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# new products bulletin

Bulletin 297, October 1980

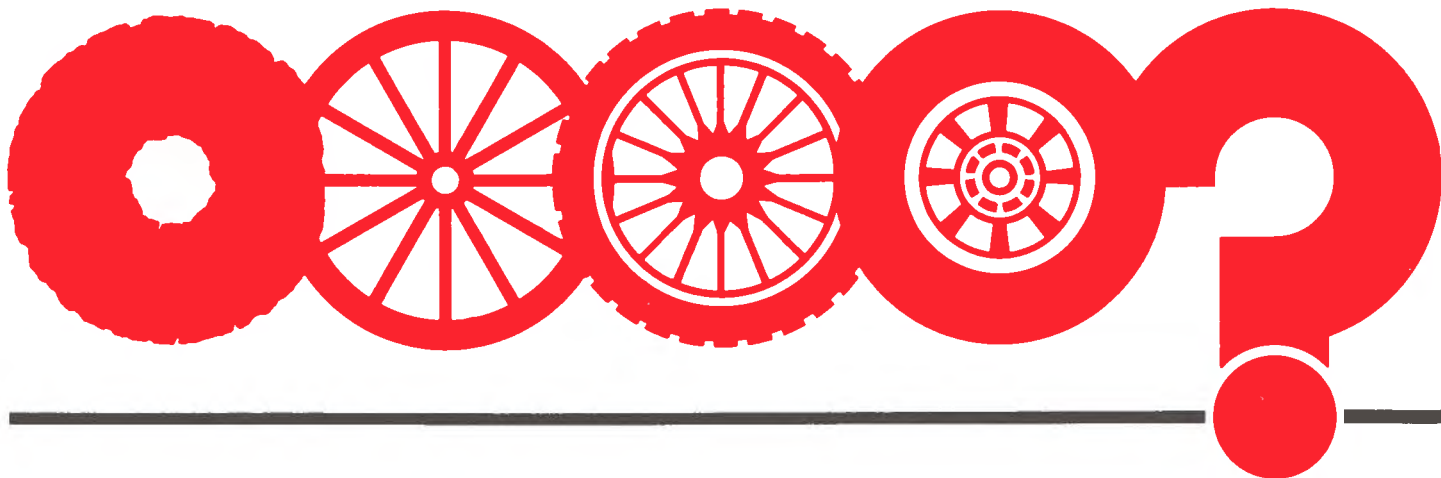
Industry, Trade, Industries  
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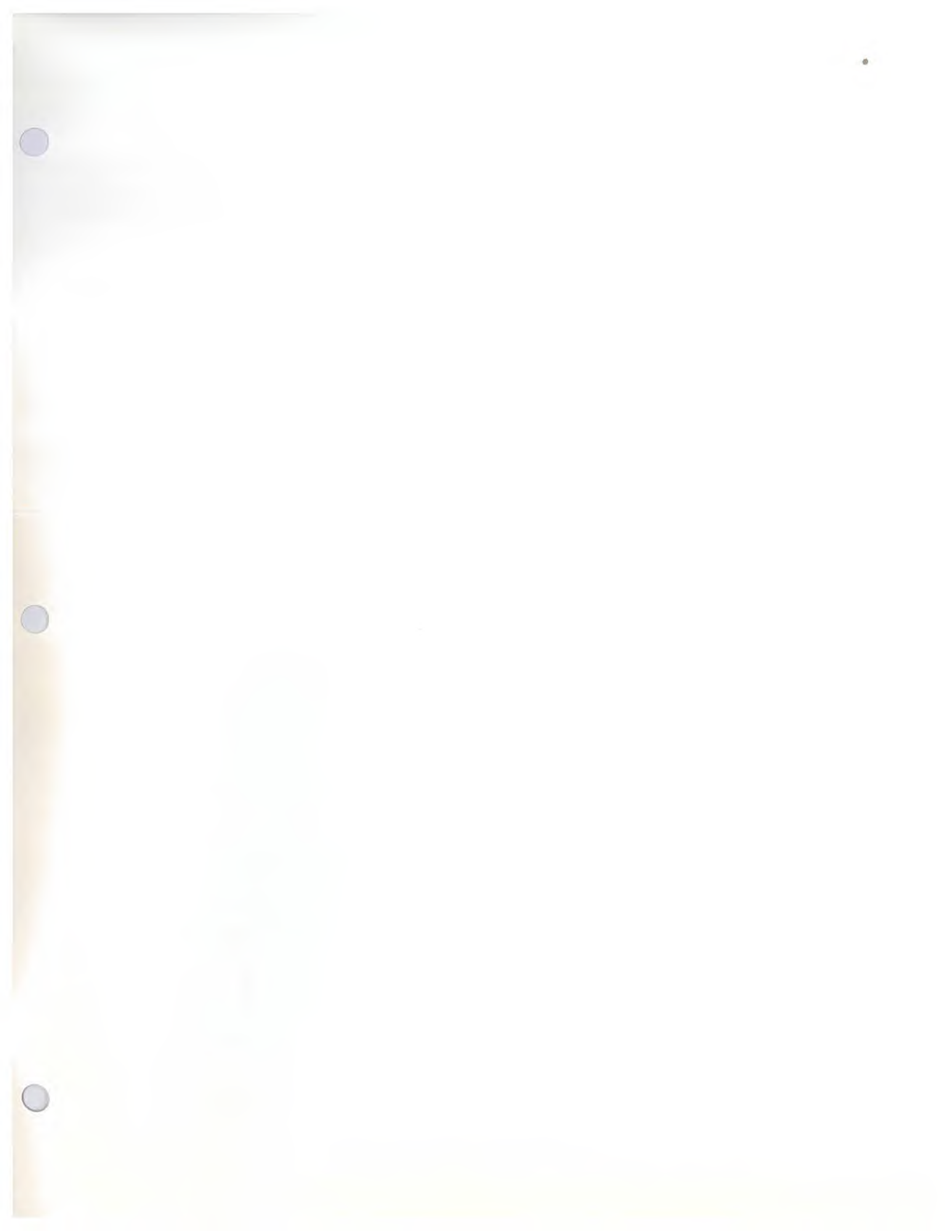
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# bulletin de produits nouveaux

Bulletin 297, Octobre 1980





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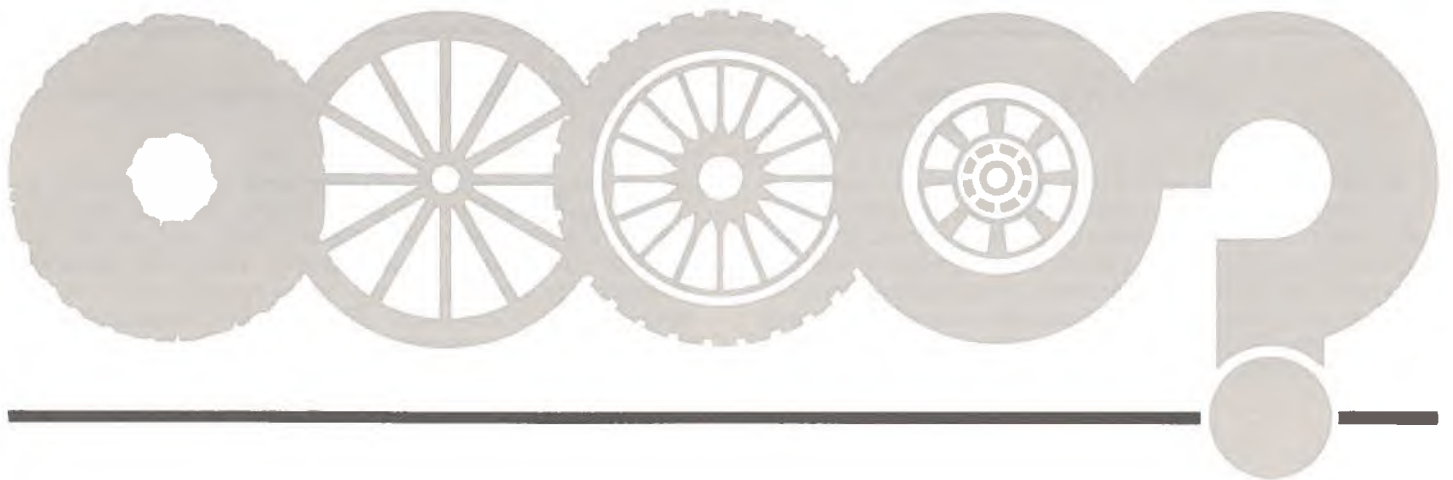
# bulletin de produits nouveaux

This monthly bulletin is published to inform Canadian industry of licensing and joint venture opportunities that may be investigated for the purpose of forming manufacturing affiliations. The Department cannot assume any responsibility for claims made or for transactions which ensue from the publication of any items in this bulletin. If you are interested in any of the proposals you should contact the correspondent identified with the item and send a copy of your initial correspondence to the Canadian Government Trade Commissioner responsible for the area at the address indicated, in order that he can provide appropriate assistance or commercial information.

The Licensing Opportunities Section (34/3) of the BUSINESS CENTRE of the Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5 (Telephone: (613) 995-5771) should be advised of any agreements concluded as a result of this publicity.

Publié tous les mois, le présent bulletin a pour objet d'informer l'industrie canadienne des occasions de fabrication sous licence et d'entreprises en participation qu'il est possible d'étudier aux fins de constituer des affiliations manufacturières. Le Ministère ne peut assumer aucune responsabilité à l'égard des réclamations ou transactions découlant de la publication d'articles dans le présent bulletin. Si l'une ou l'autre des propositions vous intéresse, auriez-vous l'obligeance de communiquer avec le correspondant et transmettre copie de votre premier échange de correspondance au délégué commercial du Gouvernement du Canada qui s'occupe de la région en cause, à l'adresse indiquée, afin qu'il puisse vous fournir l'aide ou les renseignements commerciaux pertinents.

Prière d'informer la Section des possibilités de licences (34/3), du CENTRE DES ENTREPRISES, ministère de l'Industrie et du Commerce, Ottawa (Ontario) K1A 0H5 (tél. (613) 995-5771), de toute entente intervenue à la suite de la présente publicité.



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## **Selected Licensing or Joint Venture Manufacturing Opportunities**

### **Concentration of Fruit Juices/297**

A two-stage reverse osmosis process for the concentrating of natural fruit juice is described. The concentrate contains all the flavour and aroma compounds in one-half the original volume for packaging and transportation savings. The addition of fresh drinking water reconstitutes the juice. Write: Case 6316, Canadian Patents and Development Limited, 275 Slater Street, Ottawa, Canada K1A 0R3 and send a copy of your initial correspondence to: Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Canada K1A 0H5.

### **Antenna Beam Shaping Structure/297**

This passive antenna beam shaping structure for receiving space satellite transmitted signals is designed to give  $2\pi$  steradian hemispherical coverage. Write: Case 6993, Canadian Patents and Development Limited, 275 Slater Street, Ottawa, Canada K1A 0R3 and send a copy of your initial correspondence to: Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Canada K1A 0H5.

### **Low-Cost Cable-Erected Building/297**

A low-cost easily-erected structure. It employs locking struts on the sides of the arch which fold inwardly beneath the arch in the collapsed condition so that the span of the arch in the erect and collapsed condition is substantially the same. Write: Case 6997, Canadian Patents and Development Limited, 275 Slater Street, Ottawa, Canada K1A 0R3 and send a copy of your initial correspondence to: Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Canada K1A 0H5.

### **Amplitude Controlled Digital Oscillator/297**

A low-cost digital oscillator specifically designed to produce accurate sine wave forms and high amplitude stability. Write: Case 7099, Canadian Patents and Development Limited, 275 Slater Street, Ottawa, Canada K1A 0R3 and send a copy of your initial correspondence to: Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Canada K1A 0H5.

## **Sélection d'occasions de fabrication sous licence ou d'entreprises en participation**

### **Concentration des jus de fruits/297**

Description d'un procédé de concentration des jus de fruits naturels par osmose inverse à deux étages. Le concentré contient tous les arômes dans la moitié du volume original, ce qui permet des économies substantielles pour le conditionnement et le transport. Pour reconstituer le jus il suffit d'ajouter de l'eau potable. Écrire: Cas 6316, Société canadienne des brevets et d'exploitation limitée, 275, rue Slater, Ottawa (Canada) K1A 0R3 et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licences (34/3), Centre des entreprises, Ministère de l'Industrie et du Commerce, Ottawa (Canada) K1A 0H5.

### **Dispositif conformateur de faisceau d'antenne/297**

Ce dispositif conformateur de faisceau d'antenne passif est destiné à la réception des signaux transmis par satellite et donne une couverture hémisphérique de  $2\pi$  stéradians. Écrire: Cas 6993, Société canadienne des brevets et d'exploitation limitée, 275, rue Slater, Ottawa (Canada) K1A 0R3 et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licences (34/3), Centre des entreprises, Ministère de l'Industrie et du Commerce, Ottawa (Canada) K1A 0H5.

### **Bâtiment économique monté au moyen de câbles/297**

Il s'agit d'une structure économique, facile à monter. Comporte des articulations auto-blocantes qui se replient verticalement vers l'intérieur de sorte que en position repliée ou déployée la portée est essentiellement la même. Écrire: Cas 6997, Société canadienne des brevets et d'exploitation limitée, 275, rue Slater, Ottawa (Canada) K1A 0R3 et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licences (34/3), Centre des entreprises, Ministère de l'Industrie et du Commerce, Ottawa (Canada) K1A 0H5.

### **Oscillateur numérique à commande d'amplitude/297**

Oscillateur numérique de faible coût, conçu spécialement pour donner des formes d'onde sinusoïdales précises avec une très bonne stabilité d'amplitude. Écrire: Cas 7099, Société canadienne des brevets et d'exploitation limitée, 275, rue Slater, Ottawa (Canada) K1A 0R3 et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licences (34/3), Centre des entreprises, Ministère de l'Industrie et du Commerce, Ottawa (Canada) K1A 0H5.

### **Cubic Modular System/297**

Danish manufacturer offers technical, production and marketing know-how, drawings of all components and workshop drawings for a license or joint venture partnership, to manufacture and market, in Canada, a commercially proven modular method of constructing electrical distribution switchboards and control panels, enclosures for machinery and pneumatic- or hydraulic control systems. The CUBIC-Modular Design is based on a system of cubicles constructed with similar parts each with dimensions which are a multiple of 192 mm. Therefore cubicles and parts of cubicles can be expressed in modules of 192 mm which makes for great flexibility of cubicle size and yet retains standard method of construction. Even in the smallest detail of part, the modular method of measurement is used and thus a standardised approach to assembly and construction is established and maintained throughout until the final cubicle product is produced. The raw material is mainly electro-galvanized steel with components made with cold rolled steel plate. (See illustrations page 44.) Write: CUBIC-Modulsystem A/S, Skjoldborgsgade 21, DK-9700 Broenderslev, Denmark and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Kr. Bernikowsgade 1, 1105 Copenhagen K, Denmark.

### **Stabilizing Mattress/297**

French manufacturer seeks the cooperation of a Canadian company for the production and sale under a licensing know-how arrangement of the "COQUILLE" mattress for the transportation of injured persons from the site of an accident to the operating table. It provides safety and comfort during transportation by ambulance or aircraft, absorbs shocks, and provides complete immobilization of the body by a complete, uniform distribution of loads. The mattress is permeable to X-rays so that X-ray examination, therapy or isotopic examination can be carried out without moving the patient from the mattress. The mattress can be used with or without a stretcher or converted to a stretcher by a pair of telescopic carrying poles. It consists of an airtight envelope containing plastic balls. The outer skin is particularly strong to withstand tractive efforts and accidental tearing. In the inoperative position the valve is open, the atmospheric pressure prevails within the envelope. When the body is laid on the mattress, a fraction of the air escapes, thus accommodating the configuration of the body. This effect can be obtained by thumping the mattress for the most suitable arrangement of the plastic balls. Then a vacuum is produced within the inner space of the mattress by a vacuum pump, or alternately by connecting the air intake of an engine carburetor to the mattress valve. According to the degree of vacuum created, due to the reduction in the volume of plastic balls, the mattress attains, in succession, a moulding stage, then a "clamping" stage. Thus moulding alone may take place if desired, but the "clamping" action may be obtained only subsequently to the moulding stage. (See illustrations page 44.) Write: Firn-Medical, 35, rue du Maréchal de Lattre de Tassigny, 67150 Erstein (rance) and send a copy of your initial correspondence to the Commercial Division, Canadian Embassy, 35, Avenue Montaigne, 75008 Paris (France).

### **Système modulaire CUBIC/297**

Un fabricant danois offre une coparticipation à son entreprise ou les droits de fabrication et de commercialisation au Canada de tableaux de distribution électrique, de panneaux de commande et d'enceintes pour machines et pour circuits de commande hydrauliques ou pneumatiques de construction modulaire ayant déjà connu un succès sur le marché. L'offre comprend les connaissances techniques, les données propres à la fabrication et la commercialisation, les dessins de toutes les pièces composantes et les dessins d'exécution. Le système modulaire CUBIC est basé sur un système d'éléments cubiques constitués de pièces semblables, et dont toutes les dimensions sont des multiples de 192 mm. Les éléments modulaires et leurs composants peuvent donc être exprimés en modules de 192 mm, permettant ainsi d'obtenir une grande variété de dimensions sans modifier la méthode de construction. La méthode de mesure modulaire est utilisée même dans le cas des plus petites pièces, ce qui permet d'établir une méthode d'assemblage et de construction normalisée qui sera utilisée jusqu'à la fabrication de l'élément modulaire définitif. Le matériau brut est essentiellement de l'acier galvanisé par électrodeposition et les pièces composantes sont fabriquées à partir d'une plaque d'acier laminée à froid. (Voir les illustrations page 44.) S'adresser au CUBIC-Modulsystem A/S, Skjoldborgsgade 21, DK-9700 Broenderslev, Danemark et envoyer une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Kr. Bernikowsgade 1, 1105 Copenhague K, Danemark.

### **Matelas stabilisateur/297**

Un fabricant français recherche la coopération d'une société canadienne pour la production et la vente, sous licence de savoir-faire, du matelas "Coquille" servant au transport de personnes blessées du lieu de l'accident à la table d'opération. Il assure la sécurité et le confort du blessé pendant son transport par ambulance ou aéronef, absorbe les chocs et permet l'immobilisation complète du sujet par une répartition totale et uniforme des charges. Le matelas est transparent aux rayons X de sorte qu'il est possible de pratiquer l'examen ou le traitement aux rayons X, ou un examen par isotopes, en laissant le patient dans le matelas. Celui-ci peut être utilisé avec ou sans civière ou transformé en civière par l'ajout de deux longerons télescopiques. Le matelas est formé d'une enveloppe étanche à l'air contenant des billes de plastique. Le revêtement externe est particulièrement robuste afin de résister à la traction et aux déchirures par accroc. Lorsque le matelas n'est pas utilisé, la soupape est ouverte et la pression interne est égale à la pression atmosphérique. Une partie de l'air contenu s'échappe quant un sujet est couché sur le matelas qui se modèle aux formes du corps. Cet effet peut cependant être accru en tapotant le matelas pour obtenir la meilleure répartition possible des billes. On pratique ensuite un vide partiel en reliant le matelas à une pompe à vide ou à la prise d'air du carburateur d'un moteur. Selon l'importance du vide partiel obtenu et suite à la réduction du volume des billes de plastique, le matelas atteint une étape de moulage qui est suivie d'une étape d'immobilisation ou de serrage. Il est possible d'arrêter à l'étape du moulage, mais celle de l'immobilisation est toujours postérieure à la première. (Voir les illustrations page 44.) Écrire à: Firn-Médical, 35, rue du Maréchal De Lattre de Tassigny, 67150 Erstein (France) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, Avenue Montaigne, 75008 Paris (France).

## **Siltation Abatement System/297**

American licensing organization offers a Canadian company the manufacturing and marketing rights to the commercially proven "Ventra-Vac" system of keeping clear channels; bays; lakes and slips — areas susceptible to silt, sand, sludge and deposits under floating drydocks and/or piers. The Ventra-Vac unit (patented in Canada) is a fibre glass cylinder manufactured in varying diameters and lengths, to which a bell cone is attached at the lower end. The base of the unit has a cone shape which is inserted into the bell to create a venturi effect and a horizontally-directioned force of water. High volume, low pressure air is injected into the plenum chamber at the base of the cylinder and is ejected at a designated angle to induce turbulent action. The air expands and accelerates as it rises causing a vacuum pull at the base of the cone, thus inducing a flow of water and loose sediment. This mixture is accelerated to a rise of eight feet (2.44 m) per second by the venturi effect as it passes over the cone into the column. The flow of water, air and sediment is diffused by water above the Ventra-Vac, creating a circular flow pattern over a wide area. The unit has no moving parts, cuts maintenance dredging and costs, has continuous effectiveness, improves ecological environment and performance/energy-cost ratio. (See illustration page 44.) Write: Mr. Frank Brkic, Mosaic Enterprises, Inc., P.O. Box 667, Arlington, Virginia 22216 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102.

## **Automatic Spring Manufacturing and Wire Straightening Machines/297**

Swiss inventor and manufacturer offers a Canadian company a license to manufacture and market a spring making machine. Made on a six or twelve tool carrier model, the machine permits the manufacture of all types of springs of round and semi-flat wire and offers a wide range of possibilities owing to the combination of tool carriers, to the wire feed through the centre or from the side and to the new and unique device of the feed and roll spindle. This spindle activated by a forward movement, alternate rotation with stop and restart at each cycle, enables the manufacture of springs of circular form as well as circular shaped forms with folded ends. Machine capacity is round wire 0.03 mm. to 1.00 mm; semi-flat wire 0.01 mm. thick to 7.00 mm. wide. Springs are used in watchmaking, fine instruments, computers, servo controllers, armament fuses, etc. A wire straightening machine which can handle any alloy is also offered to complement the spring making machines. Patents are held in major manufacturing nations. (See illustrations page 45.) Write: Mr. René Perrenoud, Industrial, Ressorts-Fil S.A., rue F.-Jacques 5, 2114 Fleurier/Ne, Switzerland and send a copy of your initial correspondence to the Commercial Division, Canadian Embassy, Kirchenfeldstrasse 88, 3005 Berne, Switzerland.

