new products bulletin

bulletin de produits nouveaux

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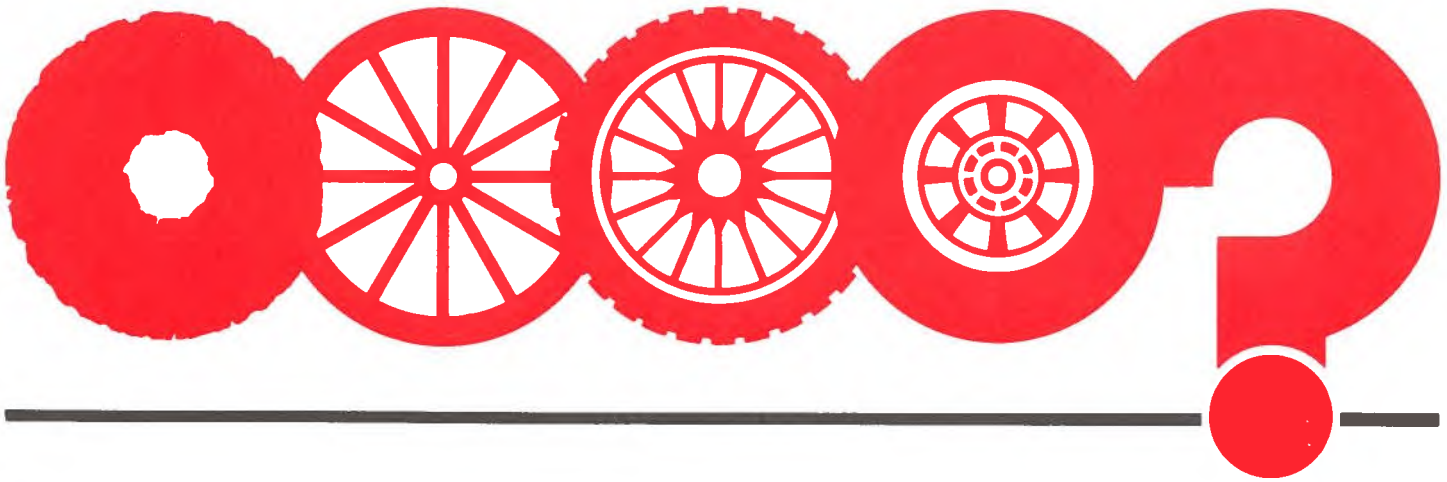


new products bulletin

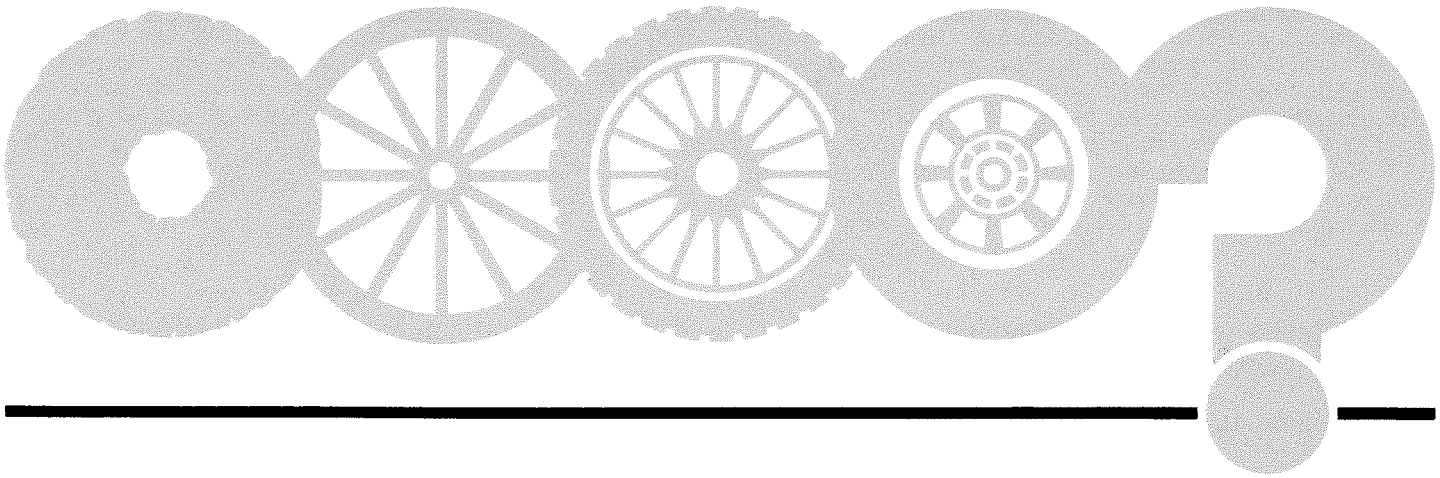
bulletin de produits nouveaux

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

Steam Press for Particleboard/300

The unique platens of this press allow low pressure steam to be passed through the mat resulting in fast heating of the center and reduced press time and steam consumption. Particleboard and waferboard made in this press exhibit improved dimensional stability and reduced water absorption. Write: Case 4994, 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.

