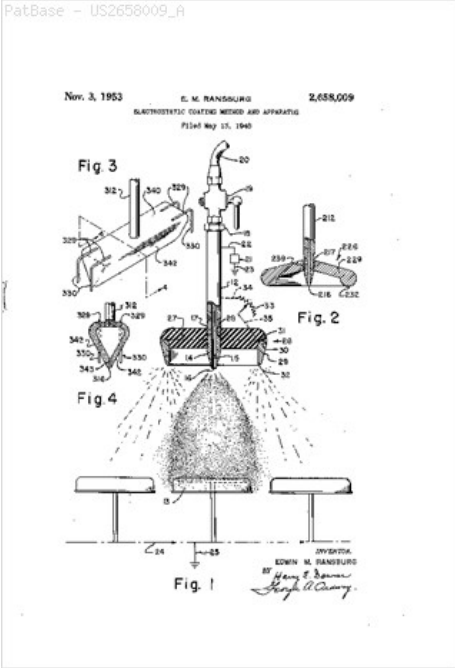
Inventor(s): (std): ERIK ROTHEIM ; ROTHEIM ERIK

Title: Electrostatic coating method and apparatus

Abstract: Source: GB749008A A method of electrostatically coating an article comprises establishing in a quiescent atmosphere a particle-depositing electrostatic field over at least a portion of the surface of the article, introducing a spray of finely-divided particles of **liquid** coating material into the field from a source spaced from the article and electrically charging the particles to move them along the lines of force of the field, for deposition, while still in the **liquid** state, on the article, and electrostatically modifying the arrangement of the lines of force of the field by a secondary electrostatic field, maintained adjacent the depositing field, for rearranging the pattern of deposition of the **liquid** particles on the article. The article may be moved relatively to the spray source. In the form shown in Fig. 1, a tube 12, preferably of electrically-conductive material, has a beveled tip 14 and is threaded exteriorly at 17 to support adjustably a disc 27 of insulating material. Coating material is fed into the bore of the tube 12 through a pipe 20 and valve 19, and is **atomized** at the tip 14 by a electro static field produced by connecting the tube 12 to the live terminal of a high-voltage source 21, the other terminal, and the articles 13 to be coated, being earthed. The member 27 carries a metal ring 29 at its outer edge; this functions as a control member for the electric field, and may be connected through a variable resistor 33 to the tube 12. The members 27, 29 may be replaced by a single member of conductive material, having a depending, rounded edge. The apparatus of Figs. 3 and 4 comprises an elongated chamber 340 of triangular section to which coating material is fed through a tube 312 connected to a high-voltage source. At its lower end there is an aperture 343, one of the walls having a lower projecting edge 316 from which the coating material issuing through the aperture 343 is discharged. The control electrode consists of L-shaped wires, 329, the downwardly directed portions 330 of which terminate in a plane slightly above the edge 316. In Fig. 5, sheet material 410 is carried on an earthed conveyer 413 beneath an **atomizing device** 415 connected to a high-voltage source 416, and comprising supports 420 carrying an elongated member 421, preferably of electrically-conductive material, which has a sharp lower edge 422. Coating material is fed to the edge 422 from a **nozzle** 429 on a tube 427, connected by a flexible hose 428 to a source of coating material; the tube 427 carried by a lever 425 which reciprocates in a slot 426. Field-modifying members 431 are provided at one or both ends of the member 421, and extend below its edge 422. The hand gun 510 of Fig. 6 comprises an insulating housing 511 containing an electrostatic **atomizing** unit 512 consisting of plates 513 and 515, tapered to sharp edges and spaced by shims. Into the elongated feed orifice 517 so produced coating material is fed from a tube 518 through passages 525, 521 and 522. The unit 512 is connected to the live terminal of a powerpack 526, the other terminal of which is earthed. The housing 510 carries a flared shield member 530 of insulating material, having an opening 531 of substantially rectangular cross-section, and an earthed outer metallic coating 532. The gun of Fig. 8 comprises an integral insulating housing 540, handle 541 and shield 542, the housing containing a rotatable bell type **atomizing** unit 544. This comprises a bell-shaped head 545 with a central feed opening 546, and mounted on a hollow shaft 547 which is journaled in bearings 548 and driven by an hydraulic motor unit 549, fluid being supplied to and carried away from the motor by tubes 555 and 5551. Coating material is supplied to the head 545 from a pump through a tube 533, of insulating material, passage 551 and chamber 552. The motor unit 549 is connected by an insulated wire 558 to the live terminal of a power pack 559, the other terminal of which is earthed, as is a metallic coating 570 on the outside of the handle, housing and shield unit. In the arrangement of Fig. 9, flat metal panels 610 are carried by a conveyer 611 through a coating zone an **atomizing device** 612 being provided at a fixed distance therefrom. The **device** 612 comprises a bell-shaped head 613 which is rotated through shafts and gearing in the support 621, and to the centre of which **liquid** coating material is supplied through a hose 622. The head 613 is connected to a source of high electrical potential 619, and a sprayshaping electrode 614, consisting of a square metal plate to which are attached fins 617, mounted on the **atomizing** apparatus by an insulating ring 615, is also connected thereto through a potential divider 620. The electrode 614 may be replaced by one of triangular plate form. In the **device** of Fig. 17, the field shaping electrode is placed within the **atomizing** edge of a rotatable head 683, and comprises triangular metal plates 680a, 680b, 680c and 680d mounted on heavy wires 681a, b, c and d, which are connected to a disc 682, which is mounted on a rod running through the head 683. The electrodes are maintained at a high electrical potential at or near that of the head 683. Specification 591,474 and U.S.A. Specificatio 2,559,225 are referred to.