## **Système de réduction de l'envasement/297**

Un organisme américain d'attribution de licences offre à une société canadienne les droits de fabrication et de commercialisation d'un système de réduction de l'envasement, le Ventra-Vac, qui a fait ses preuves dans des chenaux, des baies, des lacs, des bassins — tous les endroits où le sable, la boue, la vase, etc. sont susceptibles de s'accumuler comme sous les cales sèches flottantes et les quais sur pilotis. Le Ventra-Vac qui est breveté au Canada est un cylindre de fibre de verre, fabriqué en différentes longueurs et différents diamètres, à l'extrémité inférieure duquel est fixé un cône creux. La base de l'unité est un cône plein, placé à l'intérieur du cône creux ou cloche, de façon à former un effet de venturi et une force horizontale. De grandes quantités d'air sous faible pression sont injectées dans la chambre à la base du cylindre, selon un angle calculé pour induire un effet de turbulence. L'air se dilate et accélère en s'élevant, créant une aspiration à la base du cône et donc un courant d'eau et de sédiments. Ce mélange est accéléré jusqu'à 8 pieds (2,44 m) par seconde par l'effet venturi lorsqu'il passe du cône au tuyau. Le courant d'eau, d'air et de sédiments est diffusé par l'eau au-dessus du Ventra-Vac, créant ainsi un mouvement circulaire sur une vaste étendue. Cet appareil n'a aucune pièce mobile, diminue le dragage et les coûts qui lui sont associés, est d'une efficacité constante, améliore l'environnement écologique et présente un bon rapport performance/coût énergétique. (Voir l'illustration page 44). Écrire à: M. Frank Brkic, Mosaic Enterprises Inc., P.O. Box 667, Arlington (Virginie) 22216 et envoyer copie de votre correspondance initiale au Consulat canadien, 3 Parkway Building, Suite 1310, Philadelphia (Pennsylvanie) 19102.

## **Machines pour la fabrication des ressorts et pour le redressage du fil/297**

Un inventeur et fabricant suisse offre à une compagnie canadienne les droits de fabrication et de commercialisation d'une machine pour la fabrication de ressorts. Cette machine permet de fabriquer des ressorts de toutes formes, en fil rond et méplat. Elle présente un très large éventail de possibilités grâce à ses 6 ou 12 porte-outils, à l'avance du fil par le centre ou par le côté et au dispositif nouveau et unique de la broche spéciale de roulage. Cette broche, animée d'un mouvement d'avance, de rotation alternative avec arrêt et remise en marche à chaque cycle, permet de fabriquer des ressorts de formes circulaires à extrémités pliées ou non. Elle travaille des fils ronds de 0,03 mm à 1,00 mm et des fils méplats de 0,01 mm à 7,00 mm. Les ressorts ainsi fabriqués trouvent leur application dans l'horlogerie, de même que dans les industries des instruments de précision, du matériel informatique, des télécommandes, des fusibles d'armement, etc. En complément de cette machine, le même inventeur offre également une machine pour le redressage du fil. Des brevets ont déjà été accordés à des entreprises de grandes nations industrialisées. (Voir les illustrations page 45.) S'adresser à: M. René Perrenoud, industriel, Ressorts Fil SA, 5, rue F.-Jacques, 2114 Fleurier/Ne, Suisse et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Kirchenfeldstrasse 88, 3005 Berne, Suisse.

## Mobile Radio Security System/297

Swiss inventor offers a Canadian advanced electronic company the manufacturing and worldwide marketing rights to the Falcon International Radio Security System. It consists of an electronic unit with a transmitter which, with basic units and a central processor for each country, provides 24 hour security alarm service. The system works with codes in protecting possessions (4,000 times more codes than the world population) and locates automatically, by direction in degrees and distance in kilometers, so that the rescue organization can find the yacht in distress, or police, the location of the taxi where a hold up has taken place. Units are wireless or wirebanded, can direct coded reports without sirens (code specifies each protected object), permits up to 88 different alarm connections, receives sabotage-proof radio alarms up to 40 km, permits SOS for ten separate emergencies, can compliment already existing alarm installations — the agent's own or his competitors — and give a client better security, is pocket size and weighs 500 g, can be connected to a personal paging system. Incoming coded alarm signals are automatically transferred to the central station and registered by the base station which locates the transmitter on the yacht, vehicle, aeroplane, etc. The system is international. Write: Mr. Jan Falk, Falcon Systems, Postfach 65, CH-3415, Basle, Switzerland and send a copy of your initial correspondence to the Commercial Division, Canadian Embassy, Kirchenfeldstrasse 88, 3005 Berne, Switzerland.

## Voice Frequency Opener/297

Swedish invention licensing organization offers a Canadian company the manufacturing and North American marketing rights to an all electronic 5-tone code switch used in mobile radios and automatic guard systems, for military purposes and in controlling processes. Compared to types now on the market, it has the advantage of being more exact (100% selection), impossible to open illegitimately, easy to program, easy to re-program without exchanging any components, wide-ranged (a five-tone selection unit will give a practically unlimited number of combinations), non-sensitive for vibrations, non-sensitive for temperature alterations, and it is compact (a five-tone unit is, when built with now available standard components not as big as a cigarette pack). It can be inexpensively produced (a five-tone unit will cost one third or one quarter of the price of a two-tone opener made today). A patent is pending. Write: Mr. Kjell Nylén, Innovex, Gardesvagen 5, S-531 57 Lidköping, Sweden and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, P.O. Box 16129, S-103 23 Stockholm 16, Sweden.

## Système de sécurité radio mobile/297

Un inventeur suisse offre à une société canadienne d'électronique de pointe les droits de fabrication et de commercialisation, pour le monde entier, du système international de sécurité radio Falcon. Il s'agit d'un appareil électronique muni d'un émetteur qui fournit, à l'aide de blocs de base et d'un processeur central pour chaque pays, un système d'alarme de sécurité 24 heures sur 24. Ce système utilise des codes (4000 fois plus de codes que le nombre de gens sur la Terre) pour localiser, en degrés pour la direction et en kilomètres pour la distance, l'installation protégée, afin que l'organisme de secours puisse trouver le yacht en détresse ou, la police, l'endroit où se trouve le taxi venant de faire l'objet d'un hold-up, par exemple. Les appareils sans fils, ou avec fils, peuvent transmettre des rapports en code, sans sirène (le code précise l'objet protégé), permettent le raccordement à un maximum de 88 circuits d'alarme différents, reçoivent des alarmes radio jusqu'à une distance de 25 milles, sans possibilité de sabotage, permettent l'émission d'un SOS pour dix urgences distinctes, peuvent s'ajouter aux installations d'alarme existantes — celles de l'agent ou celles de ses concurrents — pour donner au client une sécurité accrue, sont de format de poche, pèsent 500 grammes et peuvent être raccordés à un système de téléappel de recherche de personnes. Les signaux d'arrivée codés sont automatiquement transférés à la station centrale et enregistrés par la station de base qui localise le yacht, véhicule, avion, etc. Le système est international: le yacht du Canada sera aussi bien sauvé à Nassau qu'à Nice. Écrire à M. Jan Falk, Falcon Systems, Postfach 65, CH-3415, Bâle, Suisse et envoyer une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Kirchenfeldstrasse 88, 3005 Berne, Suisse.

## Commutateur de fréquences vocales/297

Un organisme suédois s'occupant de licences d'invention offre à une société canadienne les droits de fabrication et de commercialisation en Amérique du Nord d'un commutateur de code à 5 tonalités entièrement électronique, destiné aux systèmes radio mobiles et aux systèmes de garde automatiques, à des fins militaires et à des fins de vérification. Par rapport aux dispositifs actuellement disponibles, ce commutateur présente l'avantage d'être plus précis (sélection à 100 %), d'être impossible à ouvrir illégalement, d'être facile à programmer, facile à reprogrammer sans changer de composants, d'avoir une gamme étendue (un bloc de sélection à cinq tonalités donne un nombre pratiquement illimité de combinaisons), de ne pas être sensible aux vibrations, ni aux variations de température et d'être compact (fabriqué avec les composants standard actuels, il n'est pas plus grand qu'un paquet de cigarettes). Il peut être produit à bon marché (un commutateur à cinq tonalités coûtera un tiers ou même un quart du prix du commutateur à deux tonalités d'aujourd'hui). Brevet en instance. Écrire à M. Kjell Nylén, Innovex, Gardesvagen 5, S-531 57 Lidköping, Suède et envoyer une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, P.O. Box 16129, S-103 23 Stockholm 16, Suède.

## Nozzles/297

Japanese industrial technology association offers licensing rights to a method of eliminating foam appearing on a liquid surface. An MPC nozzle made of stainless steel or a suitable non-metallic substance located on the surface of a liquid contained in a reaction vessel ejects liquid which is being circulated by a pump from the bottom of the reaction vessel. The liquid particles ejected from the nozzle hit and break foam appearing on the liquid surface by their kinetic energy. The equipment consists of a nozzle which ejects accelerated liquid, an impinging plate located at the mouth of the nozzle, and front and rear arms supporting the impinging plate. The impinging plate, with the support, is inserted into the center of the nozzle and distance L, between the nozzle and plate, can be varied by a screw arrangement. More than one nozzle can be used effectively. It is important to select a suitable PQ product in order to obtain the best performance in eliminating foam appearing on a liquid surface inside a reaction vessel, where P is liquid pressure in kilograms per square centimeter G and Q is liquid flow rate in litres per minute. It should be noted that a proper PQ product and nozzle distribution be used for a large scale operation. If a Wald-Hof type reaction vessel is used the equipment includes an air pump, a liquid circulating pump, or reaction vessel and the MPC nozzle. Write: Japan Industrial Technology Association, 20-Mori Bldg, 8F, 2-7-4 Nishi Shinbashi, Minato-ku, Tokyo 105, Japan and send a copy of your initial correspondence to Commercial Division, Embassy of Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japan.

## Electrolytic Cell for Production of Sodium Hypochlorite/297

Japanese technology center offers know-how licensing rights to a Canadian company on behalf of Kobe Steel, Ltd. for technology relating to an apparatus to produce sterilizing sodium hypochlorite (NaOC1) by electrolysis of seawater (or a saline solution) without using any diaphragm. This is a non-diaphragm type seawater electrolysis apparatus. The electrolytic cell proper is cylindrical and is made of FRP characterized by light weight and anti-corrosion against seawater. The basic construction is such that a number of bar-type anodes and cathodes are arranged in parallel. Platinum-plated titanium and other insoluble materials are used for the anode, while steel is used for the cathode. Advantages: The electric current efficiency is approximately ten percent better than that of conventional electrolytic cells — namely, the quantity of NaOC1 produced per unit amount of electricity is approximately ten percent greater; less deposit of magnesium hydroxide on the cathode and in the surrounding area; the electrolytic cell is smaller and more compact than conventional electrolytic cells; ease of maintenance. Write: The Foundation of Osaka Science and Technology Center, 1-8-4, Utsubo Hommachi, Nishi-ku, Osaka, Japan and send a copy of your initial correspondence to the Commercial Division, Embassy of Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japan.

## Buses/297

La Japan Industrial Technology Association offre les droits sous licence d'un procédé d'élimination de la mousse qui se forme à la surface d'un liquide. Une buse MPC en acier inoxydable ou en tout autre matériau non métallique approprié et affleurant la surface d'un liquide contenu dans un vase de réaction projette le liquide refoulé par une pompe placée au fond du vase. Les particules liquides chassées de la buse frappent la mousse formée à la surface du liquide et la fractionnent par leur seule énergie cinétique. Le matériel est composé d'une buse qui projette le liquide soumis à une accélération, d'une plaque de contact placée à l'ouverture de la buse et de bras supportant la plaque de contact à l'avant et à l'arrière. Cette dernière, solidaire du support, est introduite dans l'axe de la buse. L'écart L entre la buse et la plaque peut être modifié au moyen d'une vis. Il est possible d'utiliser plus d'une buse. Il est important de trouver le produit PQ procurant la meilleure élimination possible de la mousse à la surface d'un liquide contenu dans un vase de réaction, P étant la pression du liquide en kg/cm<sup>2</sup> et Q le débit, en L/mm. Noter que pour une utilisation industrielle, il faut combiner convenablement le produit PQ et le nombre de buses à utiliser. Dans le cas d'un vase de réaction de type Wald-Hof, le matériel comprend une pompe à air, une pompe de circulation ou un vase de réaction et une buse MPC. Écrire à Japan Industrial Technology Association, 20-Mori Bldg, 8F, 2-7-4 Nishi Shinbashi, Minato-Ku, Tokyo 105, Japon et faire parvenir une copie de votre correspondance initiale la Division Commerciale, Ambassade du Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japon.

## Cellule électrolytique destinée à produire de l'hypochlorite de sodium/297

Le Centre de technologie du Japon offre aux compagnies canadiennes, pour le compte de la *Kobe Steel Ltd.*, les droits d'exploitation d'une technique pour produire par électrolyse d'eau de mer (ou d'une solution saline) et sans l'utilisation d'un diaphragme, de l'hypochlorite de sodium (NaOC1) qui est utilisé comme stérilisant. Le nouveau type de cellule utilisée à cette fin est de forme cylindrique et est constituée de FRP qui est un matériau léger et résistant à la corrosion dans de l'eau de mer. De plus, cette cellule ne comporte aucun diaphragme et comprend essentiellement un certain nombre d'anodes et de cathodes, en forme de tiges, disposées parallèlement les unes par rapport aux autres. L'anode est constituée de titane platinisé et d'autres matériaux insolubles, tandis que la cathode est constituée d'acier. Avantages: Son rendement électrolytique est d'environ 10 p. cent supérieur à celui des cellules classiques, c.-à-d. que la quantité de NaOC1 produite par unité d'électricité utilisée est d'environ 10 p. cent supérieure; les quantités d'hydroxyde de magnésium déposées sur la cathode et au voisinage de celle-ci sont inférieures; la cellule est plus petite et plus compacte que les cellules classiques; enfin, ce type de cellule est plus facile à entretenir. Prière d'expédier toute demande à l'adresse suivante: *The Foundation of Osaka Science and Technology Center*, 1-8-4, Utsubo Hommachi, Nishi-ku, Osaka, Japon et faire parvenir une copie de votre correspondance initiale à la Division commerciale de l'Ambassade du Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japon.

## **Steel Production by Continuous Caster Combined with Ladle Refining Furnace/297**

Japanese technology center offers know-how licensing and marketing rights for the production of high quality steel products and special steel, including steel for cold rolling and low-alloy steel, by combining in one system the equipment technology in the continuous casters, continuous operating technology and processing technology of molten steel to be fed for continuous casting. After slag retention is carried out prior to delivery of steel from the steel-making furnace, the molten steel is subjected to argon gas bubbling treatment, vacuum treatment, etc., for ladle refining, thereby reducing the inhibiting factors such as inclusions, gas and others. Many special structural designs are made for the continuous caster. The molten steel is isolated from the air in the entire course from the bottom of the ladle to the caster and special fire bricks are used for the tundish. The level of the molten steel in the mold in continuous casting is automatically controlled in terms of both productivity and quality of cast material. The quality can be further improved by cooling the mold and cast bloom and using the electromagnetic stirring technique. In addition, this technology also incorporates a multiple continuous casting system, high-speed casting technique and continuous casting technique using large cross-section mold. Write: The Foundation of Osaka Science and Technology Center, 1-8-4, Utsubo Hommachi, Nishi-ku, Osaka, Japan and send a copy of your initial correspondence to the Commercial Division, Embassy of Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japan.

## **Cold and Hot Hydrostatic Extrusion/297**

Japanese company, Kobe Steel, Ltd., offers patent and know-how licensing for an energy saving process which makes extrusion of metal materials efficient and raises productivity. Friction between the rolls and material is small so that the extrusion pressure is reduced. Extrusion at a large ratio can be conducted, and products with small cross section can be obtained from large billets. Uniform material flow assures easy extrusion of composite members, thin-wall pipes, and other members having a complex cross-sectional profile. Unlike in the conventional method, products with better surface and more accurate dimensions can be obtained in the cold and hot processes. Advantages: The method permits extrusion of aluminum alloys at 10 to 100 times higher speeds than in conventional ones; when applied to extrusion of copper alloys, it offers products of small dimensions, eliminating the intermediate process of drawing — the same is true of steel materials; in the case of extrusion of special metals or special-shape materials, good surface properties and highly accurate dimensions of the extruded members are assured. Write: The Foundation of Osaka Science and Technology Center, 1-8-4, Utsubo Hommachi, Nishi-ku, Osaka, Japan and send a copy of your initial correspondence to Commercial Division, Embassy of Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japan.

## **Fabrication de l'acier par utilisation combinée de la machine à coulée en continu et du four d'affinage à poche de coulée/297**

Un centre technologique japonais offre les droits de fabrication sous licence et de commercialisation de produits manufacturés en acier de première qualité et d'aciers spéciaux, y compris l'acier pour laminage à froid et l'acier faiblement allié. Le procédé offert combine l'utilisation des machines à coulée en continu et la technique de production en continu appliquée au traitement de l'acier en fusion destiné au coulage. Une fois la rétention des scories accomplie, soit avant la sortie de l'acier du four, l'acier en fusion est soumis au barbotage à l'argon et au traitement sous vide en vue de l'affinage en poche de coulée, ce qui réduit au minimum les facteurs d'inhibition comme les inclusions, les gaz, etc. La machine à coulée en continu entraîne l'aménagement d'installations spéciales présentant de nombreuses particularités. L'acier en fusion est isolé de l'air durant tout le procédé, du fond de la poche de coulée jusqu'à la machine à coulée. La cuve de coulée est fabriquée de briques réfractaires spéciales. Durant le coulage en continu, le contrôle du niveau de l'acier en fusion dans le moule vise une productivité et une qualité optimales du produit coulé. Il est même possible de produire une coulée de qualité supérieure par le refroidissement des blooms et le brassage électromagnétique. De plus, cette technique se prête au coulage multiple en continu, au coulage à haute vitesse et au coulage en continu grâce à l'utilisation de moules très volumineux. Écrire à: The Foundation of Osaka Science and Technology Center, 1-8-4, Utsubo Hommachi, Nishi-ku, Osaka, Japon et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japon.

## **Procédé hydrostatique d'extrusion à chaud et à froid/297**

La société japonaise Kobe Steel Ltd. offre d'octroyer sous licence le brevet et la technique ayant trait à un procédé qui exige peu d'énergie et qui a pour but de rendre l'extrusion des métaux efficace et d'améliorer la productivité. Le frottement entre les outils et le matériau est faible, ce qui réduit la pression d'extrusion. Il est possible d'effectuer une extrusion de grande réduction et d'obtenir des produits de faible section à partir de lingots. L'écoulement uniforme du matériau assure une extrusion facile des pièces en matériaux mixtes, des tuyaux minces et d'autres pièces présentant une section complexe. Contrairement à la méthode classique, des produits ayant une meilleure surface et des dimensions plus précises peuvent être obtenus à chaud et à froid. Avantages: La présente méthode permet l'extrusion des alliages d'aluminium à une vitesse de dix à cent fois supérieure à celle des procédés classiques; dans le cas des alliages de cuivre, elle permet d'obtenir des produits de faibles dimensions, ce qui élimine le recours à l'étirage intermédiaire — ce qui vaut aussi pour l'acier; enfin, dans le cas des métaux spéciaux ou des matériaux aux formes particulières, cette méthode donne aux pièces extrudées de bonnes caractéristiques de surface et des dimensions très précises. Écrire à l'adresse suivante: The Foundation of Osaka Science and Technology Center, 1-8-4, Utsubo Hommachi, Nishi-ku, Osaka, Japon et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japon.

### Electrical Plug Release Mechanism/297

Canadian inventor offers manufacturing and marketing rights under his U.S. Patents 4,114,969 and 4,045,106 for an electrical plug release mechanism which, by a slight pull on the electrical cord, releases the plug from its receptacle. The release mechanism consists of a spring mounted reciprocable member to which is attached an electrical plug. The reciprocable member carries an inner tubular member coaxially therewith, a stationary member between the inner and the reciprocable member, a spring acting between the reciprocable member and the stationary member and a lever mounted on an extension projecting outwardly from the stationary member through the reciprocable member. An electrical cord is introduced through a sleeve pivotally mounted between the outer ends of the lever, down through the stationary member and connected to the electrical plug in the usual manner. When the cord is at an angle to the plug, the sleeve will be at a similar angle so that a pull on the cord causes the lever to rotate and disengage from the locked position. The spring action actuates the member upwards withdrawing the terminal prongs from the socket thus releasing the plug from the outlet. Write: Mr. John Borg, Borg's Janitorial Service, P.O. Box 207, Toronto, Ontario L5P 1B1 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

### Thread Restoring Tool/297

American inventor offers a Canadian company the rights to manufacture a thread restoring tool and to market it in Canada, the United States and its possessions. U.S. Patents 4,084,395, 4,090,808 and 4,201,503 have been issued. The product is in commercial production in Japan, Spain and Germany. The tool restores threads in damaged spark plug holes by starting rethreading in the hole where the threads are still good below the damaged thread. Thread match is guaranteed. The tool screws out of the hole bringing cuttings with it so they do not fall through into the cylinder. It is advantageous in that it saves many holes, often eliminates the need for insert replacement, and is excellent for periodic cleaning of spark plug holes by bringing out carbon deposits. (See illustration page 45.) Write: Mr. Wm. G. Nannen, Box 242, Smethport, Pennsylvania 16749 and send a copy of your initial correspondence to Canadian Consulate, Aluminating Building, 55 Public Square, Cleveland, Ohio 44113.

### Multiimpeder/297

American inventor seeks a Canadian company to manufacture under license a new device akin to a synchronous motor on which the following U.S. Patents have issued: 4,048,602, 4,163,962 and 4,206,433. Its purpose is the integrated control of electric power, in the interest of reduced energy losses and increased safety and dependability of utility networks. Its function is based on the control of the state of resonance of a spring loaded armature oscillating in a controlled field environment. The state of resonance is set up automatically in response to a line voltage deviation from a nominal level, or to a power factor deviation from

### Mécanisme de débranchement automatique d'une fiche électrique/297

En vertu de ses brevets américains 4 114 969 et 4 045 106, un inventeur canadien offre les droits de fabrication et de mise en marché d'un mécanisme qui débranche automatiquement une fiche électrique lorsqu'on tire légèrement sur son cordon. Le mécanisme se compose d'une pièce coulissante à ressort à laquelle est fixée la fiche. La pièce coulissante est munie d'un tube intérieur coaxial. Entre ce tube et l'extérieur de la pièce se trouvent un ressort de débranchement ainsi qu'un élément fixe surmonté d'un tube traversant la pièce coulissante et sur lequel est fixé un levier. Un cordon électrique est introduit dans une douille pivotant sur l'extrémité du levier, acheminé dans l'élément fixe et relié à la fiche de la façon habituelle. Quand le cordon forme un angle avec la fiche, la douille en fait autant. Une traction sur le cordon déverrouille le levier en le faisant pivoter. Le ressort fait monter la pièce coulissante et débranche donc la fiche. Écrire à: Mr. John Borg, Borg's Janitorial Service, Box 207, Toronto (Ontario) L5P 1B1, et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licences (34/3), Centre des entreprises, Ministère de l'Industrie et Commerce, Ottawa (Ontario) K1A 0H5.

### Taraut correcteur/297

Un inventeur américain offre à une société canadienne les droits de fabriquer un taraut correcteur et de le commercialiser au Canada ainsi qu'aux États-Unis et dans leurs possessions. Brevets américains 4 084 395, 4 090 808 et 4 201 503. L'article est déjà fabriqué commercialement au Japon, en Espagne et en Allemagne. L'outil est destiné à rectifier les filets endommagés des trous de bougie en commençant la correction à partir des filets intacts qui succèdent à la partie endommagée. Le filetage se faisant vers l'extérieur, les copeaux métalliques sont entraînés au dehors et ne tombent pas dans le cylindre. Outil présentant plusieurs avantages: il permet de sauver de nombreux trous, il élimine souvent la nécessité de poser des bagues filetées, et il se prête très bien au nettoyage du carbone qui se dépose dans les trous de bougie. (Voir l'illustration page 45.) Écrire à: Mr. Wm G. Nannen, Box 242, Smethport, Pennsylvania 16749 et envoyer une copie de votre correspondance initiale au Consulat du Canada, Aluminating Building, 55 Public Square, Cleveland, Ohio 44113.

### Multimpeder/297

Un inventeur américain est à la recherche d'une compagnie canadienne qui fabriquerait sous licence un nouvel appareil semblable à un moteur synchrone; trois brevets ont été délivrés aux États-Unis pour cet appareil: 4 048 602, 4 163 962 et 4 206 433. L'appareil a comme fonction le contrôle intégré de la puissance électrique de façon à réduire les pertes d'énergie et augmenter la sécurité et la fiabilité des réseaux de distribution électrique. Son fonctionnement est basé sur le réglage de la résonance d'une armature à ressort oscillant dans un champ électrique contrôlé. La résonance apparaît automatiquement si la tension de

unity, or to the onset of a fault current. The device, constructed of electric iron and copper, is capable of behaving as a contactless voltage regulator, reactor, capacitor or condenser, and as an arcless fault-current attenuator and recloser, all in one. As such it replaces the main equipment of a distribution substation by one physical unit, resulting in economies with regard to inventories, installation costs, and maintenance costs; and in energy savings, the latter through the continuous power factor control. In addition, it provides a new function, that of fault current attenuation. Write: Mr. N.D. Diamantides, 2517 Fourteenth Street, Cuyahoga Falls, Ohio 44223 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113.

### **Portable Self-Cleaning Door Mat/297**

Canadian inventor offers manufacturing and marketing rights under his U.S. Patent No. 3,786,531 for a self-cleaning door mat having a hollow mat frame which is provided with a top plate of substantially rigid material. The plate is formed with a plurality of depressed apertures which are preferably aligned axially and transversely. The marginal crests of the depressions are covered with felt or other soft material which will remove dirt from shoes, etc. The apertures are closed by spring mounted valve members which protrude above the depressions a sufficient distance to be unseated by being depressed by a person's foot being wiped off on the soft material or by a person standing thereon. The dirt is sucked down through the apertures by a suction device which automatically starts when the mat is stepped-on. The suction device is connected to a collector into which the dirt is deposited. Write: Mr. John Borg, Borg's Janitorial Service, P.O. Box 207, Toronto, Ontario L5P 1B1 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

### **Tine Cleaning Fork/297**

American attorney offers U.S. Patent No. 3,602,541 to a Canadian company, to manufacture for the domestic and international markets, an extremely simple wire and lever mechanism designed to clear food from the tines of a fork. By pushing a thumb operated lever to operate the mechanism, a slide portion moves along the tines to push food off the points. It is ideal for carving and serving barbecued meats and it eliminates much of the mess associated with carving as well as the possibility of accidentally dropping meat slices while attempting to dislodge them from the fork. A prototype is available. (See illustrations page 45.) Write: SNC-1029-17, Mr. William H. Edwards, Attorney at Law, 1531 Manning Avenue, Columbia, South Carolina 29204 and send a copy of your initial correspondence to Canadian Consulate General, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303.

ligne s'écarte d'une valeur nominale, si le facteur de puissance s'écarte de l'unité ou si un courant de défaut se produit. L'appareil, fait en fer et en cuivre de qualité électrique, peut tout à la fois faire office de régulateur de tension sans contacts, d'inductance, de condensateur, d'atténuateur de courant de défaut sans amorçage d'arc et de réenclencheur. Il remplace ainsi l'équipement principal d'une sous-station de distribution par un seul appareil, ce qui permet de ne garder en stock qu'un minimum de pièces de rechange, de réduire les frais d'installation et d'entretien, et de réaliser des économies d'énergie par la régulation constante du facteur de puissance. Il a de plus une fonction supplémentaire, celle d'atténuateur de courant de défaut. Écrire à: M. N.D. Diamantides, 2517 Fourteenth Street, Cuyahoga Falls, Ohio 44223 et faire parvenir une copie de votre correspondance initiale au Consulat canadien, Illuminating Building, 55 Public Square, Cleveland, Ohio, 44113.

### **Paillason portatif auto-nettoyant/297**

Un inventeur canadien offre les droits de fabrication et de commercialisation, sous son brevet américain n° 3,786,531, d'un paillason auto-nettoyant constitué d'un châssis creux recouvert d'une plaque réalisée en un matériau essentiellement rigide. La plaque comporte de nombreuses cavités qui comportent une ouverture au centre et qui sont alignées longitudinalement et transversalement de préférence. Les bords extérieurs des cavités sont recouverts de feutre ou d'un autre matériau souple qui enlève la saleté des souliers, etc. Les ouvertures sont fermées par des billes montées sur ressort qui dépassent des cavités sur une hauteur suffisante pour dégager les ouvertures dès qu'une personne pose les pieds sur le paillason. La saleté est aspirée par les ouvertures par un dispositif d'aspiration qui est mis en marche automatiquement lorsqu'une personne pose les pieds sur le paillason. Le dispositif d'aspiration est relié à un collecteur dans lequel la saleté est déposée. S'adresser à M. John Borg, Borg's Janitorial Service, C.P. 207, Toronto (Ontario) L5P 1B1 et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licence, Centre d'information aux entreprises, ministère d'Industrie et de commerce, Ottawa (Ontario) K1A 0H5.

### **Fourchette autonettoyante/297**

Un avocat des États-Unis offre le brevet américain n° 3 602 541 à une compagnie canadienne pour qu'elle fabrique, pour les marchés national et international, un mécanisme très simple à tige et levier permettant de débarrasser les dents d'une fourchette des restes d'aliments. Par une pression du pouce, on déplace un levier qui entraîne une partie coulissante le long des dents; cette dernière pousse les aliments hors des dents. Le dispositif est idéal pour découper et servir des viandes cuites sur le barbecue et élimine une bonne partie des dégâts éventuels, ainsi que les risques qu'on échappe la tranche de viande en tentant de la déloger de la fourchette. Prototype disponible. (Voir les illustrations page 45.) Écrire à SNC 1029-17, M. William H. Edwards, Attorney at Law, 1531 Manning Avenue, Columbia, South Carolina 29204 et envoyer une copie de votre correspondance initiale au Consulat général du Canada, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303.

## Recently Issued Canadian Patents Available for Licensing or Sale

### Note:

Résumés of the following Canadian Patents are published in the language of application, English or French.

### Patent 1,082,407

#### Apparatus for Cleaning Floors, Carpets and the Like/297

Suction cleaning apparatus for both dry-suction cleaning and water extraction cleaning comprises a container for the collection of the liquid and having an inlet for connection to a cleaning head. A motor driven, air suction unit has an air inlet communicating with the container to apply suction thereto. A detachable reservoir is provided for the cleaning liquid so as to enable the apparatus to be used alternatively for wet cleaning. A shut-off valve can act to close the air inlet in response to the level of the contents of the container. A valve structure alternatively delivers air from an exhaust outlet of the suction unit either to atmosphere or to the interior of the reservoir so as to deliver the liquid from the reservoir to the cleaning head. This valve

### Patent 1,082,420

#### Dispositif étanche de coulée des métaux fondus sur machine à mouler sous pression/297

Dispositif de coulée comportant un creuset, un bassin de niveau, une pompe à vide, un cylindre d'injection et un moule ainsi que diverses canalisations reliant ces éléments, l'ensemble de ces circuits étant maintenu hors de l'air libre permettant la coulée sous vide applicable aux métaux particulièrement réactifs en présence de l'oxygène. Ce dispositif associé à une source de gaz permet

### Patent 1,082,549

#### Fireplace Grate and Blower/297

A fireplace heat transfer unit consists of a forced-air fed distribution manifold extending across the rear of the fireplace parallel to the back wall, a series of heat transfer conduits interconnected with the manifold and extending forwardly from it to the fireplace opening, supported by a generally rectangular, side-walled grate enclosure from which support legs extend downwardly at each corner, an expanded-metal coal grate positioned on the grate enclosure below the heat transfer conduits to hold glowing coals in proximity to the conduits and in proximity to the manifold, the heat transfer conduits having restricting ori-

## Liste des brevets canadiens disponibles pour octroi de licence ou vente

### Note:

Des résumés des brevets canadiens ci-joints sont publiés dans la langue de la demande de brevet, en anglais ou en français.

#### Appareil de nettoyage pour planchers, tapis, et autres/297

structure includes a valve member biased into a first position in which exhaust air from the suction unit is allowed to flow to atmosphere. The valve member is so arranged so as to be engaged by a part carried by the reservoir when the latter is in use, so that the valve member is then moved to a second position in which the exhaust air flow from the suction unit is directed to the interior of the reservoir so as to apply a positive pressure thereto. Write: Vax Appliances Limited, 168 Worcester Road, Bromsgrove, Hereford & Worcester, England and send a copy of your initial correspondence to the Commercial Division, Canadian High Commission, One Grosvenor Square, London, W1X 0AB, England.

#### Airtight Casting Apparatus for Pressure Casting Molten Metals/297

d'effectuer une coulée dans un moule combinée à un traitement superficiel. Écrire: Groupement pour les Activités Atomiques et Avancées "GAAA" S.A., 20 avenue Édouard Herriot, 92350 Le Plessis-Robinson, France et faites parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

#### Grille et ventilateur pour foyer/297

fices where connected to the distribution manifold and at the emission orifices through which heated air is directed into the room. Forced air input is provided by an enclosed, heat-protected electric blower which may be positioned just inside of the fireplace on either side of the heat transfer unit, connected to the manifold by means of a heat transfer conduit at either end. Write: Morton Metalcraft Co., Route 98, Morton, Illinois 61550, U.S.A. and send a copy of your initial correspondence to Canadian Consulate General, 310 South Michigan Avenue, Suite 2000, Chicago, Illinois 60604, U.S.A.

## **Patent 1,082,568**

### **Circular Heddle (Automatic Leaser)/297**

### **Lame circulaire/297**

This invention relates to the shedding of flexible tapes, whether plastic, fabric or other wise. This shedding device has a dual purpose as: 1) automatic leaser as in the beaming process; 2) heddle frame as used in a weaving machine. Write: Robert W. Moore, 735 Morin St., North Bay, Ontario

P1B 5S1 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

## **Patent 1,082,638**

### **Load Transfer Device/297**

### **Dispositif de transfert d'une charge/297**

A load transfer device is provided which enables bulk goods packed in sacks, boxes and the like and supported on a first pallet to be transferred to a second pallet. A load platform receives bulk goods stacked onto the first pallet and includes a floor onto which the pallet can be placed, and a side member for retaining bulk goods resting against it. The load platform is supported clear of ground contact on a suitable framework and is pivoted at its rear face. A lid is slidably supported on the load platform in spaced parallel relationship to the floor for movement towards and away from the floor. The lid supports the base of a second pallet placed in the load platform with its load accepting surface resting on the top of the stack of goods. Actuating means connected between the load platform and the lid

which are extended to move the lid away from the floor to allow the first and second pallets to be loaded into the load platform are then retracted to cause the lid to engage the base of the second pallet. The load platform is then rotated by suitable means from an initial upright position to an inverted position, the direction of rotation being such that the side member supports the load during the inversion. The lid can then be moved downwardly to release the load. Write: Alan Payne, Poplar Lodge, Beeston, Kings Lynn, Norfolk, England; Robin G. Bunning, Willow House, Gressenhall, East Dereham, Norfolk, England and send a copy of your initial correspondence to the Commercial Division, Canadian High Commission, One Grosvenor Square, London, W1X 0AB, England.

## **Patent 1,082,747**

### **Portland Cement Manufacture/297**

### **Fabrication de ciment Portland/297**

Waste matter is incinerated in a combustion zone external to a rotary cement kiln. The resulting gaseous product is taken up in effluent gas from the cement making process in contact with calcareous material. At least some of the combustion zone bottom ash is combined in the eventual standard Portland cement by firing it in the kiln with the clinker-forming materials. The combustion zone can for instance be a fluidised bed combustor. The combustion zone

can be a zone through which the clinker-forming materials pass at a temperature such that the waste matter ignites. Write: The Associated Portland Cement Manufacturers Limited, Portland House, Stag Place, London SW1E 5BJ, England and send a copy of your initial correspondence to the Commercial Division, Canadian High Commission, One Grosvenor Square, London, W1X 0AB, England.

## **Patent 1,082,755**

### **Heavy Duty Sling Construction/297**

### **Élingue renforcée/297**

An improved sling construction for lifting heavy loads is disclosed. The sling is formed by intertwining a multiplicity of three body part slings or subslings which in turn are woven from single cables in such a manner that they have a body having an eye at each end thereof. The construction of the sling is such that when the particular application calling for such a sling is completed, it may be readily dis-

assembled enabling reuse of the constituent subslings. A second construction for lifting very heavy loads is also disclosed. Write: I & I Sling Company, Inc., Route 452 and I-95 Aston, Pennsylvania 1014 and send a copy of your initial correspondence to the Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

## **Patent 1,082,920**

### **Trap Holder/297**

### **Dispositif de retenue pour piège/297**

A lightweight metal frame for supporting an animal trap is releasably connected to an elongated handle for thrusting the frame into a trapping position. The frame has a pair of legs with sharpened ends for penetration into a supporting surface. Write: Joseph M. Payeur, R.R. Jogues, Ontario

POL 1R0 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

### Patent 1,082,921

#### Method and Apparatus for Producing Synthetic Fuels from Solid Waste/297

Organic solid wastes represented by the general chemical formula  $C_xH_yO_z$  are reacted with steam at elevated temperatures to produce  $H_2$  and  $CO_2$ . The overall process is represented by the reaction  $C_xH_yO_z + 2(X-Z/2)H_2O \xrightarrow{\Delta} XCO_2 + [(Y/2) + 2(X-Z/2)] H_2$ . Reaction (1) is endothermic and requires heat. This heat is supplied by a tower top solar furnace; alternatively, some of the solid wastes can be burned to supply heat for the reaction. The hydrogen produced by reaction (1) can be used as a fuel or a chemical feedstock. Alternatively, methanol can be produced by the commer-

#### Méthode et appareil de production de combustibles synthétiques à partir de déchet solide/297

cial process  $CO_2 + 3H_2 \rightarrow CH_3OH + H_2O$ . Since reaction (1) is endothermic, the system represents a method for storing heat energy from an external source in a chemical fuel produced from solid wastes. Write: James E. Denny, Assistant General Counsel for Patents, Office of the General Counsel, U.S. Department of Energy, Washington, D.C. 20545, U.S.A. and send a copy of your initial correspondence to the Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

### Patent 1,082,928

#### Bale Loader and Carrier/297

A wheel mounted main frame includes supporting structure to support, for rotation, a cylindrical bale carrier component having three longitudinally extending segments at approximately  $120^\circ$  from each other. Each segment is arcuately curved and designed to carry a plurality of cylindrical bales lengthwise therein. Each bale is picked up by a fork pick-up attachment at one side of the front of the frame and elevated to a loading chute or cradle. A pusher assembly pushes the bale rearwardly into one of the segments of the bale carrier that is then rotated  $120^\circ$ . After a bale has been loaded in each segment, further bales are

#### Dispositif de chargement et transport de ballots/297

loaded by the pusher assembly by pushing back the first bales within the segment until all bales are loaded or the carrier is at capacity. To unload, one hinged side of the framework is released and the bale carrier is rotated thereby discharging, by gravity, the bales in each segment as each segment reaches the unloading position. Write: Richard R. Hutton, Box 577, Shellbrook, Saskatchewan and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

### Patent 1,082,948

#### Copper-Base Alloy for Liquid Phase Sintering of Ferrous Powders/297

A copper-base alloy composition consisting essentially of 85-89% copper, 2-4% manganese, and 8-11% silicon and use of same in liquid phase sintering of ferrous powders. Write: James E. Denny, Assistant General Counsel for Patents, Office of the General Counsel, U.S. Department of

#### Alliage de cuivre pour le frittage de poudre de fer en phase liquide/297

Energy, Washington, D.C. 20545, U.S.A. and send a copy of your initial correspondence to the Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

### Patent 1,083,198

#### Lifting Device/297

A lifting device for use with a paving slab comprises a handle and a straight shank non-rotatably secured at one end thereof within the handle. A straight support portion extends perpendicularly from the opposite end of the shank and terminates at a point. The shank has small cross-sectional dimensions in all transverse directions to fit and rotate between adjacent slabs. The device is inserted in the gap between adjacent slabs and twisted so

#### Dispositif de levage/297

that the support portion is beneath one of the slabs. The device is then pulled upward to raise the slab. Write: Frank S. Pravitz, 27 Woodview Crescent, Ottawa Ontario K1B 3B1 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

## Patent 1,083,259

### **Système pour la simulation des caractéristiques d'une machine électrique/297**

Système pour la simulation analogique des paramètres et caractéristiques de fonctionnement d'une machine tournante triphasée. Le système comporte un ensemble transformateur des courants d'armature triphasés de la machine en courants équivalents biphasés et de transformation desdits courants biphasés en courants dits d'axes direct et de quadrature. Un ensemble générateur et de contrôle simule les paramètres et caractéristiques de fonctionnement de la machine en fonction de ces courants d'axes direct et de quadrature, et alimente un autre ensem-

### **System for Simulating the Characteristics of an Electrical Machine/297**

ble pour la génération de tensions biphasées. Ces tensions biphasées sont alors transformées en tensions triphasées, à partir desquelles les caractéristiques dynamiques de la machine sont générées. Écrire: Hydro-Québec, 75 ouest boul. Dorchester, Montréal, Québec H2Z 1A4 et faites parvenir une copie de votre correspondance initiale à la Section des possibilités de licence (34/3), Centre des entreprises, Ministère de l'Industrie et du Commerce, Ottawa, Ontario K1A 0H5.

## Patent 1,044,474

### **Corrosion-Resistant Encasement for Structural Members/297**

A protective system for concrete, wood and steel piling or other structures subject to corrosion or wear from the action of water. The system includes an encasement sleeve surrounding the piling or other structure and made of fibreglass, epoxy resin, or other inert, corrosion resistant material, and a filler of concrete, epoxy resin or the like between the encasement sleeve and the piling. The encasement sleeve is made of separate sections connected together by tongue and groove joints. The encasement and

### **Enveloppe anticorrosion pour éléments de construction de charpente/297**

filler are left permanently on the structure to protect the same from water or other elements, and also to reconstruct worn portions to achieve the original structural integrity of the structure. Write: Charles K. Murray, Associates, Inc., P.O. Box 1406, Greenwich, Connecticut 06830, U.S.A. and send a copy of your original correspondence to the Canadian Consulate General, 1251 Avenue of the Americas, New York City, N.Y. 10020, U.S.A.

## Patent 1,083,316

### **Procédé de fabrication d'un réservoir souple de sécurité pour hydrocarbures, notamment pour véhicules automobiles/297**

Procédé de fabrication d'un réservoir souple de sécurité pour hydrocarbures, notamment pour véhicules automobiles, résultant de l'assemblage de deux demi-coquilles obtenues par injection dans un moule d'un élastomère, vulcanisées in situ sauf dans les zones proches de leur périphérie en contact avec des parties du moule correspondantes refroidies à une température inférieure à celle qui produirait la vulcanisation totale de l'élastomère. Le procédé est caractérisé par le fait que le moulage s'effectue en deux phases successives, la première dans un moule en deux parties respectivement constituées d'un élément supérieur et d'un élément inférieur donnant lieu à l'une des demi-coquilles, la seconde, dans un moule de volume différent, obtenu après substitution à l'élément supérieur pré-

### **Process for the Manufacturing of a Flexible Safety Fuel Tank, Especially for Automobiles/297**

cedent du moule d'un second élément supérieur dont l'empreinte comporte un volume correspondant à la forme de l'autre demi-coquille à mouler, le refroidissement des zones périphériques effectué au cours de la première phase étant alors arrêté de façon à permettre la vulcanisation du plan de joint des deux demi-coquilles en contact. Écrire: Compagnie des Produits Industriels de l'Ouest, Zone Industrielle de Nantes, Carquefou, Boîte Postale 1226, 44023 Nantes, Cédex, France et faites parvenir une copie de votre correspondance initiale à la Section des possibilités de licences, (34/3), Centre des entreprises, Ministère de l'Industrie et du Commerce, Ottawa, Ontario K1A 0H5.

## Patent 1,083,324

### **Method and Arrangement for Teem-Welding Metals/297**

A method for teem-welding metals, preferably light metals, particularly aluminium and its alloys, in which the metal, during its introduction into the casting mould, is caused to form one or more metal jets which are directed as far as possible at right-angles to and concentrated against the surfaces of the workpieces to be melted *a mould of the volume and arrangement of the workpieces therein*, is used, so that their desired melting is achieved with that

### **Méthode et système de soudage aluminothermique/297**

quantity of metal which, as the process proceeds, accumulates in and fills the mould, which quantity constitutes all the metal introduced into the mould. Also, a particular nozzle arrangement is necessary for carrying out the above method. Write: Ardal og Sunndal Verk, A.S., Sorkedaisveien 6, Oslo 3, Norway and send a copy of your initial correspondence to the Commercial Division, Canadian Embassy, Postuttak, Oslo 1, Norway.

## Patent 1,083,338

### Photo Electronic Astro Compass/297

In an instrument for navigation, it is known to have a plurality of light sensitive devices contained in such manner as to be illuminated in only one concentrated area by a radiant body and means for electrically connecting the output of the said light sensitive devices to a micro-processor for detecting the angle of the radiant body. Write: Paul J.