Classifications:

International (IPC 8-9): B05B5/025 B05B5/04 B05B5/08 B05B5/14 (Advanced/Invention); B05B5/025 B05B5/04 B05B5/08 (Core/Invention)
International (IPC 1-7): B05B5/00 B05B5/08 B05D1/04 C03C17/00 C23C7/00 H02P13/06
CPC: B05B5/0255 B05B5/04 B05B5/08 B05B5/14
European: B05B5/025A B05B5/04 B05B5/08 B05B5/14
US: 118/300 118/626 118/636 118/638 239/3 427/483 427/569



Family:

Publication number	Publication date	Application number	Application date
BE519260 A	00000000		00000000
CH130552 A	19281215		19280228
CH321226 A	19570430		19530417
DE1230695 B	19661215	DE1953R011457	19530418
DE1230695 C	19661215	DE1953R011457	19530418
FR1087802 A	19550301		19530417
GB749008 A	19560516	GB19530010629	19530417
US2651287 A	19530908	US19490080753	19490310
US2658009 A	19531103	US19480026867	19480513

Priority:

US19480026867 19480513 US19490080753 19490310 19520418
19520513

Probable Assignee: RANSBURG ELECTRO COATING CORP

Assignee(s): (std): EDWIN MARLIN RANSBURG ; HAROLD PRESTON RANSBURG ; HARPER GREGG RANSBURG ; HARPER J RANSBURG ; RANSBURG ELECTRO COATING CORP ; HARPER J RANSBURG COMPANY ; WESTINGHOUSE ELECTRIC CORP

Assignee(s): WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY ; HARPER J RANSBURG CO

Inventor(s): (std): FANGE ARTHUR WILLIAM VON ; JUVINALL JAMES WILLIAM ; JUVINALL ROBERT CHARLES ; RANSBURG EDWIN M ; RANSBURG EDWIN MARLIN ; TURNER ROBERT H ; TURNER ROBERT HARRIS ; ROBERT HARRIS TURNER ; ROBERT CHARLES JUVINALL ; RANSBURG HAROLD PRESTON ; MFG CO WESTINGH ; MANUFACTURING COMPANY WESTINGH ; JAMES WILLIAM JUVINALL ; EDWIN MARLIN RANSBURG ; ARTHUR WILLIAM VON FANGE ; RANSBURG HARPER J ; RANSBURG HARPER GREGG

Inventor(s): COMPANY WESTINGHOUSE ELECTRIC AND MANUFACTURING ; CHARLES JUVINALL ROBERT ; HARRIS TURNER ROBERT ;