### Astrocompas photo-électronique/297

Maloney, 102 Cameron Crescent, Pointe Claire, Québec H9R 4E1 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

## Patent 1,083,550

### Mounting Base of a Disk Refiner/297

For a disk refiner which includes a frame with a refiner housing, a driving shaft, and a driving motor, a mounting base in the form of an integrated block made of concrete absorbent to vibrations of the disk refiner, said block having towards one end, symmetrically in relation to the longitudinal central line of the base, support surfaces for the driving motor and, at its other end, two front supports for the refiner frame and housing and, at a distance from said front supports, two rear supports for the refiner frame,

### Socle de montage pour raffineur à disques/297

said front and rear supports being formed as column-like projections having free support ends situated pairwise symmetrically in relation to the shaft of the refiner in a plane extending along the longitudinal central line of the shaft above a plane defined by said support surfaces. Write: Enso-Gutzeit Osakeyhtio Kanavaranta 1, SF-00160 Helsinki 16, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

## Patent 1,083,627

### Portable Miniature Golf Game/297

A portable, table type miniature golf game consisting of a game board made of easily and quickly assembled sections to take up minimum room when not in use. The game board has the configuration of a cross with the end of the main leg remote from the cross leg defining the starting zone of the play. Upstanding side walls are fixed to the edges of the panel and confine the golf ball to the playing surface. There are three cups made in the cross leg. One cup is visible from the starting zone, while the two remaining cups are not visible, the side walls forming an obstacle. The cups can be selectively plugged so that only one is used at anyone time. Various hazards of different shapes

### Jeu de golf miniature portatif/297

can be removably positioned from the playing surface and their positions can be changed. Ball deflectors are also removably attached to the walls. A fortune wheel is associated with the game and determines by chance the number of points to be scored if the player sinks the ball in the cup in the indicated number of strokes. Write: Jean-Paul Hudon, 26 Yamaska Street, West, Farnham, Québec J2N 1H2 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

## Patent 1,083,682

### Coaxial-to-Microstrip Transition Connector/297

A transition device for connecting a coaxial cable to an integrated microwave circuit (MIC) composed of planar lines disposed on a substrate, the device being composed of a coaxial connector having a protruding inner conductor cable, a tuning screw disposed to form a variable capacitor with the protruding conductor of the coaxial connector and arranged to be adjusted to control the electrical parameters of the device, an intermediate dielectric carrier carrying a planar intermediate line connected to the inner conductor of the connector, the intermediate carrier

### Connecteur de transistor de câble coaxial à microbande/297

forming a fixed unit with the coaxial connector and being disposed between the connector and the (MIC) substrate, a housing supporting the fixed unit and the substrate, and two metal bands connecting together the planar intermediate line and the planar line of the microwave circuit and the bottom metallisation. Write: Licentia Patent-Verwaltungs-GmbH, Theodor-Stern-Kai 1, 6000 Frankfurt am Main, West Germany and send a copy of your initial correspondence to the Canadian Consulate General, Immermannstrasse 3, 4 Duesseldorf, West Germany.

## Patent 1,083,771

### Closure Member/297

The invention relates to a manually actuated device for use in affecting the opening and closing of filling covers and ventilation transoms found in agricultural structures such as grain bins or silos. The invention takes the form of a latching device mounted on the cover in conjunction with a support arrangement, the latching device being operated remotely from the roof of the structure by means of a

### Élément de fermeture/297

cable, extending from the latching mechanism, through the support to a point adjacent the base of the structure. Write: Alex Hrycyk, 10, 15 - 45th Street, N.E., Medicine Hat, Alberta and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

## Patent 1,083,831

### Process for the Suspension Smelting of Sulfidic Complex and/or Mixed Ores or Concentrates in Order to Separate the Impurity Minerals or Metals Present in Them/297

A suspension of finely divided impure sulfidic complex or mixed ores or concentrates and air flowing downwards in a reaction zone at a high temperature is first oxidized to vaporize the impurities and then reduced or sulfidized to bring the unvaporized impurities into the gas phase before

### Procédé de fusion des composants sulfiteux ou des minerais mixtes ou concentrés en suspension dans le but de séparer les impuretés ou les métaux qui s'y trouvent/297

separating the solids from the gas phase. Write: Outokumpu Oy, Outokumpu, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

## Patent 1,083,834

### Clock Face for Omnidirectional Viewing/297

A clock has a clock face formed on the surface of a solid revolution, e.g. a sphere, a cone or a cylinder. Clock hands extend around the clock face following a helical path, and time-indicating markings are arranged on all the surfaces of the face. It is therefore possible for a complete set of these markings to be seen from any direction relative to the clock face. The hands are normally driven by a conventional clock movement, there being an hour hand and a minute hand. However, it would be possible in some appli-

### Horloge à cadran omnidirectionnel/297

cations to have only a single hand, e.g. a minute hand, and to drive the clock face relative to the hand. The markings are arranged along helical paths, corresponding to the helical shape of the hands. Write: David G. Jones, 74 Junction Road, London, N. 19, England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London, W1X 0AB, England.

## Patent 1,083,922

### Limiteur de débit d'un circuit hydraulique/297

Limiteur statique de débit d'un circuit hydraulique engendrant une poche de cavitation développée en présence d'un débit prédéterminé; dans certaines conditions l'appareil peut fonctionner en clapet anti-retour. Écrire: Alsthom-

### Hydraulic System Flow Limiter/297

Atlantique, 38, avenue Kléber, 75784 Paris, Cedex 16, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

## Patent 1,084,006

### Side Loading and Unloading Trailer/297

An apparatus is disclosed for side loading and unloading large objects such as cylindrical fuel tanks from flat bed trailers. Double pivotted links in combination with a bent lever permits lateral loading and unloading from a plane below the level of the trailer bed. Write: Donald E.

### Appareil servant au chargement et au déchargement latéral d'une remorque à plate-forme/297

McMullen, 10 Elvins Gardens, Belleville, Ontario K8P 2T3 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

## Patent 1,084,091

### Multiple Light Cart/297

A cart mounted on two inverted "T" shape runners with wheels collapsibly mounted between the runners and actuated by levers on each side of the cart. The cart has foldable front and rear sides. The wheels are mounted on spaced plates and have means for locking them in raised

### Chariot léger/297

and lowered positions. Write: George Kaley; Bernadette Kaley, 736 Oak Avenue, River Edge, New Jersey 07661, U.S.A. and send a copy of your initial correspondence to Canadian Consulate General, 1251 Avenue of the Americas, New York City, N.Y. 10020.

## Patent 1,084,240

### Process for the Simultaneous Manufacture of Phosphoric Acid or the Salts Thereof and a Complex Multi-Component Mineral Fertilizer/297

In this process, raw phosphate rock is decomposed with a aqueous solution of sulphuric acid and ammonium sulphate recycled from the conversion step of phosphogypsum into chalk, and then the decomposition liquor stream is divided into a partial acid plant stream /Liquor I/ to be converted into phosphoric acid and a partial fertilizer plant stream /Liquor II/ to be processed to a multi-component mineral fertilizer. From the acid plant stream /Liquor I/ constituting up to 30 per cent by weight of total decomposition stream, ammonium sulphate is precipitated and introduced into the fertilizer plant stream /Liquor II/, all the above mentioned processes or decomposition, separation and precipitation being carried out in continuous way. Another embodiment of the process, wherein the par-

### Préparation industrielle simultanée d'acide phosphorique et de ses sels et d'un engrais minéral complexe, à plusieurs substances/297

tial acid plant stream /Liquor I/ constitutes a partial phosphate plant stream; the acid stream comprising aqueous-solvent phosphoric acid solution after precipitation of impurities is neutralized with ammonia, alkali metal hydroxides or alkali metal carbonates to yield crystalline phosphate salts of high purity and a homogenous mixture of organic solvent and water which may be easily separated by distillation. Write: Przedsiębiorstwo Projektowania i Dostaw Kompletnych Obiektów Przemysłowych "Chemadex" W. Warszawie, Oddział W. Krakowie, 30-133 Krakow, ul. Dzierzynskiego 114, Poland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Matejki 1/5, Srodmiescie, Warsaw, Poland.

## Patent 1,084,249

### Helical Flaking Head with Multiple Cutting Circle Diameters/297

A rotative, flaking, cutterhead in the form of a right regular cylinder with surface mounted helical shaped cutting blades. The cutterhead characterized by multiple and progressively increasing cutting blade circle diameters, said blades being closely grouped on said cylinder. Write:

### Couteau à copeaux de forme hélicoïdale et à diamètres multiples/297

United States Department of Commerce, National Technical Information Service, 425 Thirteenth Street, N.W., Washington, D.C. 20004, U.S.A. and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102.

## Patent 1,084,289

### Timelock Device/297

A timelock device comprising a mounting plate fixed at a location where the device is to be used, and a separate housing provided with a channel defining a passageway for the locking bolt of a door vault lock. The housing carries a locking pin, a timer and a mechanism operable by the timer means for moving the locking pin through the channel. Fastening means are used for detachably connecting the housing to the mounting plate. This device is particularly

### Verrou à minuterie/297

interesting since it allows for easy and accurate replacing of the operational parts of the device by replacement parts when the operational parts must be serviced. Write: Erich Wallach, 1615 St-Jean Baptiste, St-Roch, Comté Verchères, Québec J0L 2R0 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

## Patent 1,084,338

### Halftone Printing Process and Halftone Offset Printing Press Plates/297

Halftone printing is carried out by printing a first impression in entirety with a solid density of good render-ability

### Méthode d'impression par similitravure et planches pour impression offset par similitravure/297

from the middle-tone part to the light-tone part in a printed matter and printing at least a second impression, super-

posed over the first impression, with a printing plate lightly and supplementarily expressing only the parts of high dot density of the printed matter. A set of press plates for carrying out this printing process is also provided. A set of plates includes a first plate which has been contact photo-printed with a screened film made from a transparent or reflecting original and at least a second plate adapted to express somewhat lightly and supplementarily only parts

of high dot densities (%) of the first plate. If desired a third plate can be used to express more lightly than the second plate and supplementarily only parts of higher dot densities (%) of the second plate. Write: Kohan Kabushiki Kaisha, 18-9 Kasuga, 2-Chome, Bunkyo-ku, Tokyo-To, Japan and send a copy of your initial correspondence to Commercial Division, Embassy of Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japan.

### **Patent 1,084,413**

#### **Vaccine Containing Slow Release Antigen/297**

The invention provides a method for preparing a vaccine composition which comprises mixing antigenic material with a matrix-forming material, subjecting the mixture thus formed to crosslinking and/or polymerization to form a solid biodegradable matrix containing the antigenic material, and dispersing the thus prepared matrix in a liquid vaccine. Such matrices, after injection into animals, are capable of providing delayed, sustained or periodic release

#### **Vaccin contenant un antigène à libération lente/297**

of the active ingredients, the type and time of release being dependent on the crosslinking conditions used in manufacture. Write: Commonwealth Serum Laboratories Commission, 45 Poplar Road, Parkville, Victoria, Australia and send a copy of your initial correspondence to Canadian Consulate General, Princes Gate East Tower, 17th Floor, 151 Flinders Street, Melbourne 3000, Australia.

### **Patent 1,084,466**

#### **Tackle Box Light/297**

A tackle box light can be mounted in an upper section of a three section extendible housing and can be operated by a set of batteries mounted in a chamber in the upper section of the housing to which the light is attached, a pivotally attached lens mounted to the top section of the housing permits transmission of the light down into the tackle box which is preferably of the hip roof type, the housing may be

#### **Lumière pour coffre d'attirail de pêche/297**

attached to the tackle box by a set of brackets one of which can be mounted to the bottom of the tackle box the other of which is adjustable attachable to the upper edge of the tackle box. Write: Jack E. Moberly, R.R. 4, Box 536F, Anderson, Indiana 46011, U.S.A. and send a copy of your initial correspondence to Canadian Consulate, 1920 First Federal Building, 1001 Woodward Avenue, Detroit, Michigan 48226.

### **Patent 1,084,481**

#### **Heat Rejection System/297**

A cooling system for rejecting waste heat consists of a cooling tower incorporating a plurality of coolant tubes provided with cooling fins and each having a plurality of cooling channels therein, means for directing a heat exchange fluid from the power plant through less than the total number of cooling channels to cool the heat exchange fluid under normal ambient temperature conditions, means for directing water through the remaining cooling channels when- ever the ambient temperature rises

#### **Système de refroidissement/297**

above the temperature at which dry cooling of the heat exchange fluid is sufficient and means for cooling the water. Write: Mr. James E. Denny, Assistant General Counsel for Patents, Office of the General Counsel, U.S. Department of Energy, Washington, D.C. 20545 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102.

### **Patent 1,084,562**

#### **Wheel Kit for Snowmobile/297**

A wheel kit is disclosed for converting snowmobiles into wheeled vehicles. The kit is mounted on the chassis of a snowmobile after removal of the front skis and endless track. The conversion device comprises a front wheel drive assembly including a frame secured to the front end of the chassis of the snowmobile and a pair of laterally spaced wheels rotatably mounted on the frame and powered by the snowmobile engine, and a rear wheel steering assembly including a frame secured to the rear end of the snowmobile

#### **Train de roues pour motoneige/297**

chassis, a single wheel pivotally mounted on the rear frame and steering means interconnecting the rear wheel to the regular steering mechanism of the snowmobile. Write: Michel Denis, 3241 Doverthorn Road, S.E., Calgary, Alberta T2B 2G9 and send a copy of your initial correspondence to the Licensing Opportunities Section, (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

## Patent 1,084,585

### Accumulateur électrique à plomb à dégagement gazeux limité/297

Accumulateur au plomb comportant un bac fermé par un couvercle, et contenant un électrolyte et un bloc formé de plaques positives, de plaques négatives et de séparateurs. Ledit bloc est enserré dans un caisson parallélépipédique plongé dans l'électrolyte et dont les deux parois, en contact étroit avec les plaques extrêmes du bloc, présentent

### Low Gas Release Lead Storage Battery/297

des ouvertures. Accumulateur au plomb sans entretien. Écrire: Compagnie Européenne d'Accumulateurs, 16, rue de la Baume, 75008 Paris, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

## Patent 1,084,602

### Rétenteur de fiche raccord, fiches mâle et femelle, et fiche à plaque murale/297

Le dispositif de la présente invention comprend une pièce d'attache de support pouvant être fixée à la tête d'embranchement d'un fil d'extension ou à une plaque murale d'une prise de courant, une monture reliée de façon pivotante à la pièce de support et comportant une partie en forme de U formant une ouverture servant à recevoir un fil électrique; et une ancre d'attache en forme d'arc de cercle montée de façon pivotante sur la monture près de la partie en forme

### Holding Clamp for Connection Plug, Plug and Jack and Wall Plate Plug/297

de U et servant à fermer l'ouverture afin de fixer le fil électrique à la monture pivotante. Écrire: Adolphe Poisson, 107 King Georges, Longueuil, Québec J4J 2V2 et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licences (34/3), Centre des entreprises, Ministère de l'Industrie et du Commerce, Ottawa, Ontario K1A 0H5.

## Patent 1,084,684

### Water-Soluble Film-Forming Rust Preventive Composition/297

A water-soluble film-forming rust preventive composition prepared by modifying, through mixing with an alkaline solution, a homopolymer of a hydrocarbon having a double bond or bonds in the molecule and selected from the group consisting of carboxylic acids and anhydrides, and/or a copolymer of the said hydrocarbon and an olefinic hydrocarbon having from 2 to 6 carbon atoms per molecule.

### Composition antirouille formant membrane et soluble à l'eau/297

Write: Mitsubishi Jukogyo Kubushiki Kaisha 5-1, Marunouchi, 2-chome, Chiyoda-ku, Tokyo, Japan; Kyoisha Yushi Kagaku Kogyo Co., Ltd., 7-2, Tanimachi, 8-chome, Minami-ku, Osaka City, Osaka, Japan and send a copy of your initial correspondence to Commercial Division, Embassy of Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japan.

## Patent 1,084,713

### Saw Chain Grinder/297

A grinder for sharpening saw chain cutting teeth includes a base, an arcuate guide arranged on the base, a power-driven rotary grinding wheel mounted on a pivotal motor arm movable with a mounting bracket along the arcuate guide and a releasable, self-centering clamp for holding a segment of a saw chain in position beneath the grinding wheel. The clamp includes laterally opposed elongate bars which support a saw chain and which are each simultaneously displaceable at equal rates toward a preselected datum line. The preselected datum line intersects a fixed, reference axis about which the mounting bracket is angularly displaced. Because the elongate bars are movable equally with respect to the preselected datum line, the

### Affûteuse pour scie à chaîne/297

lengthwise centerline of a saw chain will always be maintained substantially aligned on the preselected datum line regardless of the width of the chain. The arcuate guide is an elongate bar having an arcuate guide track which receives the motor arm mounting bracket. The arcuate guide is pivotal about a pivot axis so that the mounting bracket may be angularly displaced along the arcuate guide and offset at varying distances from the reference axis. Write: Bell Industries, 3390 West, 11th Avenue, Eugene, Oregon, U.S.A. and send a copy of your initial correspondence to Canadian Consulate General, 412 Plaza 600, Sixth and Stewart, Seattle, Washington 98101.

## Patent 1,084,743

### Dispositif de raccordement de fibres optiques/297

Dispositif de raccordement permettant, à partir d'embouts de fibres optiques fabriqués en usine, de raccorder les

### Connector for Optical Fibers/297

fibres sur le terrain. L'embout comprend une fibre enserrée entre trois tiges cylindriques tangentes deux à deux. Les

embouts sont disposés de part et d'autre d'un ensemble de montage comportant des structures d'alignement constituées de rainures en V dans lesquelles on introduit la fibre et les tiges. Des patins appuient sur les tiges transversalement. Selon une variante cette fonction est réalisée grâce à des cylindres d'élastomère comprimés sous l'effet

d'un serrage des plaques de l'ensemble de montage. Écrire: Les Câbles de Lyon, 170, avenue Jean-Jaurès, 69353 Lyon, Cedex 2, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

### **Patent 1,084,786**

#### **Method and Apparatus for Manufacturing an Even Laminated Product by Extrusion/297**

Disclosed is a method and an apparatus for manufacturing an even laminated product by extrusion a molten thermoplastic coating material track onto a basic-material track. The edge strips of the coating material track are cooled by means of jets of heat binding material to keep the said edge strips of the basic-material track. The strips of each

#### **Appareil pour la fabrication par extrusion d'un produit lamellé uniforme/297**

track are then cut off said tracks, chopped separately, and directed separately for recovery. Write: Pekema Oy, Teollisuuskatu 29, 00510 Helsinki 51, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

### **Patent 1,084,881**

#### **Non-Inverting Fluid Dispenser/297**

A fluid dispenser particularly for use at the bottom of a deformable or partly flexible container is disclosed, which dispenser includes a base member having therein a vent providing an air passage controlled by a valve, and a fluid dispensing passage also controlled by a valve. The exterior air vent tube and exterior dispensing tube of the dispenser are usually sealed until the first use of the dispenser, at which time the container is substantially fixed in place with the dispenser at the bottom thereof, and the seals of the exterior air vent and dispensing tubes are broken. The

#### **Distributeur de liquide à écoulement non réversible/297**

dispensing action is carried out by pressing a deformable portion of the container thereby increasing the pressure within the container, and in the normal, inverted position of the container with the dispenser at the bottom thereof — i.e., the dispensing action is non-inverting. Write: Raza Alikhan, 201 Willowridge Court, Oakville, Ontario and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

### **Patent 1,084,913**

#### **Process for the Preparation of Alkali Cellulose/297**

A process for the preparation of alkali cellulose by reacting steeping lye and cellulose pulp manufactured by alkali cooking without prehydrolysis or by acid cooking without alkali extraction, and by adding to the cellulose pulp, the steeping lye or the alkali cellulose at least one organic compound which is an alcohol, an ester, an ether, a ketone,

#### **Préparation d'alcalicellulose/297**

an amine, an acid or the salt of such an acid, an imine or an aliphatic hydrocarbon of at least four carbon atoms. Write: Kemira Oy Malminkatu 30, SF-00 100 Helsinki 33, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

### **Patent 1,084,998**

#### **Procédé et générateur d'essai pour dispositif de protection/297**

Procédé et générateur d'essai pour simuler les conditions de fonctionnement d'un dispositif de protection d'un réseau à basse, haute ou très haute tension alternative. Le générateur comporte une branche de tension reliée au dispositif de protection pour produire une impulsion d'amorçage et une branche d'injection montée en parallèle avec cette branche de tension pour produire à travers le dispositif sous essai un courant de suite de valeur correspondante à celle du courant injecté par le réseau dans ce dispositif de protection lorsque celui-ci est en service. Une branche résonnante est reliée à la branche d'injection pour former aux bornes du dispositif de protection une tension

#### **Process and Testing Generator for Protective Device/297**

alternative correspondante à la tension du réseau. Le générateur peut également simuler une longue ligne de transport d'énergie ainsi que l'amorçage à répétition du dispositif sous essai. En outre, un amorçage du dispositif à tout angle de phase de la tension du réseau peut être effectué. Le procédé et le générateur sont particulièrement utiles pour des essais sur parafoudres. Écrire: Hydro-Québec, 75 ouest, boul. Dorchester, Montréal, Québec H2Z 1A4 et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licences (34/3), Centre des entreprises, Ministère de l'Industrie et du Commerce, Ottawa, Ontario K1A 0H5.

## **Patent 1,085,005**

### **Régulateur à action continue/297**

Régulateur de niveau à action continue sensible à l'amplitude d'une onde pilote incluse dans le signal dont le niveau est à réguler, comportant un quadripôle à gain variable traversé par ledit signal, une boucle de contrôle automatique de gain agissant sur un circuit de commande du gain du quadripôle à gain variable et une boucle auxiliaire grâce à laquelle le circuit de commande agit également en réaction

### **Continuous Level Measurement Regulator/297**

sur la boucle de contrôle automatique de gain. Ledit régulateur s'utilise avantageusement dans les systèmes de transmission. Écrire: Compagnie Industrielle des Télécommunications Cit-Alcatel, 12, rue de la Baume, 75008 Paris, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

## **Patent 1,085,036**

### **Réglette à coupure pour télécommunications/297**

Réglette à coupure pour télécommunications constituée d'éléments en forme de boîtier plat comportant sur la face arrière des broches de connexion et des broches de jarretière. La face avant comporte des orifices permettant l'introduction de fiches de coupure ou de dérivation. Les éléments sont empilés, et positionnés par encliquetages pour former des réglettes. Les réglettes, selon l'invention,

### **Cut Off Strip for Telecommunications/297**

sont d'un encombrement très réduit et la disposition permet de placer des contacts dont l'usure est très diminuée. Écrire: Mars-Actel, 148, Boulevard Haussman, 75008 Paris, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

## **Patent 1,085,067**

### **Air Diffusers/297**

In an air diffusion system for lagoon treatment of sewage or industrial waste, a radial configuration of flexible diffuser tubes eliminates short-circuiting by automatically producing a flow pattern extending well beyond the radial extent of the diffuser and over the sloping sides of the lagoon in particular. A preferred diffuser comprises an inner perforated conduit surrounded by a fabric tube through which air is released into the liquid. Providing a

### **Diffuseurs d'air/297**

space between the conduit and the fabric tube and filling the space with gravel pellets provides for greatly improved uniformity in air diffusion. Write: Schramm, Inc., 800 East Virginia Avenue, West Chester, Pennsylvania, U.S.A. and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102.

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Mr. George Kudravetz  
Product Manager  
U.S. Department of Commerce  
National Technical Information Services  
5285 Port Royal Road  
Springfield, Virginia 22161

### Navy

U.S. Department of the Navy  
Assistant Chief for Patents  
The Office of Naval Research  
Mailing code: 302  
Arlington, Virginia 22217

### PAT-APPL-6-132-582

#### Protein Concentrate from High-Protein Pearl Millet/297

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 31, 1980, by the Department of Agriculture. Procedures are described for obtaining about 80% of the high-grade protein in pearl millet grain as a concentrate. These procedures involve extraction of lipid-free whole millet

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Assistant General Counsel for Patents  
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U.S. Department of Energy  
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#### Concentré de protéines à partir de millet perle à haute teneur en protéines/297

flour with a combination of 70% aqueous isopropyl alcohol, aqueous sodium hydroxide, and dilute mineral acid to give three protein-rich fractions, which can be combined for optimum use as a protein concentrate. Write: NTIS.

**PAT-APPL-6-070 384**

**Hydraulic Seal Battery Terminal/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed August 28, 1979, by the Department of the Air Force. A self-sealing battery terminal including a hydroformed inconel outer case, a low shear strength sealant material, and a central post in the form of a bolt which acts as both a conductor and transmits the preload from a pair of Belleville washers to a lower ceramic washer. The lower ceramic

**Borne à batterie à joint hydraulique/297**

washer acts like a piston to compress the sealant when the nut on the central post is tightened. The Belleville washers serve to maintain a minimum tension on the central post. A top ceramic washer is held in place by the tension in the central bolt as long as the tension exceeds a minimum value. Write: NTIS.

**PAT-APPL-6-129 437**

**Solvent Mixture for Removing Polyurethane Coatings/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 11, 1980, by the Department of the Air Force. The present invention concerns itself with a solvent mixture that is especially adapted for dissolving and removing polyurethane synthetic resins in the form of coatings, foamed encapsulants, paints and insulation foams. The solvent mixture is effective in removing polyurethane compounds strictly through solvent activity without the need for an additional abrading or grinding action which often

**Solvant pour enlèvement des revêtements de polyuréthane/297**

results in inflicting excessive damage to polyurethane coated, electronic components. The solvent solution consists essentially of a mixture of dichloromethane, dimethyl formamide and methanol. The solvent mixture's effectiveness appears to reside in its ability to achieve slight solvation with maximum swelling. This affects the adhesive bond of the polyurethane compound thereby facilitating easy removal with little or no damage to the polyurethane coated substrate or electronic component. Write: NTIS.

**PAT-APPL-6-133 767**

**Aircraft Self-Sealing Fuel Tank and Method of Fabricating/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 25, 1980, by the Department of the Air Force. Disclosed is a fabrication technique for, and the structure of, a flexible self-sealing fuel tank having a preactivated

**Réservoir de carburant auto-obturateur pour aéronefs et méthode de fabrication/297**

sealant constructed by laying-up over an innerliner, positioned on a form, prefabricated panels having a self-sealant member stitched into a rubber-coated outer wrap. Write: NTIS.

**PAT-APPL-6-059 937**

**Clutch Employing Constant Force Springs/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed July 23, 1979, by the Department of the Army. A mechanical clutch comprising interposed clutch plates keyed to the input and output members for axial movement between driving positions frictionally engaged with one another and

**Embrayage à ressorts à force constante/297**

disengaged positions relaxed away from one another. The invention relates to the use of constant force, zero rate, springs for moving the clutch plates between the engaged and disengaged positions. Write: NTIS.

**PAT-APPL-6-066 949**

**Disposable Controlled Atmosphere System for Extending the Shipping and Storage Life of Lettuce/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed August 18, 1979, by the Department of the Army. The shipping and storage life of lettuce is extended by enclosing a plurality of heads of lettuce in a plastic bag liner, preferably made of low density polyethylene, together with porous envelopes of hydrated lime and active carbon, and tightly closing the bag liner, preferably by heat sealing

**Dispositif jetable à atmosphère contrôlée pour prolonger la durée d'expédition et de stockage de la laitue/297**

thereof. A controlled atmosphere of less than 1 percent carbon dioxide, about 1 to 6 percent oxygen, and zero or near zero percent ethylene is maintained around the lettuce while it is being refrigerated. Storage life is extended several-fold over the storage life of conventionally packed lettuce. Write: NTIS.

**PAT-APPL-6-082 378****Novel Process for Preparing O,O' Diethyl Methylphosphonite/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed October 5, 1979, by the Department of the Army. A one-step process for preparing the compound O,O'diethyl methylphosphonite without generation of undesirable by-products and large volumes of pollutant contaminated wastewater which have to be treated prior to disposal comprising the step of reacting methylphosphonous dichloride with an alkali metal ethoxide, wherein the alkali metal is selected from the group consisting of sodium, potassium, rubidium, and cesium, slurried in a hydrocarbon, to produce the product O,O'diethyl methylphosphonite and a corresponding alkali metal chloride salt by-product. The principal object of this invention is to provide a simple, one-

**Nouvelle méthode de préparation du méthylphosphonite de O,O'-diéthyle/297**

step process for preparing the binary reactant intermediate compound, O,O'diethyl methylphosphonite. A further object of this invention is to provide a process for preparing O,O'diethyl methylphosphonite without the generation of undesirable hard-to-dispose of by-products and large volumes of pollutant contaminated wastewater. A still further object of this invention is to provide a process for preparing O,O'diethyl methylphosphonite without generation of gaseous by-products which are potential air pollutants. These and other objects of this invention will be apparent from the detailed description of the invention. Write: NTIS.

**PAT-APPL-6-086 504****Acceleration Resistant Crystal Combination/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed October 19, 1979, by the Department of the Army. It is therefore an object of the present invention to provide an acceleration resistant crystal configuration which is acceleration resistant along all directions. It is another object of the present invention to provide an acceleration resistant crystal configuration which is rugged and is highly resist-

**Montage de cristaux résistant aux accélérations/297**

ant to breakage. In brief, these and other objects of the invention are achieved by having two crystals which are electrically coupled or mechanically coupled, or both electrically and mechanically coupled together. At least two axes of one crystal are disposed in anti-parallel relationship with the corresponding axes of the other crystal. Write: NTIS.

**PAT-APPL-6-087 116****New Supports and Preparation Process for the Manufacture of a Calcium Chemical Pump for HF/DF Laser/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed October 22, 1979, by the Department of the Army. A process is described for producing a calcium chemical pump which includes reacting calcium and anhydrous ammonia in a closed vessel that is cooled to a temperature below 0 C to form a solution of the calcium and anhydrous ammonia and then spraying the solution onto a rotating

**Nouveaux supports et procédé de préparation d'une pompe chimique à calcium pour laser HF/DF/297**

porous foamed substrate material in a closed container that has a vacuum pulled thereon, and the solution when sprayed causing the ammonia to flash and be evaporated and drawn off by the vacuum to cause the calcium to be deposited on the rotating porous foamed substrate material. Write: NTIS.

**PAT-APPL-6-087 117****Improved High Energy Laser Beam Sampling Meter/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed October 22, 1979, by the Department of the Army. This document discloses apparatus for accurately sampling and measuring beam power of a high energy laser beam without blocking or unduly perturbing the beam for phenomenological effects purposes and including a unitary sampling wheel which reflects a portion of the laser beam

**Appareil perfectionné d'échantillonnage et de mesure de faisceau laser haute énergie/297**

energy to a primary collecting and focusing mirror which re-reflects the laser beam onto a low level energy detector and a low level power detector for providing accurate and reliable samples through a wide range of frequencies and low amplitude without affecting beam characteristics and further use. Write: NTIS.

**PAT-APPL-6-088 906**

**Triggered High Current Opening Switch/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed October 29, 1979, by the Department of the Army. This invention describes a means by which electric current of values up to many thousands of amps may be made to cease flowing at a precisely controlled point in time. A fuseable link is inserted in series-connection in the circuit, and load current causes resistive heating to a temperature

**Coupe-circuit à déclenchement pour courants élevés/297**

less than the melting point. At a selected time, energy from some external source (laser, capacitor, etc.) is introduced into the fuseable link which causes melting and a rapid transition of temperature and resistivity until explosive vaporization of the fuseable link takes place. At that point, the flow of current is blocked. Write: NTIS.

**PAT-APPL-6-101 344**

**Fluidic Wetted Slip Range/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed December 7, 1979, by the Department of the Army. This document describes a slip ring assembly including a housing containing a fluidic conductive source such as mercury. A rotating shaft extends through the housing and

**Ensemble de bagues à contact mouillé/297**

is provided with electrical conductors thereon which are immersed in the mercury during shaft rotation. A pair of conductive plates is carried in the mercury and electrical leads extend from the conductive plates and out of the housing. Write: NTIS.

**PAT-APPL-6-101 927**

**Circuit for Test of Ultra High Speed Digital Arithmetic Units/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed December 10, 1979, by the Department of the Army. A method is shown for testing ultra high speed digital arithmetic circuits or even complete digital signal processors which operate at speeds faster than presently available

**Méthode d'essai de circuits arithmétiques numériques à vitesse ultra haute/297**

test equipment. With this technique for testing, the operating speed of digital circuits can be increased until failures occur and then quantitative information on failure rates can be measured. Write: NTIS.

**PAT-APPL-6-105 839**

**Individual Lead Pull Test for Beam Leaded Devices/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed December 20, 1979, by the Department of the Army. The present technology involving the testing of beam-lead devices deals with the 'push-off' testing of the entire bonding of the multiplicity of leads at one time. This technology involves the use of a special substrate arranged such that a hole is directly under the bonded beam-lead device in order to allow the 'push-off' test to be accomplished. In accordance with this invention, a method for destructive testing of beam-leaded devices is provided in which a ceramic chip of a beam-leaded integrated circuit is cut with a laser to segment a portion of the ceramic chip with each individual

**Essai d'arrachement individuel des fils des dispositifs à conducteurs-poutres/297**

beam-lead, then cutting a hole with the laser through each individually cut chip section and then attaching a hook of a gram pull tester in the hole of each individual chip section and pulling on the tester until the bond between the individual beam lead and the conductor to which each individual beam lead is connected is broken or the beam lead itself is broken to test the bond strength of each individual beam-lead to its respective conductor. In this manner, the bond strength of each individual beam-lead to its respective conductor is accurately tested to determine the sufficiency of the bond strength of each individual lead. Write: NTIS.

**PAT-APPL-6-106 983**

**Method and Apparatus for Non-Destructive Testing of Beam-Lead Integrated Circuit Connections/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed December 26, 1979, by the Department of the Army. The presently known technology involving the testing of beam-lead devices deals with destructive testing such as

**Méthode et appareil d'essai non destructif des fils de circuits intégrés à conducteurs-poutres/297**

the 'Push-Off' testing of the entire bonding of the multiplicity of leads at one time or by other destructive methods. The 'Push-Off' technology involves the use of a special substrate arranged such that a hole is directly

under the bonded beam-lead device in order to allow the 'Push-Off' test to be accomplished. In accordance with this invention, a method and apparatus for non-destructive testing of beam-leaded devices is provided in which each individual lead of the beam-leaded device has a pull tab with a weakened area thereon in order to provide a non-destructive means for testing the beam-leads. The beam-lead device is tested by inserting a hook of a gram pull tester into an opening of the tab and pulling on the tab until the weakened area is broken. The weakened area is selected

such that it will break when subjected to a predetermined pull and this predetermined amount being less than that required to break the tensile strength of the diffusion bond between the beam-leads and the conductors to which they are connected. In this manner, the bond strength of each individual beam-lead to its respective conductor is accurately tested in a non-destructive manner to determine the sufficiency of the bond strength of each individual lead. Write: NTIS.

### **PAT-APPL-6-114 547**

#### **Interference Cancelling System/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed January 23, 1980, by the Department of the Army. The described system utilizes a pair of antenna beam patterns, one of which is adapted to provide the desired signal and all interfering signals, and the other of which is adapted to provide only the interfering signals. The patterns are then combined to produce substantially only the desired signal as the combined output. As is well known and understood, one of the major concerns of designers of antenna system communication links is the elimination or reduction of external interference sources, such as jamming, self-interference, atmospheric noise, man-made noise, and acoustic noise. As is also well known, most of the arrangements

#### **Dispositif d'annulation de brouillage/297**

which attempt to resolve these problems of external interference do so in a relatively complex manner, often times utilizing very large directional antennas and/or with antennas having hundreds, or even more, elements. This problem of external interference is especially prevalent in the area of mobile communications systems where omnidirectional antennas are employed, because of the large numbers of users operating in the same frequency band and because of multipath. Use of very large directional antennas in such mobile arena will be seen to be almost a physical impossibility, and an economic impracticality. Write: NTIS.

### **PAT-APPL-6-126 591**

#### **Handcuff Improvements/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 3, 1980, by the Department of Commerce. Triple locking handcuffs are provided having a lock which has an abutment therein which pushes against a bolt in the lock to double lock the latch and triple lock the ratchet and pawl of the lock. In the triple locked position a biasing means forces the bolt against the abutment, and to unlock the

#### **Menottes perfectionnées/297**

handcuffs a number of different mechanical means are provided for moving the bolt slightly away from the abutment, whereupon the ordinary handcuff key can be used to unlock the handcuffs. Handcuffs are also provided which automatically double and triple lock upon application to the wrist. Write: NTIS.

### **PAT-APPL-967 748**

#### **Method of Freezing Living Cells and Tissues with Improved Subsequent Survival/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed December 8, 1978, by the Department of Energy. This invention relates to an improved method for freezing red blood cells, other living cells, or tissues with improved subsequent survival, wherein constant-volume freezing is uti-

#### **Méthode de surgélation de cellules et de tissus vivants permettant une meilleure réanimation/297**

lized that results in significantly improved survival compared with constant-pressure freezing; optimization is attainable through the use of different vessel geometries, cooling baths and warming baths, and sample concentrations. Write: Department of Energy.

### **PAT-APPL-6-000 740**

#### **High-Voltage Crowbar Circuit with Cascade-Triggered Series Ignitrons/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed January 3, 1979, by the Department of Energy. A series string of ignitrons for switching a large current at high voltage to ground is discussed. Switching is initiated by means of a negative trigger pulse applied to the cathode of the lowest voltage level ignitron next to ground to draw ground current through diodes in the ignitor circuit. The

#### **Circuit crowbar à haute tension avec ignitrons en cascade déclenchés/297**

trigger pulse is applied thereby to the next higher ignitron cathode and sequentially to the remainder of the ignitrons in the string through diodes in respective ignitor circuits. Full line voltage is held off of nonconducting diodes and ignitrons by means of varistors. Write: Department of Energy.

**PAT-APPL-6-018 099**

**Magnetohydrodynamic (MHD) Channel  
Corner Seal/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 6, 1979, by the Department of Energy. A corner seal for an MHD duct includes a compressible portion which contacts the duct walls and an insulating portion which contacts the electrodes, sidewall bars and insulators. The compressible portion may be a pneumatic or hydraulic gasket or an open-cell foam rubber. The insul-

**Joint d'étanchéité de coin pour  
conduite de dispositif  
magnétohydrodynamique/297**

ating portion is segmented into a plurality of pieces of the same thickness as the electrodes, insulators and sidewall bars and aligned therewith, the pieces aligned with the insulator being of a different size from the pieces aligned with the electrodes and sidewall bars to create a stepped configuration along the corners of the MHD channel. Write: Department of Energy.

**PAT-APPL-6-018 211**

**Fuel Cell Oxygen Electrode/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 7, 1979, by the Department of Energy. An oxygen electrode for a fuel cell utilizing an acid electrolyte has a substrate of an alkali metal tungsten bronze of the for-

**Electrode d'oxygène pour pile à  
combustible/297**

mula:  $A/\text{sub } x/\text{WO}_3$  where A is an alkali metal and x is at least 0.2, which is covered with a thin layer of platinum tungsten bronze of the formula:  $\text{Pt}/\text{sub } y/\text{WO}_3$  where y is at least 0.8. Write: Department of Energy.

**PAT-APPL-6-027 439**

**Method of Preparing High-Temperature-  
Stable Thin-Film Resistors/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed April 5, 1979, by the Department of Energy. A method of preparing composite, high-temperature-stable, thin-film resistors by chemical vapor deposition is disclosed. The resistor film of tungsten-silicon is formed from gaseous

**Méthode de préparation de résistances à  
couche mince à grande stabilité aux  
températures élevées/297**

decomposable compounds of tungsten and silicon. The bulk resistivity of the film can be controlled and reproduced and the temperature coefficient of resistivity can be controlled over a range of values by process parameter variation. Write: Department of Energy.

**PAT-APPL-6-030 806**

**Electromechanical Solar Tracking  
Apparatus/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed April 17, 1979, by the Department of Energy. The invention relates to an electromechanical solar tracking

**Dispositif électromécanique de poursuite  
solaire/297**

device which tracks the position of the sun using paired, partially-shaded bimetallic elements. Write: Department of Energy.

**PAT-APPL-6-035 158**

**Ceramic Components for MHD  
Electrode/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed May 2, 1979, by the Department of Energy. A ceramic component which exhibits electrical conductivity down to near room temperatures has the formula:  $\text{Hf}/\text{sub } x/\text{In}/\text{sub } y/\text{A}/\text{sub } z/\text{O}/\text{sub } 2$  where  $x = 0.1$  to  $0.4$ ,  $y = 0.3$  to  $0.6$ ,  $z =$

**Composants en céramique pour  
électrode de dispositif  
magnétohydrodynamique/297**

$0.1$  to  $0.4$  and A is a lanthanide rare earth or yttrium. The component is suitable for use in the fabrication of MHD electrodes or as the current leadout portion of a composite electrode with other ceramic components. Write: Department of Energy.

**PAT-APPL-6-037 077**

**Cooperative Heat Transfer and Ground Coupled Storage System/297**

**Système de stockage de chaleur dans le sol avec récupération par échangeur thermique/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed May 8, 1979, by the Department of Energy. A cooperative heat transfer and ground coupled storage system wherein collected solar heat energy is ground stored and permitted to radiate into the adjacent ground for storage therein over an extended period of time when such heat

energy is seasonally maximally available. Thereafter, when said heat energy is seasonally minimally available and has propagated through the adjacent ground a substantial distance, the stored heat energy may be retrieved by a circumferentially arranged heat transfer means having a high rate of heat transfer. Write: Department of Energy.

**PAT-APPL-6-039 427**

**Gas Cleaning Apparatus/297**

**Appareil de purification des gaz/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed May 15, 1979, by the Department of Energy. A gas cleaning apparatus located in a high temperature (up to 1000 exp 0 F) high pressure (20 or more atmospheres) gas flow path between a coal gasifier and a gas turbine, for removal of entrained dust having particle diameters in the range of 1 to 10 microns from the gas stream, includes an outer housing which encloses an inner rotatable, cylindrical centrifuge having a graduated series of vanes formed on the outside of the centrifuge. The vanes on the exterior surface of the centrifuge smoothly accelerate the

process gas to a high tangential velocity to separate the particulate impurities from the gas, while not triggering secondary mixing of the particulate impurities. The gas enters a cyclone at maximum axial velocity and ultra-high tangential velocity where the particulate matter separates and is ejected from the bottom of the cyclone. The centrifuge encloses an integral, interior, axial turbine through which the cleaned high pressure process gas from the core of the cyclone vortex flows to drive the turbine and the centrifuge. Write: Department of Energy.

**PAT-APPL-6-042 462**

**Nondestructive Method for Detecting Defects in Photodetector and Solar Cell Devices/297**

**Méthode non destructive de détection des défauts des dispositifs à photodétecteurs et à piles solaires/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed May 25, 1979, by the Department of Energy. The invention described herein is a method for locating semi-conductor device defects and for measuring the internal resistance of such devices by making use of the intrinsic dis-

tributed resistance nature of the devices. The method provides for forward-biasing a solar cell or other device while it is scanning with an optical spot. The forward-biasing is achieved with either an illuminator light source or an external current source. Write: Department of Energy.

**PAT-APPL-6-047 447**

**Cyclic Thermochemical Process for Producing Hydrogen Using Cerium-Titanium Compounds/297**

**Méthode cyclique thermochimique pour produire de l'hydrogène à l'aide de composés du cérium et du titane/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed June 11, 1979, by the Department of Energy. A thermochemical cyclic process for producing hydrogen employs the reaction between ceric oxide and titanium dioxide to form cerium titanate and oxygen. The titanate is treated

with an alkali metal hydroxide to give hydrogen, ceric oxide, an alkali metal titanate and water. Alkali metal titanate and water are boiled to give titanium dioxide which, along with ceric oxide, is recycled. Write: Department of Energy.

**PAT-APPL-903 430**

**Spray Immunization of Fish/297**

**Immunisation des poissons par vaporisation/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed May 8, 1978, by the Department of the Interior. The present invention comprises an antigenic material useful for immunizing fish against disease and a spray method for administering the antigenic material to the fish. Accordingly it is an object of the invention to provide an antigenic

material for the immunization of fish against disease and to provide a method for administering the antigenic material to fish efficiently and at low cost. Another object is to provide a method for administering the antigenic material to the fish by means of a spray. Write: NTIS.

## **PAT-APPL-6-129 778**

### **Computer Circuit Card Puller/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 12, 1980, by NASA. A handtool for facilitating the removal of printed circuit cards is described. The device is adapted to sit on spaced, parallel rail surfaces of a card rack having a plurality of printed circuit cards. The device includes a cylindrical bar adapted to sit on the rail surfaces of the rack, a blade projected radially from the bar adapted to be received beneath a card rail, and a handle

### **Extracteur de cartes d'ordinateur/297**

affixed to the bar in diametric opposition to the blade for facilitating manipulation of the blade for unplugging and lifting the card at its rail. Write: NASA, Hugh L. Dryden Flight Research Center, Edwards, California 93523 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014.

## **PAT-APPL-6-106 192**

### **Automatic Thermal Switch/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed December 21, 1979, by NASA. An automatic thermal switch to control heat flow is described which includes a first thermally conductive plate, a second thermally conductive plate and a thermally conductive switch saddle pivotally mounted to the first plate. A flexible heat carrier is connected between the switch saddle and the second plate. A phase-change power unit, including a piston coupled to the switch saddle is in thermal contact with the first thermally conductive plate. A biasing element biases the switch saddle in a predetermined position with respect to the first plate. When the phase-change power unit is

### **Commutateur thermique automatique/297**

actuated by an increase in heat transmitted through the first plate, the piston extends and causes the switch saddle to pivot thereby varying the thermal conduction between the first and second plate and through the switch saddle and flexible heat carrier. The biasing element, switch saddle and piston can be arranged to provide either a normally closed or normally opened thermally conductive path between the first and second plates. Write: NASA, Goddard Space Flight Center, Mail Code: 204, Greenbelt, Maryland 20771 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102.

## **PAT-APPL-6-129 793**

### **Microwave Switching Power Divider/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 12, 1980, by NASA. A microwave switching power divider for selectively dividing and switching microwave energy among a plurality of outputs to antenna elements or other microwave devices such as filters, phase-shifters or other networks is disclosed. The power divider includes a pair of parallel, spaced-apart circular ground planes defining a microwave cavity with multi-port microwave power distributing switching circuitry formed on opposite sides of a thin circular dielectric substrate disposed between the ground planes. The power distributing

### **Commutateur-diviseur de puissance hyperfréquence/297**

circuitry includes a conductive disk located at the center of the substrate and connected to a source of microwave energy. Microwave energy propagates as standing waves within the cavity. A plurality of radial power dividing transmission lines for intercepting the standing waves are symmetrically disposed about and connected to the conductive disk. Write: NASA, Goddard Space Flight Center, Mail Code: 204, Greenbelt, Maryland 20771 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102.

## **PAT-APPL-6-138 944**

### **Open Ended Ratched Type Tubing Cutter/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed April 9, 1980, by NASA. A self-clamping tube and piping cutting tool requiring limited angular motion is described. It includes a handle attached to a C-shaped housing and has an opening sized to admit a pipe rotatably mounted within the housing is a C-shaped tool body carrying a set of clamping and support rolls and an edged cutting roll. These rolls contact a pipe at three circumferential points. Cutter advancing means advance the cutting roll toward the support rollers. The support rolls and cutting roll are rotatable independently of the C-shaped housing. A

### **Coupe-tubes à tête ouverte à cliquet/297**

one way ratchet mechanism disposed between the C-shaped housing and the C-shaped tool body permits operation by movement in one rotational direction about the pipe axis. In another embodiment, the tool body is rotated by a power driven mechanism, in addition, an automatic cutter advancing means can be provided. Write: NASA, Lyndon B. Johnson Space Center, Mail Code: AM, Houston, Texas 77058 and send a copy of your initial correspondence to Canadian Consulate, 2001 Bryan Tower, Suite 1600, Dallas, Texas 75201.

## **PAT-APPL-6-126 138**

### **Controlled Overspray Spray Nozzle/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed February 29, 1980, by NASA. A nozzle for suppressing overspray of multiingredient ablative materials is described. The nozzle includes a cylindrical inlet which converges to a restricted throat. A curved juncture between the cylindrical inlet and the convergent portion, with a predetermined radius of curvature, affords unrestricted and uninterrupted flow of the ablative material. A divergent bell shaped chamber and an adjustable nozzle exit are utilized

### **Buse réduisant les pertes par brouillard/297**

which provide a highly effective spray pattern for suppressing overspray to an acceptable level and producing a homogeneous jet of material that adheres well to the substrate. Write: NASA, Marshall Space Flight Center, Mail Code: CC01, Huntsville, Alabama 35812 and send a copy of your initial correspondence to Canadian Consulate General, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303.

## **PAT-APPL-6-129 780**

### **Amplified Wind Turbine Apparatus/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 12, 1980, by NASA. An amplified wind turbine apparatus is disclosed wherein ambient inlet air is pre-rotated in an air rotation chamber having a high pressure profile. A second rotation chamber adjacent and downstream of the turbine has a low pressure core profile whereby flow across the turbine is accelerated and thereafter exists the turbine apparatus through a draft anti-interference device. The draft device eliminates interference

### **Turbine éolienne à amplification/297**

with ambient winds at the outlet of the turbine apparatus. Pivotal vanes controlled in response to prevailing wind direction admit air to the chambers and aid in imparting rotation. Write: NASA, Marshall Space Flight Center, Mail Code: CC01, Huntsville, Alabama 35812 and send a copy of your initial correspondence to Canadian Consulate General, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303.

## **PAT-APPL-6-100 611**

### **Mechanical End Joint System for Structural Column Elements/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed December 5, 1979, by NASA. A mathematical end joint system useful for the transverse connection of strut elements to a common node is described. Included are node joint half with semicircular tongue and groove and a strut joint half with semicircular tongue and groove. The two joint halves were engaged transversely and the connection was made secure by the inherent physical property char-

### **Dispositif mécanique de liaison d'extrémité pour éléments de structure tubulaires/297**

acteristics of locking latches or by a spring-actioned shaft. A quick release mechanism is also described which provides rapid disengagement of the joint halves. Write: NASA, Langley Research Center, Mail Code: 279, Hampton, Virginia 23665 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102.

## **PAT-APPL-6-129 798**

### **Process for the Preparation of Polycarboranylphosphazenes/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 12, 1980, by NASA. Polydihalophosphazenes are allowed to react at ambient temperatures for at least one hour with a lithium carborane in a suitable inert solvent. The remaining chlorine substituents of the carboranyl polyphosphazene are then replaced with aryloxy or alkoxy groups to enhance moisture resistance. The polymers give

### **Préparation de polycarboranylphosphazènes/297**

a high char yield when exposed to extreme heat and flame and can be used as insulation. Write NASA, Ames Research Center, Mail Code: 200-11A, Moffett Field, California and send a copy of your initial correspondence to Canadian Consulate General, One Maritime Plaza, Alcoa Building, Suite 1100, Golden Gateway Center, San Francisco, California 94111.

## **PAT-APPL-6-129 799**

### **Carboranycyclotriphosphazenes and their Polymers/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 12, 1980, by NASA. Carboranyl-substituted

### **Préparation et polymérisation de carboranycyclotriphosphazènes/297**

polyphosphazenes are prepared by heat polymerizing a carboranyl halocyclophosphazene at 250 C for about 120

hours in the absence of oxygen and moisture. The cyclophosphazene is obtained by allowing a lithium carborane, e.g., the reaction product of methyl-o-carborane with n-butyllithium in ethyl ether, to react with hexachlorocyclo-triphosphazene at ambient temperatures and in anhydrous conditions. For greater stability in the presence of moisture, the chlorine substituents of the polymer are then replaced by aryloxy or alkoxy groups, such as CF<sub>3</sub>CH<sub>2</sub>O(-). The new substantially inorganic polymers are thermally

stable materials which produce a high char yield when exposed to extreme temperatures, and can thus serve to insulate less heat and fire resistant substances. Write NASA, Ames Research Center, Mail Code: 200-11A, Moffett Field, California and send a copy of your initial correspondence to Canadian Consulate General, One Maritime Plaza, Alcoa Building, Suite 1100, Golden Gateway Center, San Francisco, California 94111.

### **PAT-APPL-6-136 660**

#### **Method for Making Patterns for Resin Matrix Composites/297**

#### **Méthode de fabrication de modèles pour pièces composites à matrice de résine/297**

Price per copy from NTIS: PC U.S. \$.500/MF U.S. \$3.50, filed April 2, 1980, by NASA. A method for making laminate patterns for a resin matrix composite structural component is described. A sheet of paper is temporarily adhered to a model of the structural component. A tracer pen is positioned on the paper with an affixed spindle touching the model surface opposite the pen. The pen and spindle are moved along the path that maintains the aforementioned contacts. The resulting line traced on paper is a model constant thickness locus and provides a pattern for

a single lamination of resin-impregnated fabric. The steps are repeated to make other patterns and each time the steps are repeated the distance between the tracer and the spindle is changed to correspond to the thickness of a lamination. Write NASA, Ames Research Center, Mail Code: 200-11A, Moffett Field, California and send a copy of your initial correspondence to Canadian Consulate General, One Maritime Plaza, Alcoa Building, Suite 1100, Golden Gateway Center, San Francisco, California 94111.

### **PAT-APPL-6-135 038**

#### **Method and Device for Destructive Detection of a Substance/297**

#### **Méthode et dispositif de détection destructive d'une substance/297**

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed March 28, 1980, by NASA. A method and device for destructively detecting the presence of a substance having predetermined characteristics is disclosed. A discharge grid is provided having a sufficiently high voltage potential across its grid electrodes so that the substance having the predetermined characteristics will cause an electric spark discharge to occur between electrodes. The electric spark discharge alters the predetermined characteristics of the

substance by oxidation and/or vaporization so that the substance is no longer detectable by an electric spark discharge. A means for counting the number of electric spark discharges is provided. (A count provides an indication of the concentration of the substance having the predetermined characteristics.) Write: NASA, Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code: 180-601, 4800 Oak Grove Drive, Pasadena, California 91103 T.C.L.A.

### **PAT-APPL-6-015 675**

#### **Fluidic Controlled Diffusers for Turbopumps/297**

#### **Dispositif de commande fluide du calage des aubages diffuseurs de pompe à turbine/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed February 27, 1979, by the Department of the Navy. The invention relates to arrangement for controlling the apparent curvature of diffuser vanes of a turbine fan to reduce

stalling of the vanes and increase efficiency of the fan output over a wider range of flow demand. The arrangement has particular use in a ride control system for surface effect ships. Write: Department of the Navy.

### **PAT-APPL-6-041 037**

#### **Diver's Suit Excess Gas Exhaust Valve/297**

#### **Soupage de surpression d'air pour scaphandre/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed May 21, 1979, by the Department of the Navy. A valve for controlling venting of excess gas from a diving suit includes a valve body housing first and second rubber check valves arranged in series. A control knob is rotatable on

the valve body to selectively open or close outlet ports for venting gas from between the check valves and to actuate a member to selectively either hold the first check valve closed or to allow it function. Write: Department of the Navy.

**PAT-APPL-6-094 269**

**Array Shading for a Broadband Constant-Directivity Transducer/297**

**Configuration de réseau de transducteurs à large bande et à directivité constante/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed November 14, 1979, by the Department of the Navy. This invention relates generally to acoustic transducers for underwater and ultrasonic applications and more particularly to a broadband directional transducer which provides a constant beamwidth that is independent of frequency over its bandwidth and which produces both an azimuthal pressure distribution that is independent of the distance from the transducer and a beam pattern that has no side lobes. A constant beamwidth transducer, that is, a transducer whose beam pattern is independent of frequency over a wide frequency range, is desirable for many applica-

tions in ultrasonics and underwater acoustics. Some examples of possible applications for such a transducer are: broadband echo ranging, high data rate communication, and nondestructive ultrasonic testing, medical diagnosis and materials research. Most directional acoustic transducers and arrays exhibit beam patterns which are frequency-dependent; for example, the beamwidth of a plane piston or line array decreases with increasing frequency. As a result, the spectral content of a transmitted or received signal varies with location in the beam. Write: Department of the Navy.

**PAT-APPL-6-095 866**

**Nitrile Rubber Adhesion/297**

**Amélioration des caractéristiques adhésives d'un caoutchouc au nitrile/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed November 19, 1979, by the Department of the Navy. This invention discloses a method for converting a nitrile rubber substrate surface to a chemically active surface

where upon said surface reacts with an adhesive to form a permanent bond with said adhesive. The nitrile rubber substrate surface is so converted by treatment with a dilute mineral acid. Write: Department of the Navy.

**PAT-APPL-6-117 162**

**Electrically Conductive Polymeric Compositions/297**

**Composés polymériques électroconducteurs/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed January 31, 1980, by the Department of the Navy. Electrically conductive polymeric compositions are obtained by incorporating crown ether complexes of TCNQ salts in a polymer selected from the class consisting of polycar-

bonates and poly(alkyl alkacrylates). The compositions can be formed into semiconductive films useful in the fabrication of e.g., thermoresistors and electronic devices. Write: Department of the Navy.

**PAT-APPL-6-121 625**

**Dark Field Surface Inspection Illumination Technique/297**

**Technique d'éclairage pour inspection de surfaces sur fond noir/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed February 14, 1980, by the Department of the Navy. A well collimated beam of light such as linearly polarized light from a laser is transmitted into a prism. When the light reaches the exit side of the prism, it encounters a layer of index matching fluid which it transmits through and an optical sample which it continues to transmit through. The optical sample, index matching fluid and prism are all of similar index of refraction to permit con-

tinued transmittance of the light. The purpose of the arrangement is to permit light to be present within the optical sample at or greater than the critical angle whenever it reaches the surface. Upon reaching the surface of the optical sample the light undergoes total internal reflection off of the surface because it is at the critical angle and is transmitted back through the sample, index matching fluid and prism. The light exists from the prism. Write: Department of the Navy.

**PAT-APPL-6-122 388**

**Cooling Apparatus for Electronic Modules/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed February 19, 1980, by the Department of the Navy. The present invention provides an improved cooling arrangement for a standard electronic plug-in module assembly having a plurality of standard modules supported in grooves in parallel side plates. Each module has a metallic heat plate which facilitates the transfer of heat from the electronic components to the parallel metallic sides which support the modules. A spring is provided in each groove in the side plates for upwardly biasing each module. A top cold plate is forced downwardly by a screw-operated

**Dispositif de refroidissement de modules électroniques/297**

wedge plate and this cold plate engages a metal frame on each electronic module. The springs in the grooves are compressed and apply a force which insures good contact between the cold plate and each frame of each module thereby facilitating transfer of heat away from each electronic module. The top plate is provided with passages for carrying a cooling liquid for removing heat transferred from the modules to the top plate. It is therefore a general object of the present invention to provide an improved cooling arrangement for an electronic plug-in module assembly. Write: Department of the Navy.

**PAT-APPL-6-126 088**

**Semiconductor Encapsulant for Annealing Ion-Implanted GaAs/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed February 29, 1980, by the Department of the Navy. A method for protecting an ion-implanted substrate during the annealing process by covering the ion-implanted layer with a suitable encapsulant. A thin layer of ions are implanted into a GaAs substrate. A protective layer of germanium, amorphous GaAs, doped GaAs, or GaAlAs is applied

**Couche semiconductrice de protection du GaAs à implantation ionique pendant son recuit/297**

over the implanted layer and on the periphery of the ion-implanted GaAs substrate. The composite is annealed at a temperature which is adequate for the lattice to recover from the ion-implantation-induced damage. The protective layer is removed subsequent to the anneal step, without any damage to the ion-implanted layer. Write: Department of the Navy.

**PAT-APPL-6-126 269**

**The Recrystallization of Hexanitrostilbene from Nitric Acid and Water/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 3, 1980, by the Department of the Navy. The production of 2,2',4,4',6,6'-hexanitrostilbene-I (HNS-I) having finely divided particles of uniform size by dissolving

**Recrystallisation de l'hexanitrostilbène dans un mélange acide nitrique/eau/297**

HNS-II in hot fuming nitric acid and then drowning the HNS-nitric acid solution in water. Write: Department of the Navy.

**PAT-APPL-6-127 020**

**Automatic Actuator for Variable Speed Pump/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 4, 1980, by the Department of the Navy. In the instant invention, the control regulates the pump speed to deliver a maximum flow without full time attention by an operator. A rotary or linear actuator is used to change the

**Actionneur automatique pour pompe à vitesse variable/297**

pump speed to prevent unacceptably low pressures on the pump inlet or unacceptably high pressures on the pump outlet. Pressure operated switches at the inlet and outlet to the pump control the actuator to produce maximum flow rates through the pump. Write: Department of the Navy.

**PAT-APPL-6-129 061**

**Sulfur Dioxide Detector/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 10, 1980, by the Department of the Navy. A composition is provided for detecting the presence of sulfur dioxide by changing color. One type of composition is prepared by mixing a small amount of finely ground potassium permanganate with finely powdered activated silica gel to produce a lilac colored material which will turn

**Détecteur de dioxyde de soufre/297**

white in the presence of sulfur dioxide. Another type of composition is prepared by soaking silica gel in an aqueous solution of potassium permanganate to produce an amber colored material which will turn white in the presence of sulfur dioxide. Both types of detecting material can be combined with silicone rubber and molded into various shapes. Write: Department of the Navy.

## **PAT-APPL-6-135 392**

### **Fill Machine/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed March 31, 1980, by the Department of the Navy. A filling machine for filling an enclosed receptacle with a volatile fluid, and providing increased safety for operating personnel and receptacle storage is presented. An elongated filler tube is insertable into a first aperture in the top of the receptacle. The lower end of the filler tube is provided with second apertures configured for discharge through the apertures and influx into the receptacle of fluid under pressure in a churning manner for generating vapors

### **Remplisseuse/297**

of the fluid within the unfilled cavity portion of the receptacle. A suction sleeve is disposed above the top of the receptacle about the filler tube and the first aperture for drawing into the suction sleeve air and vapors present above the receptacle top and within the unfilled cavity portion. In this manner, harmful vapors are prevented from reaching operating personnel and oxygen is removed from the cavity portion so that the cavity portion is filled with vapors of the fluid which are substantially purged of oxygen. Write: Department of the Navy.

## **PAT-APPL-6-136 858**

### **Blocking Feed Through for Coaxial Cable/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed April 3, 1980, by the Department of the Navy. A coaxial cable is fed through a wall without introducing electrical reflections or otherwise compromising the cable's electrical integrity. A cylindrically-shaped housing having a cavity is inserted through an opening in the wall and is locked in place while an o-ring seals the juncture. An adhe-

### **Dispositif de traversée étanche pour câble coaxial/297**

sive compound fills the cavity and adhesively engages an exposed length of cable shielding and the inner wall of the cavity. After the compound cures, a watertight interconnection and penetration of the wall is formed without compromising the cable's electrical integrity. Write: Department of the Navy.

## **PAT-APPL-6-137 026**

### **Coupling for Quick Attachment to Plate-Like Structure/297**

Price per copy from NTIS: PC U.S. \$5.00/MF U.S. \$3.50, filed April 3, 1980, by the Department of the Navy. The present invention provides apparatus for coupling a selected force to a plate-like structure having a hole of selected diameter through it. The apparatus includes a bearing element means for traversing the structure from a first side to a second side of the structure, and flange means comprising a flange for abutting the first side of the structure, and a bushing which is fixably joined to the flange for insertion into the hole. A shaft means is provided which traverses the flange means and which has an end fixably joined to the bearing element means for positioning the bearing ele-

### **Dispositif de fixation rapide à une structure plane/297**

ment means in a concentric relationship with the bushing, when the apparatus is in a first mode of operation, and for positioning the bearing element means in an eccentric relationship with the bushing, when the apparatus is in a second mode of operation. The apparatus further includes locking means for maintaining the bearing element means and the bushing means in the eccentric relationship when the apparatus is in its second mode of operation, means for providing a force to activate the locking means, and means for coupling the selected force to the shaft means. Write: Department of the Navy.

## **PAT-APPL-6-137 681**

### **Submarine Rescue Cable Reel/297**

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed April 7, 1980, by the Department of the Navy. Apparatus for delivering a heavy cable such as a rescue cable from the ocean's surface to an extended depth for attachment to an object such as a stranded submarine and, after attachment of the free end of the cable to the object, delivering the cable to the ocean's surface. A syntactic foam float provides positive buoyancy for a frame assembly which supports a cable reel holding the heavy cable. Releasable ballasts are included to provide an initial overall buoyancy of a small negative value during the descent

### **Treuil pour câble sous-marin de secours/297**

of the apparatus. A release system is provided to simultaneously release the releasable ballast to change the buoyancy of the apparatus to a position value, release the cable reel to allow cable payout. The cable reel is coupled to a waterbrake system which limits the rate of the cable payout to below the rate of ascent of the rescue cable reel. The waterbrake system includes a depth-activated clutch which engages a secondary waterbrake to slow the rate of cable payout near the ocean surface. Write: Department of the Navy.

## Licensing Opportunities Through Dr. Dvorkovitz and Associates, U.S.

The following technologies are offered for manufacture under license in Canada. A fee is required from licensees who are successful in concluding agreements. When requesting additional information, please quote the reference number. Write: Dr. Dvorkovitz and Associates, P.O. Box 1748, Ormond Beach, Florida 32074 and send a copy of your initial correspondence to Canadian Consulate General, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303.

### Stable Floors/297

Austrian manufacturer offers exclusive know-how licensing rights for the production of foamed plastic (steel reinforced) flooring for animals which provides optimal heat protection, walking safety and cleanliness. The material is insensitive to corrosive atmospheric components, acids and humidity. The structure is self-supporting and can be used anywhere, for example, partially split stables and completely split stables for swine feeding and breeding, piglet birth and rearing stalls, calf rearing, sheep and goat breeding and stall extensions for cattle. Reference number A6120. See also OXIDIZATION STALL/297.

### Oxidization Stall/297

Austrian manufacturer offers exclusive know-how licensing rights for an environmentally harmless animal housing process which makes optimal use of manure by permanent liquid manure oxidation. Animal excrement is constantly raked up and supplied with oxygen in a liquid manure pit under the animals. The aeration equipment is moved through the settling pit (oxidization channel) thus eliminating sedimentation and permitting optimal oxygen input, minimal energy expense and automatic control of temperature. No special structural measures are required. Satisfactory removal of manure through suction lines installed in existing stalls is possible. This purely biological process is used for the maintenance of quantities of animals, chickens, etc., and is distinguished by: the prevention of odor emissions in the storage and processing of the liquid manure; the sanitization of the liquid and improvement of its fertilizer value; the reduction in labour costs; the freeing of the stable air of noxious gas harmful to animals; the reduced energy and investment costs. Reference number J6120. See also STABLE FLOORS/297.

## Possibilités d'acquisition de licences par l'intermédiaire de Dr. Dvorkovitz and Associates, É.-U.

Les techniques suivantes sont proposées pour la fabrication sous licence au Canada. Des droits seront exigés des fabricants qui parviendront à conclure un contrat de production sous licence. Lors de la demande de renseignements supplémentaires, veuillez citer le numéro de référence. Écrire à: Dr. Dvorkovitz and Associates, P.O. Box 1748, Ormond Beach (Floride) 32074 et envoyer une copie de votre correspondance initiale au Consulat général du Canada, 900 Coastal States Building, 260 Peachtree Street, Atlanta (Georgie) 30303.

### Planchers d'étable/297

Un fabricant autrichien offre les droits exclusifs de savoir-faire et d'exploitation sous licence pour la production de couvertures de sol en matière plastique en mousse (renforcée d'acier) pour animaux. Les couvertures assurent une protection optimale contre la chaleur, permettent des déplacements en toute sécurité et sont d'une grande propreté. Le matériau est insensible aux composants corrosifs de l'atmosphère, aux acides et à l'humidité. La structure est autoportante et peut être utilisée n'importe où, par exemple dans les étables partiellement et complètement séparées pour l'alimentation et l'élevage du porc, pour les stalles de mise bas et d'élevage des porcelets, pour l'élevage des veaux, pour l'accouplement des moutons et des chèvres et comme extension aux stalles pour le bétail. Numéro de référence A6120. Voir aussi STALLES D'OXYDATION/297.

### Stalles d'oxydation/297

Un fabricant autrichien offre les droits exclusifs de savoir-faire et d'exploitation sous licence d'un procédé non nuisible pour l'environnement de logement des animaux qui fait intervenir l'utilisation optimale du fumier par oxydation continue du purin. Les excréments d'animaux sont continuellement râtelés et on leur ajoute de l'oxygène dans une fosse à purin située sous les animaux. L'équipement d'aération est déplacé dans la fosse de sédimentation, ce qui élimine le dépôt en permettant un apport optimal en oxygène, réduit au minimum la dépense en énergie et le contrôle automatique de la température. Aucune mesure spéciale n'est nécessaire au niveau de la structure. Le fumier peut être éliminé de façon satisfaisante à l'aide de conduites aspirantes installées dans les stalles existantes. Ce procédé entièrement biologique est utilisé pour l'entretien de grands groupes d'animaux, comme les poulets, et se distingue par: l'élimination des émissions malodorantes au niveau de l'entreposage et du traitement du purin; l'assainissement du liquide et l'accroissement de sa valeur en tant qu'engrais; la diminution des coûts de main-d'oeuvre; l'élimination de l'étable des gaz nocifs nuisibles pour les animaux; une diminution des coûts en énergie et en investissements. Numéro de référence J6120. Voir aussi PLANCHERS D'ÉTABLE/297.

### **Long Drills Provided with Helical Splines/297**

French company offers optional licensing rights to manufacture and market a machine for long drills with rectilinear splines which are heated in successive zones while producing a controlled increase in the distance between the two extremities. The part to be formed is thus subjected to controlled plastic elongation while the two extremities are driven in rotation at different speeds in order to subject the splined portion to a twisting effort and thus to convert the rectilinear splines to helical splines. Advantages: The manufacture of the helical drills is drastically simplified, the straight splines are twisted into helical ones and the drill is heat-treated all in one operation. This reduces the complication in direct helical spline machinery while increasing productivity. The workpieces remain perfectly straight after heat treatment. Secrecy agreement is required to obtain confidential data. Reference number A6132.

### **Method and Apparatus for the Measurement and Control of Density of Ball Mill Discharge Slurries/297**

The M.D. Research Co. Pty. Ltd. in Australia offers exclusive licensing rights under Canadian Patent No. 1,075,495 for this new and improved method in which the density in the slurry is measured while it is flowing downwards at a rate greater than the settling velocity of the slurry. Used in the mineral processing and cement industries a direct and meaningful indicator of wet grinding process conditions is provided thereby offering distinct possibilities for improving the economy of many fine wet grinding facilities. Reference number A6801.

### **Thermo Mechanical Generator/297**

The Harwell Research Laboratory in the U.K. seeks an optional licensee for its Canadian patent and/or its patents issued in ten other industrial countries, for a generator which converts heat into electricity. As the initial prototypes are expensive the laboratory is seeking a manufacturer capable of developing the market in sufficient numbers to justify the engineering costs and to produce the generators at a competitive price. The generator is a Stirling engine with a diaphragm instead of pistons. It operates between two steady temperatures, one being ambient, the other at about 600 degree C. The heat source at present is a propane flame but other sources could work equally well. The power levels of present models are up to 60 watts (electrical). It operates for long periods without refuelling in powering remote lighthouses, telecommunications repeaters and possibly has many other uses. Reference number A6802.

### **Fabrication de forets longs à cannelures hélicoïdales/297**

Une société française offre les droits facultatifs de production et de commercialisation d'une machine à fabriquer de longs forets hélicoïdaux. Cette machine permet d'étirer à chaud le foret à cannelures rectilignes pendant que ses extrémités sont entraînées à des vitesses de rotation différentes: les cannelures rectilignes sont ainsi transformées en cannelures hélicoïdales. Avantages: la fabrication des forets hélicoïdaux est énormément simplifiée, étant donné que les cannelures droites sont transformées en cannelures hélicoïdales pendant le traitement à chaud du foret; cette simultanéité réduit la complexité des machines qui produisent directement des cannelures hélicoïdales, et permet d'augmenter la productivité. La pièce à travailler demeure parfaitement droite après le traitement à chaud. De plus amples renseignements sont fournis sous le sceau du secret. Référence A6132.

### **Méthode et appareil de mesure et de régulation de la masse spécifique du schlamm à la sortie des broyeurs à boulets/297**

La société M.D. Research Co. Pty. Ltd. d'Australie offre sous le brevet canadien n° 1,075,495 les droits exclusifs à cette nouvelle méthode améliorée utilisée pour mesurer la masse spécifique du schlamm pendant que ce dernier s'écoule à une vitesse supérieure à sa vitesse de décantation. Dans les industries du ciment et du traitement des minéraux, cette mesure donne un indice direct et significatif des conditions du broyage par voie humide et permet nettement d'augmenter le rendement de nombreuses installations de pulvérisation par voie humide. Référence A6801.

### **Générateur thermo-mécanique/297**

Le Harwell Research Laboratory, au Royaume-Uni, désire un licencié à option pour son brevet canadien ou pour ses brevets détenus dans dix autres pays industriels, au sujet d'un générateur qui transforme la chaleur en électricité. Comme les prototypes initiaux sont coûteux, le laboratoire cherche un industriel capable d'aménager un marché d'un intérêt suffisant pour justifier les frais d'étude et pour produire les générateurs à un prix concurrentiel. Le générateur est un moteur Stirling comprenant une membrane au lieu de pistons. Il fonctionne entre deux températures stables, l'une étant la température ambiante et l'autre une température d'environ 600 degrés Celsius. La source de chaleur utilisée actuellement est la combustion du propane, mais il est possible d'utiliser d'autres sources. La puissance des modèles actuels va jusqu'à 60 watts (électriques). Le générateur peut fonctionner pendant de longues périodes sans ravitaillement en combustible et il peut fournir l'électricité, entre autres, aux phares éloignés et aux répéteurs. Référence: A6802.

### **Lamellar Sedimentation System (Serfac)/297**

French company offers additional territorial non-exclusive licensing rights under Canadian Patent number 1,052,289 for the "Serfac" system for the separation and removal of suspended or colloidal solids with noticeable settling velocity when used in mineral industries, river and surface water clarification, primary physio-chemistry and treatment of sewage. The system is characterized by the fact that the flow of water to be treated and the flow of sludge are running cross-current. The outlet flow distribution control device permits quiet displacement. Surface loading is extremely high; up to 50 M<sup>3</sup>/M<sup>3</sup>/H (20 U.S.G./SF/MIN.). Efficiency and capacity may be increased by the insertion of a lamellar cell. Reference number J6133. See also DIS-SOLVED AIR FLOATATION SYSTEM (SERFLO)/297.

### **Dissolved Air Floatation System (Serflo)/297**

French company offers optional licensing rights to a dissolved air floatation system characterized by the superposition and not mixing of the flow of pressurized water and the flow of water to be treated; an outlet flow distribution control device; and the possible insertion of a lamellar cell. Its main uses are in the separation and removal of suspended colloidal solids in the pulp and paper, food and agricultural, textile, steel and metal industries. Reference number S6133. See also Lamellar Sedimentation System (Serfac)/297

### **Pick Proof Lock/297**

American inventor offers optional licensing rights to a Canadian company to manufacture and market a lock composed of a cylinder with two opposed sets of tumblers and a key made of a strip of metal bent into a zig-zag shape which passes between the tumblers. There is no space through which a picking tool can pass. Both the lock and the process of duplication are patented in the United States and patents are pending in Canada, Japan, Switzerland and Germany. Reference number J6796.

### **Solar Collector/297**

German inventor offers a Canadian company the manufacturing and worldwide marketing rights to solar energy collectors for central and water heating. The system consists of pipelines using a special oil as the heat carrier. It absorbs insolation stored under high pressure (30-50 BAR), and having temperatures up to 200°C maximum, interdependent of pressure. It is self-controlling at variations in temperature. Eventual use in connection with a warming pump is possible. The absorber lies in a box of specially prepared aluminum covered by one or two panes of glass. The collector is long lasting because there are no elements to wear out. Reference number J6797.

### **Système de sédimentation lamellaire (Serfac)/297**

Une compagnie française offre des droits d'exploitation territoriaux, non exclusifs, sous licence canadienne (numéro 1 052 289) relativement au système "Serfac" de séparation et retrait de certains solides suspendus ou colloïdaux; ceux-ci sont caractérisés par une vitesse non négligeable de sédimentation, lorsqu'utilisés dans l'industrie minière, lors de la clarification des eaux douces fluviales et de surface, en physio-chimie primaire, et lors de l'épuration des eaux usées. Dans ce système, l'eau à traiter et les boues d'épuration s'écoulent en sens inverse. Le dispositif contrôlant la distribution du débit sortant favorise un mouvement lent. La charge superficielle est considérable, et peut atteindre 50 M<sup>3</sup>/M<sup>3</sup>/H (20 U.S.G./pi<sup>2</sup>/mn.). On peut accroître le rendement et la capacité en insérant une cellule lamellaire. Numéro de référence J6133. Voir aussi "SYSTÈME DE FLOTTATION SUR LIT FLUIDISÉ (À AIR DISSOUS), (SERFLO/297)

### **Système de flottation à l'air dissous (Serflo)/297**

Une société française offre les droits optionnels d'exploiter sous licence un système de flottation à l'air dissous caractérisé par la superposition et non le mélange des écoulements d'eau sous pression et d'eaux à traiter, par un dispositif de commande de la distribution de l'écoulement de sortie, et par un système facultatif d'ajout d'une cellule lamellaire. Ses principales applications sont la séparation et l'élimination des matières colloïdales en suspension dans les industries des pâtes et papiers, alimentaire et agricole, du textile, de l'acier et des métaux. Numéro de référence: S6133. Voir aussi le système de sédimentation laminaire (Serfac)/297.

### **Serrure incrochetable/297**

Un inventeur américain offre à toute société canadienne les droits de fabrication et de mise en marché d'une serrure comprenant un barillet à deux ensembles de gorges opposées avec clé métallique de forme ondulée à insérer entre les gorges. Il est impossible d'introduire un crochet dans ce genre de serrure. Les brevets concernant la conception de la serrure et le mode de fabrication en série ont été émis aux États-Unis et sont en instance d'acceptation au Canada, au Japon, en Suisse et en Allemagne. Numéro de référence J6796.

### **Capteur solaire/297**

Un inventeur allemand offre à une société canadienne les droits de fabrication et de commercialisation internationale de capteurs solaires destinés au chauffage central et au chauffage de l'eau. Le système consiste en une tuyauterie dans laquelle circule une huile spéciale caloprotectrice. Il absorbe de l'énergie solaire et la stocke à haute pression (30-50 bars) et à des températures allant jusqu'à 200°C, selon la pression. La thermorégulation est automatique. Le capteur peut être utilisé avec une pompe à chaleur. L'absorbant repose dans une boîte d'aluminium spécial, recouverte d'un vitrage simple ou double. Le capteur est durable car il ne comporte pas de pièces mobiles. Numéro de référence: J6797.

### **Improved Lead/Acid Cell/297**

Swedish company offers licensing rights to a Canadian firm for its patented technique to form and fill into tube electrodes, lead granules of improved shape, with advantageous electrochemical properties. The technique has been laboratory-tested. the licensor will provide confidential technical and commercial data with secrecy agreement. Type and extent of licensing arrangements are optional. The new cells have an energy density (watt hours/kg) of 30 to 35 per cent better than conventional cells. Reference number S6100.

### **Accumulateur plomb-acide/297**

Une société suédoise offre à une entreprise canadienne les droits d'exploiter sous licence sa technique brevetée pour façonner et remplir des électrodes cylindriques de granules de plomb de forme améliorée et de propriétés électrochimiques avantageuses. Cette technique a été éprouvée en laboratoire. La société fournira des données techniques et commerciales confidentielles sous accord de non-divulgation. Le type et la portée des dispositions d'offre de la licence sont négociables. Les nouveaux accumulateurs sont de 30 à 35 % plus énergétiques (watts-heures/kg) que les accumulateurs classiques. Numéro de référence: S6100.

## Licenses Available from the Waterloo Centre for Process Development

The Waterloo Centre for Process Development is a University of Waterloo service to help in the development and commercial exploitation of new and improved processes; particularly chemical, biological and metallurgical processing. (See also the Bibliography section.) The following processes are available for commercial exploitation. Write: Mr. Peter W. Melnichuk, Industrial Liaison Manager, Waterloo Centre for Process Development, University of Waterloo, Waterloo, Ontario N2L 3G1 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

### The Waterloo Scrubber/297

The Waterloo Scrubber is a new field-proven concept in high-efficiency scrubbing of dirty gases containing fine particulates or other contaminants. It is the first low energy scrubber offering efficiency capabilities to, or better than, conventional high-energy scrubbers. Patented in the U.S. (4,067,703), the Waterloo Scrubber is the only wet scrubber capable of delivering 95%-plus efficiencies for the removal of particulates and mist in the difficult size range of 0.3 to 1.0 microns, while operating at a 1"-2" W.G. gas pressure increase at water/gas scrubbing ratios in the range of 0.1 to 0.3 gallons/1000 CF. Unlike most scrubbers, the prime mover (fan) is an integral part of the Waterloo Scrubber providing both turbulent contact and the necessary residence time for effective agglomeration of the aerosols with the scrubbing liquid.

### Cell for Electrochemical Processes/297

A pilot-plant scale electro-chemical cell using a rotating cylindrical electrode and wiper blades has been tested for the recovery of copper ions from dilute aqueous solutions and performance tests for various other processes are planned. Apart from metal recovery, the cell is most likely to be useful for normally inhibited oxidation and reduction processes, such as the electrochemical oxidation of  $H_2S$  to  $H_2$  and sulfur (as shown by previous bench-scale results), and possibly the oxidation of  $SO_2$ . Wide applicability is foreseen and industrial sponsoring of further development, in exchange of eventual licensing/manufacturing rights, is invited. The cell is a rotating-cylindrical-electrode electrolyser, equipped with wiper blades which provides electrical insulation of the cell compartments and remove adsorption layers from the rotating electrode surface. The device carries the following simultaneous advantages: The rotat-

## Licences offertes par le Waterloo Centre for Process Development

Le Waterloo Centre for Process Development est un service mis sur pied par l'Université de Waterloo pour promouvoir la mise au point et l'exploitation commerciale de procédés nouveaux ou améliorés, notamment dans les domaines de la chimie, de la biologie et de la métallurgie. (Voir aussi la section Bibliographie.) Les procédés ci-après sont offerts pour exploitation commerciale. Pour tous renseignements, écrire à: Mr. Peter W. Melnichuk, Industrial Liaison Manager, Waterloo Centre for Process Development, Université de Waterloo, Waterloo (Ontario) N2L 3G1 et faire parvenir une copie de votre correspondance initiale à l'adresse suivante: Section des possibilités de licences (34/3), Centre des entreprises, ministère de l'Industrie et du Commerce, Ottawa (Ontario) K1A 0H5.

### L'épurateur Waterloo/297

L'épurateur Waterloo est l'application d'un nouveau concept qui a été éprouvé en conditions réelles d'utilisation. Il permet de réaliser efficacement l'épuration de gaz contenant en suspension de fines particules ou d'autres contaminants. Il s'agit du premier épurateur peu exigeant du point de vue énergétique, présentant une efficacité égale sinon supérieure à celle des épurateurs classiques nécessitant beaucoup d'énergie pour fonctionner. Cet épurateur, qui a été breveté aux États-Unis (n° 4 067 703) est le seul épurateur par voie humide permettant d'éliminer les particules et les gouttelettes en suspension d'une taille comprise entre 0,3 et 1,0 micron avec une efficacité d'au moins 95 p. cent, avec un gradient de pression de 1-2 pouces d'eau, et un taux d'épuration de 0,1-0,3 gallon par 1 000  $pi^3$ . Contrairement aux autres types, l'épurateur Waterloo est doté d'un ventilateur qui en fait partie intégrante. Ce ventilateur assure un contact turbulent dans le mélange liquide/gaz et une durée de séjour suffisante pour qu'il y ait agglomération des aérosols au sein du liquide de lavage.

### Cellule électrochimique/297

Une cellule électrochimique, actuellement au stade de l'usine pilote, a été essayée pour la récupération des ions de cuivre en solution aqueuse diluée; divers autres essais d'application sont prévus. En dehors de la récupération de métaux, la cellule sera vraisemblablement utile surtout pour les procédés d'oxydation et de réduction normalement inhibés, comme l'oxydation électrochimique de  $H_2S$  en  $H_2$  et S (ainsi que l'on montré des essais de laboratoire), et peut-être l'oxydation de  $SO_2$ . On envisage de nombreuses applications et c'est pourquoi on fait appel à l'aide de l'industrie pour de nouveaux développements, en échange de droits éventuels de fabrication sous licence. La cellule est un électrolyseur à électrode cylindrique munie de raclours qui assurent l'isolation électrique des compartiments de la cellule et éliminent les couches déposées sur la surface de l'électrode en rotation. Le dis-

ing electrode can be anodic or cathodic with respect to a reference potential in any compartment; oxidation and reduction reactions may thus be carried out in one cell unit; by means of continuous electrode surface reactivation due to the wiping action, reactions normally inhibited in conventional electrochemical cells can be carried out at a high conversion efficiency; the wiper blades provide a systematic "break-up" of diffusion layers forming on the rotating electrode, yielding high mass transport rates (current density) in each compartment (thus reducing size requirements for a set production rate). In a previously built bench-scale prototype metal recovery, anodic oxidation of organic compounds, oxygen evolution and reduction and anodic dissolution were the major processes investigated with promising results.

### **Cyanide Recovery Treatment (WCRT System)/297**

The WCRT System is designed for recovering reagent values from complex metal/cyanide process streams. By a unique combination of pH control, ion exchange and electro-chemical processing, metals are successively recovered as hydrides and 90-95% of the cyanide is recovered in a form suitable for direct recycle. The WCRT System is pollution free. It provides an economical recovery-mode treatment of large volumes of troublesome low level cyanide process streams containing a mix of heavy metals — present process for treating such streams almost invariably involve expensive and wasteful chemical destruction of cyanide. While originally designed for treating cyanide streams produced in the cyanide extraction of gold from sulfidic gold ore concentrates, the system is adaptable for treating other types of cyanide streams — such as mixed cyanide plating room effluents or cyanide streams produced in some froth flotation operations. The modular nature of the system permits diverse applications. Advantages: Valuable reagents are recovered, not destroyed; purity level of recovered cyanide adjustable to processing requirements; especially suitable for processing low level high volume cyanide streams; system is capable of treating cyanide streams containing sulfur compounds such as thiocyanate, thiosulfate, thionates, etc. System can convert up to 50% of thiocyanate to cyanide; complete elimination of process stream pollution problems.

### **Feed/Food Protein/297**

Edible microbial biomass of yeast and fungi. Useful as proteinaceous animal-feed and future human-food. Valuable protein, fat, vitamin and other nutritive components. Amino acid profile is comparable with UN-FAO standards. Product acceptability is supported by feeding trials. The raw materials are: Waste or surplus biomass such as agricultural residues (e.g., straw, corn stover, bagasse, manure, casava) and forestry residues (e.g., wood remnants, saw-dust, paper, pulpmill sludge). The multi-stage

positif a les avantages suivants: l'électrode rotative peut être anodique ou cathodique par rapport à un potentiel de référence dans un compartiment donné; l'oxydation ou la réduction peut donc être effectuée dans une seule unité de la cellule; du fait de la réactivation de la surface de l'électrode par le raclage, les réactions normalement inhibées dans les cellules classiques peuvent être poursuivies avec une bonne efficacité; les raclours "brisent" systématiquement les couches de diffusion qui se forment sur l'électrode, ce qui donne de forts taux de transport de masse (densité de courant) dans chaque compartiment (ce qui permet de réduire la taille pour une production donnée). Dans un prototype de laboratoire pour la récupération des métaux, on a étudié notamment l'oxydation anodique de composés organiques, la production et la réduction de l'oxygène ainsi que la dissolution anodique.

### **Récupération des cyanures (Système WCRT)/297**

Le système WCRT (Waterloo Cyanide Recovery Treatment) a été mis au point en vue de récupérer les réactifs utiles des rejets liquides contenant des cyanures métalliques complexes. Cette méthode unique, qui comporte le contrôle du pH, l'échange ionique et un traitement électrochimique, permet de récupérer les métaux sous forme d'hydruure; 90-95 p. cent des cyanures sont récupérés dans une forme recyclable directement. Ce système, qui ne produit aucun polluant, constitue une façon économique de traiter de grandes quantités de rejets présentant de faibles teneurs en cyanures et contenant différents métaux lourds, normalement difficiles à éliminer. Les procédés actuels employés à cette fin sont presque toujours très coûteux et détruisent chimiquement les cyanures qui, en fait, sont, réutilisables. Ce système a été mis au point initialement en vue de traiter les rejets liquides produits lors de l'extraction de l'or contenu dans les concentrés de minerais aurifères sulfurés, mais il peut être modifié pour traiter d'autres types de rejets cyanurés comme les mélanges de cyanures des effluents rejetés lors d'opérations d'électrodéposition ou lors de certaines opérations de flottation par mousse. Diverses autres opérations sont également possibles en raison de la nature modulaire du système. Avantages: Récupération de réactifs utiles qui autrement seraient détruits. Possibilité de modifier selon les besoins la qualité de cyanure récupéré. Méthode particulièrement convenable pour traiter les rejets liquides contenant de faibles quantités de cyanure. Également possibilité de traiter des rejets liquides cyanurés contenant des composés soufrés comme le thiocyanate, le thiosulfate, les thionates, etc. Le système permet de transformer 50 p. cent des thiocyanates en cyanure, éliminant ainsi complètement tout risque de pollution.

### **Protéines alimentaires pour l'homme ou l'animal/297**

Biomasse microbienne comestible constituée de levures et de champignons pouvant servir d'aliment protéiné pour l'animal et, éventuellement, pour l'homme. Le produit contient des protéines, des graisses, des vitamines et d'autres éléments nutritifs, et son profil d'acides-amino est conforme aux normes de la FAO. Des essais ont montré que le produit est bien accepté par l'animal. Les matières premières utilisables sont les déchets ou les produits excédentaires comme les résidus agricoles (paille, enveloppe

process involves physical or physicochemical pretreatment of the raw materials, fermentation of the pretreated materials, and recovery of the fermented solids by filtration and optional drying. Farm or industrial level technology options are available. The estimated Canadian selling price of the product is competitive with soymeal for plant sizes utilizing more than 2 tons per day of feedstock. Additional credit is abatement of environmental pollution normally caused by the raw materials. The process economics are even more attractive for protein-poor, carbohydrate-rich developing countries.

### **New Agglomeration Device/297**

The pelletizer is for the continuous production of spherical pellets or "green balls" (in which the strength arises from capillary forces) from powder and liquid. Subsequent drying and processing steps are not part of the device. In addition to its use in the process industries that now agglomerate fines, it may also be of environmental use in allowing unwanted fine powders to be made into a form convenient for handling and so disposed of. Advantages: The balls or pellets are all of the same size, hence no recycle, and so no screens, crushers, or excess capacities are needed; the size of the ball is that which it is desired to be; no seed material is needed. It may thus be possible to pelletize previously intractable substances; the balls are of homogeneous structure, hence thermal spalling or mechanical breakage is likely to be much reduced; the apparatus is compact (of the order of 1 cubic foot of space per 2,000 tons per annum of solid of specific gravity 4.0) — furthermore, scale-up from laboratory to production size is a matter of simple arithmetic; the device is mechanically simple, and the operating conditions are mild. Thus capital, energy, and maintenance costs should all be low.

### **Technology on Drying/297**

The dryer developed at the University of Waterloo is the first dryer that combines both microwave and hot air in achieving ultra high energy efficiency and minimum drying time in performance. A conventional dryer is very low in energy efficiency and it usually requires a long drying time. On the other hand, microwave heating is internal in nature, the power penetrates the surfaces and provides energy for drying inside the material where it is most effective. Consequently, the moisture thus generated at a much higher rate can be transported away by only a very small fraction of the amount of hot air needed for a conventional dryer. The concept of incorporating microwave power in a conventional hot air dryer, has been tested for many products such as grain, wood, and even baking bread. It normally reduces the drying time by 50-60% and requires less than one tenth of the hot air for a conventional dryer, a very important factor if the air must be treated to remove pollutants before discharging to the atmosphere. Moreover, it eliminates many undesirable effects due to high temperatures such as thermal cracking, excessive shrinkages,

de maïs, bagasse, fumier, etc.) et les résidus forestiers (restes de bois, sciure, papier, boues de papeteries, etc.). Le procédé à plusieurs étages comprend le prétraitement physique ou physicochimique des matières premières, la fermentation des produits traités et la récupération des solides fermentés par filtration et, éventuellement, séchage. Du point de vue technologique, le traitement peut se faire avec des moyens industriels ou simplement ceux de la ferme. Le prix de vente prévu au Canada rendrait le produit concurrentiel avec la farine de soya pour les usines utilisant plus de 2 tonnes de produits alimentaires par jour. Un autre avantage est la réduction de la pollution de l'environnement que créeraient autrement les résidus. Le procédé est encore plus intéressant pour les pays en voie de développement, pauvres en protéines et en glucides.

### **Nouveau dispositif d'agglomération/297**

La pastilleuse a été conçue pour fabriquer en continu des pastilles sphériques (dont la rigidité est assurée par capillarité) à partir d'une poudre et d'un liquide. Ce dispositif ne comporte aucune opération de séchage ou de traitement. Outre son utilisation industrielle (agglomération de fines particules, la pastilleuse permet également de donner aux fines poudres, gênantes du point de vue environnemental, une forme facilitant leur traitement et leur élimination. Avantages: toutes les pastilles sont de taille égale, ce qui évite ainsi le recyclage, donc aucun tamisage ou broyage; ainsi, on ne fabrique que la quantité nécessaire de pastilles aux dimensions voulues; aucun germe cristallin n'est utilisé. On peut donc fabriquer des pastilles avec des substances antérieurement difficiles à traiter; la structure homogène des pastilles permet ainsi de réduire grandement la fragmentation thermique ou le broyage mécanique. Le dispositif est compact (de l'ordre de 1 pied cube par 2 000 tonnes annuellement de solides de densité 4,0). En outre, le passage de l'échelle de laboratoire à l'échelle de production nécessite seulement un simple calcul arithmétique; l'appareil est de conception simple et les conditions de fonctionnement sont peu rigoureuses. Ainsi, les coûts d'investissement, de l'énergie nécessaire à son fonctionnement et de l'entretien devraient être bas.

### **Perfectionnement de la sécheuse/297**

La sécheuse mise au point à l'Université de Waterloo est la première qui combine le séchage par micro-ondes au séchage à l'air chaud avec un rendement très élevé et un temps de séchage minimal. Les sécheuses classiques ont un rendement très faible et nécessitent habituellement un long temps de séchage. Le chauffage par micro-ondes est interne de nature; l'énergie pénètre le linge et l'assèche de l'intérieur avec une efficacité maximale. Ainsi, l'humidité est extraite plus rapidement et peut être emportée par une quantité d'air chaud beaucoup plus faible que celle requise dans les sécheuses classiques. L'utilisation de l'énergie des micro-ondes dans une sécheuse classique a été éprouvée pour nombre de produits comme le grain, le bois et même le pain. Elle réduit normalement le temps de séchage de 50 à 60 % et exige moins du dixième de la quantité d'air chaud requise dans une sécheuse classique, facteur très important si l'air doit être épuré avant d'être retourné dans l'atmosphère. Elle élimine en outre nombre d'effets indésirables dus aux hautes températures tels que les fissures thermiques, les rétrécissements excessifs, la

degradation of qualities and others. This combination dryer is most suitable for drying materials that are heat sensitive, and/or hygroscopic with strong bonding to the moisture. Moreover, it has distinctive advantages over the conventional dryer if the exhaust gas must be treated to remove harmful products resulting from the drying process since only a small fraction of gas will be needed in the microwave dryer.

### **The C-MHS Design and Flow Contraction Retrofit/297**

The C-MHS Design is a new geometry for either rectangular or circular clarifiers which provides for acceleration of the clarified stream just before the outlet weir. A conventional circular or rectangular clarifier can be converted to the C-MHS Design by addition of a baffle which contacts the flow just upstream of the overflow. Modification of the sludge collecting system, however, will be required. The simple, low cost baffles extend clarifier capacity sufficiently that capital outlay for new clarifiers can be postponed often for many years. Laboratory scale experiments show that the C-MHS Design provides about an 8% greater recovery of solids than in a conventional rectangular clarifier of equal surface area. This can correspond to an increase of clarifier capacity of 30 to 50%. For a circular geometry, the C-MHS Design increases solids recovery by 6%. Again, the capacity increase is substantial: the order of 25% at the same solids recovery level. The new design results in 20 to 25% saving in clarifier volume. Not only is the performance better, but the clarifier should cost less. In applications where clarification is used as part of a waste treatment sequence, reductions of solids discharged over the effluent weirs ranging from 10 to 50% have been achieved in the laboratory.

dégradation des tissus, etc. Cette sécheuse combinée convient surtout au séchage des tissus thermosensibles et(ou) hygroscopiques et fortement liés à l'humidité. Elle est aussi nettement supérieure à la sécheuse classique, advenant que les gaz d'échappement doivent être épurés des produits nocifs provenant du séchage, puisque qu'elle ne fait appel qu'à une faible quantité de gaz.

### **Dispositif de rattrapage pour la contraction de l'écoulement — conception C-MHS/297**

La conception C-MHS est une nouvelle géométrie adaptable aux décanteurs rectangulaires et circulaires. Elle accélère le passage de l'eau clarifiée juste en amont du déversoir. La conception C-MHS s'incorpore à un décanteur rectangulaire ou circulaire grâce à l'adjonction d'une chicane qui restreint l'écoulement en amont du trop-plein. Il est cependant nécessaire de modifier le réseau collecteur de boues. Les chicanes simples et économiques augmentent suffisamment la capacité des décanteurs pour qu'on puisse retarder, souvent pour de nombreuses années, les dépenses d'investissement pour l'achat de décanteurs supplémentaires. Les expériences en laboratoire, à l'aide de maquettes, indiquent que grâce à la conception C-MHS, la récupération des solides est de 8% plus grande que dans le cas d'un décanteur rectangulaire ordinaire de même surface. Cela équivaut à augmenter de 30 à 50% la capacité du décanteur. Si le décanteur est circulaire, l'amélioration est de 6%, ce qui représente une augmentation de capacité de 25%. Non seulement le rendement est meilleur, mais le décanteur devrait être moins dispendieux. Dans les installations où la décantation est une étape de l'épuration des eaux usées, les expériences de laboratoire ont révélé que le relâchement de solides dans les déversoirs est réduit de 10 à 50%.

## Bibliography

### The Waterloo Centre for Process Development

The services of the Waterloo Centre for Process Development are available to companies and individuals (e.g., inventors) in the academic, public and private sectors who require assistance to exploit or commercially demonstrate a new process or product through the use of a pilot plant model. Advanced laboratory services and facilities, independent reviews and studies, and application of new knowledge, techniques or processes are provided. The Centre encourages and facilitates the commercial exploitation of new or improved processes by offering the following services:

1. assessment of the potential of new or improved processes or products.
2. provision of an industrial liaison service to inventors and companies to facilitate the commercial exploitation of their processes.
3. attracting industry to commercial exploitation of technology and processes acquired and owned by the Centre.
4. the management and co-ordination of research and development projects.
5. undertaking the design, development, construction and operation of pilot plants to demonstrate probable operating performance of full-scale plants employing new or improved processes, and to accumulate design data for the commercial exploitation of the process.
6. training specialists to become technical experts on specific processes.
7. employment of undergraduate and graduate students in connection with specific new processes (with the subsequent possible transfer of these experts to industry with the developed technology).

Projects can be undertaken on a contract/fee basis or on a cost-shared basis. Future royalty and fee revenues coming from the commercial exploitation of the process would be shared on a pre-determined ratio by the proponent and the Centre. Cost shared projects could include processes currently available for commercial exploitation by the Centre as well as new proposals being submitted to it. Projects and proposals having commercial potential may be submitted to the Centre for evaluation and review. Submitted information and data will be treated as commercially confidential.

The University through its Office of Research Administration also provides a comprehensive contract research service to industry and business through the WATERLOO RESEARCH INSTITUTE and assistance services to inventors through the INVENTORS ASSISTANCE PROGRAM.

The 16th Annual Patent Institute Seminar will be held in Friendship Library on the Florham-Madison Campus on Saturday, March 21, 1981. The seminar is annually redesigned to meet the needs of scientists, technical managers, businessmen and those whose work is involved in or related to patents. In today's economy, where cost-saving is so important, one of the primary concerns of the businessman can be accomplished by attending this Program,

## Bibliographie

### Le Waterloo Centre for Process Development

Le Waterloo Centre for Process Development offre ses services aux sociétés et personnes (aux inventeurs par exemple) des secteurs universitaire, public et privé qui ont besoin d'aide pour exploiter un nouveau procédé ou produit ou encore pour en faire la démonstration commerciale au moyen d'un modèle d'usine pilote. Le centre fournit des services et des installations de laboratoire perfectionnés, des services d'études et d'analyse indépendants et des possibilités d'application de nouvelles connaissances et techniques ou de nouveaux procédés. Il encourage et facilite l'exploitation commerciale de procédés nouveaux ou améliorés en offrant les prestations suivantes:

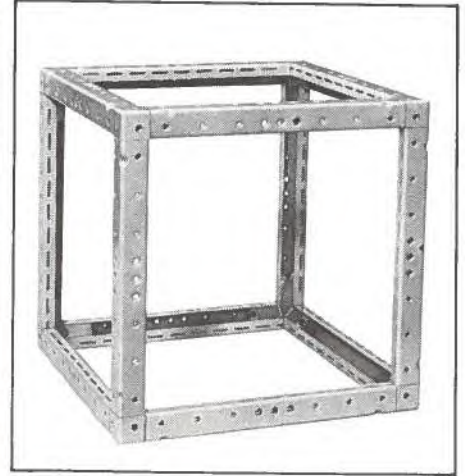
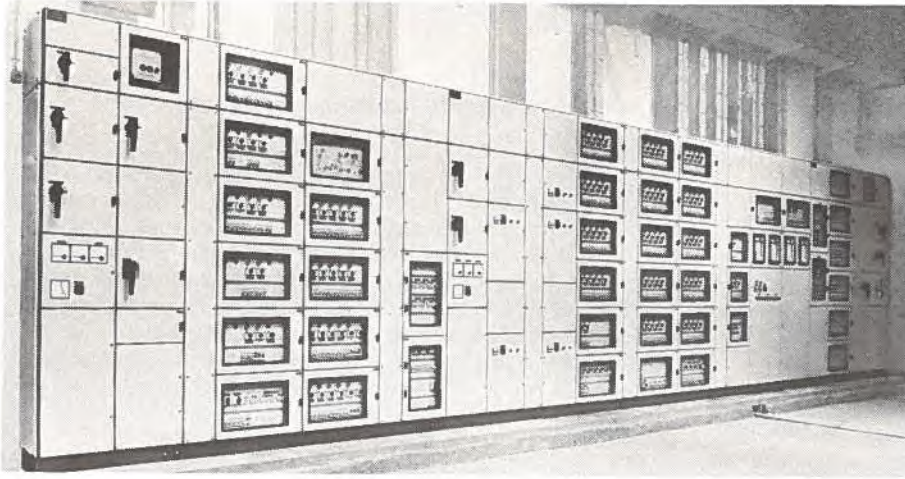
1. évaluation du potentiel de procédés ou produits nouveaux ou améliorés;
2. service de liaison industrielle entre les inventeurs et les sociétés pour faciliter l'exploitation commerciale de leurs procédés;
3. sensibilisation de l'industrie à l'exploitation commerciale de la technologie et des procédés acquis par le Centre;
4. gestion et coordination de projets de recherche et de développement;
5. conception, élaboration, construction et exploitation d'usines pilotes pour démontrer la performance probable d'usines réelles utilisant les procédés nouveaux ou améliorés et pour obtenir des données d'études sur l'exploitation commerciale des procédés;
6. formation de spécialistes pour en faire des experts techniques bien familiarisés avec les procédés;
7. embauche d'étudiants de premier cycle et diplômés pour travailler aux procédés (et transfert ultérieur possible de ces experts à l'industrie avec la technologie développée).

Les projets des inventeurs peuvent être confiés au Centre à titre de contrat ou selon une formule à coûts partagés, les droits et honoraires que pourrait rapporter le procédé étant alors partagés selon un ratio établi par le proposeur et le centre. La formule à coûts partagés pour s'appliquer à des procédés déjà acquis par le centre ou aux nouveaux procédés proposés. Tout projet ou proposition offrant des possibilités commerciales peut être présenté au centre qui en fera l'étude et l'évaluation. Les demandes sont traitées confidentiellement.

Par l'entremise de son Office of Research Administration, l'Université de Waterloo offre aussi des services contractuels de recherches à l'industrie et au secteur des affaires en collaboration avec le Waterloo Research Institute, et des services d'aide aux inventeurs grâce à son Inventors Assistance Program.

## Seminar

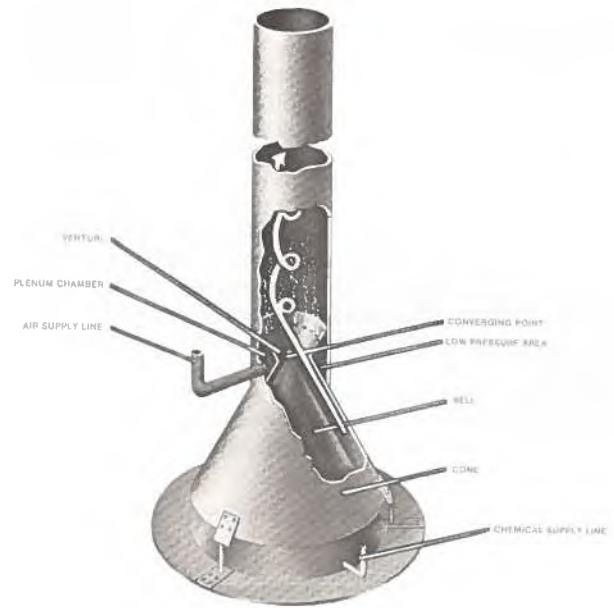
since new methodology and procedures, as well as recent legislation, are specialized, discussed and analyzed by the staff of highly-regarded attorneys and practitioners from the field of patent law. Additional information may be obtained from: Mr. Joseph L. Tramutola, Jr., Director, 1981 Patent Institute, Florham-Madison Campus, Fairleigh Dickinson University, Madison, New Jersey 07940.

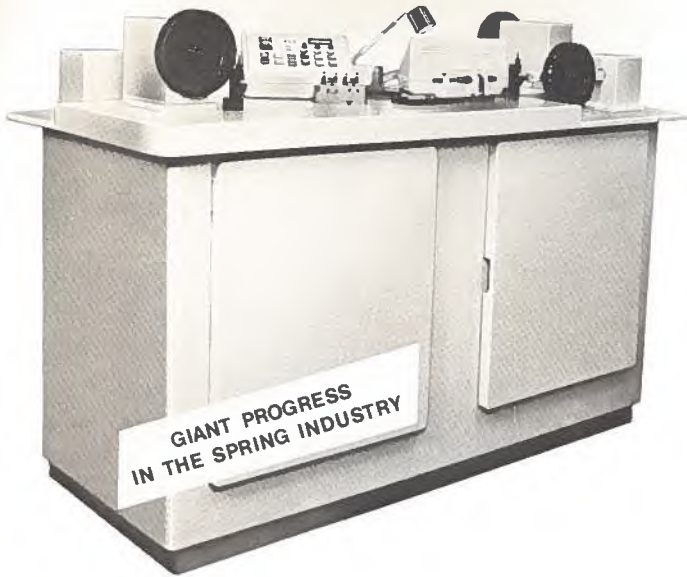


Cubic Modular System (See page 4.) ▲  
 Système modulaire CUBIC (Voir page 4.)

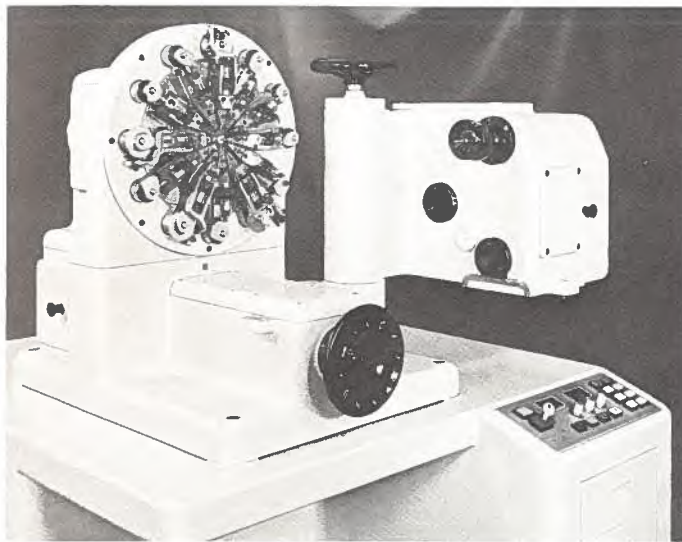
Siltation Abatement System (See page 5.) ▶  
 Système de réduction de l'envasement (Voir page 5.)

Stabilizing Mattress (See page 4.) ▼  
 Matelas stabilisateur (Voir page 4.)

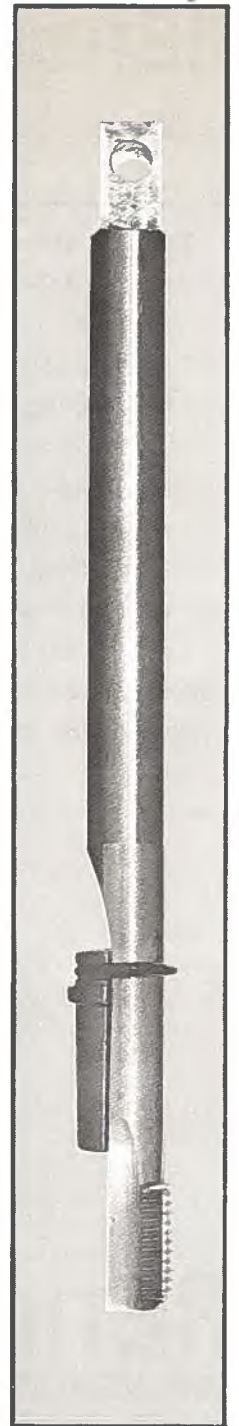




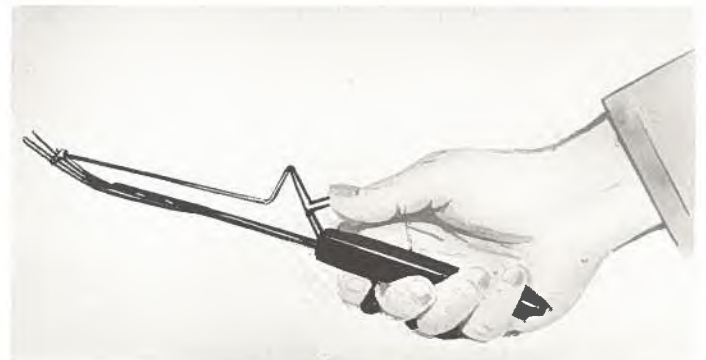
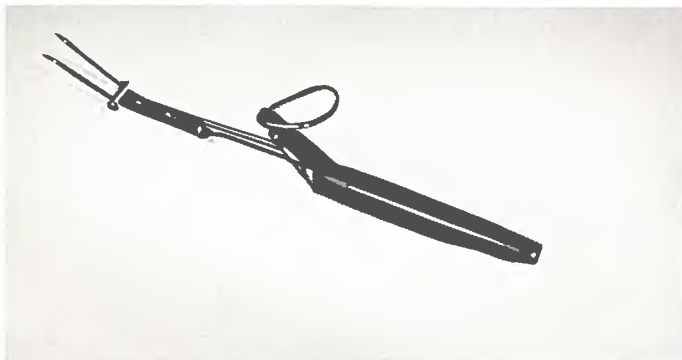
- ▲ Automatic Spring Manufacturing and Wire Straightening Machines (See page 5.)  
Machines pour la fabrication des ressorts et pour le redressage du fil (Voir page 5.)
- ▼



- ▶ Thread Restoring Tool (See page 9.)  
Taraud correcteur (Voir page 9.)



- ▼ Tine Cleaning Fork (See page 10.)  
Fourchette autonettoyante (Voir page 10.)
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