Retrofitting Domestic Oil Furnaces with a High Efficiency Air Head/300

A new design of air head specifically designed for easy retrofitting to conventional domestic oil burners. It offers the following advantages:

— High efficiency combustion resulting in greatly reduced fuel costs. A CO_2 level of 13%-14% is easily maintained.
— Exceptionally clean starts, stops and operation so that the furnace heat exchanger remains clean for 3 or 4 heating seasons in a row, resulting in reduced maintenance costs.
— A unique heat shield in front of the nozzle prevents cracking of oil in the nozzle greatly extending nozzle life and further reducing maintenance costs.

To date, three designs of this head have been developed to work with 0.4, 0.5 and 0.65 USGPH nozzles. Small nozzles were developed first because the greatly increased efficiency of combustion permits a significant decrease in nozzle size for a given furnace. It is expected that, with this air head, savings in fuel and maintenance costs will result in a 30%-40% reduction in the cost of heating an average home. Write: Case 6715, 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.

Laser Triggered High Voltage Rail Gap Switch/300

The laser-triggered high voltage rail gap switch includes two parallel electrodes in a high pressure environment of SF_6 and Ar. The one electrode may have a knife edge cross

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

Presse à vapeur pour panneaux de particules/300

Les platines inédites de cette presse permettent le passage de la vapeur basse pression à travers du plateau, provoquant ainsi un réchauffement central rapide et réduisant le temps de pressage et la consommation de vapeur. Les panneaux de particules et de copeaux ainsi fabriqués sont caractérisés par une meilleure stabilité dimensionnelle et une absorption d'eau moins marquée. Écrire: Cas 4994, 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.

Déflecteur d'air à rendement amélioré pour installation sur les chaudières à mazout domestiques existantes/300

Un déflecteur d'air de conception nouvelle spécialement prévu pour s'installer facilement sur les brûleurs à mazout domestiques ordinaires. Ses avantages sont les suivants:

— Une combustion très efficace, qui permet de réduire nettement les frais de combustible; on peut maintenir facilement une concentration de CO_2 de 13% à 14%.
— Un fonctionnement exceptionnellement propre, y compris au démarrage et à l'arrêt: l'échangeur de chaleur de la chaudière se passe de nettoyage pendant 3 ou 4 saisons de chauffage de suite, d'où réduction des frais d'entretien.
— Un écran thermique spécial placé devant la buse empêche le craquage du mazout avant sa pulvérisation, ce qui allonge de beaucoup la vie utile de la buse et réduit d'autant les frais d'entretien.

On a conçu jusqu'ici trois déflecteurs de ce type en fonction de buses de 0,4, 0,5 et 0,65 gal (É.-U.)/min. Des petites buses ont été mises au point en premier parce que l'efficacité considérablement accrue de la combustion permet de réduire sensiblement le calibre de la base pour une chaudière donnée. On estime que ce déflecteur d'air peut entraîner, pour une maison moyenne, des économies de chauffage de 30% à 40% (combustible et entretien). Écrire: Cas 6715, 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.

Interrupteur haute tension à sectionnement de rail déclenché par laser/300

Cet interrupteur se caractérise par deux électrodes parallèles noyées dans un mélange de SF_6 et d'Ar sous haute pression. La section d'une électrode est en lame de cou-

section and the other electrode a circular cross section. A pulsed UV laser directs a coherent beam parallel to the electrodes to initiate multichannel breakdown in the gap between the electrodes. This breakdown occurs at a fixed time delay after the laser pulse. This breakdown is enhanced by including an organic additive such as fluorobenzene or tri-n-propylamine in the gas mixture. Write: Case 7171, 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.

teau, celle de l'autre est circulaire. On projète un faisceau cohérent de laser à impulsions UV parallèlement aux électrodes pour provoquer le claquage entre les électrodes. Ce claquage se produit à un intervalle de temps fixe après l'impulsion laser. On favorise le claquage en ajoutant au mélange gazeux un additif organique tel que le fluorobenzène ou le tri-n-propylamine. Écrire: Cas 7171, 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.

Coating Process for Strip Material on One Side Only/300

American company seeks joint venture partners in Canada willing to carry out development work for a unique method and apparatus for treating only one side of a strip of material which could be used in a number of strip processing applications such as one side galvanizing of sheets. Covered by U.S. Patent No. 4,178,397, this process offers a potential for low cost conversion of conventional two side hot dip coating facilities, and simple operations with no moving parts. The firm is offering test data, conceptual layout and design criteria to partners who would consider investing in further research, scale up and pilot operations. The method and apparatus utilizes a pressurized foil bearing. The strip passes around the foil bearing while contacting a bath of liquid material. By controlling the pressure of the pressurizing medium used within the foil bearing, the strip is supported on a film of the pressurizing medium and the liquid material is prevented from contacting the side of the strip adjacent the foil bearing while the other side of the strip is in contact with the liquid material. Preferably, the pressurizing medium is at about the same temperature as the liquid material. Furthermore, a non-oxidizing gas may be used as the pressurizing medium to protect the side of the strip adjacent the foil bearing from oxidizing. Write: Mr. A.K. Eichler, Bethlehem International Engineering Corporation, Bethlehem, Pennsylvania 18016 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113, U.S.A.

Procédé de revêtement unilatéral de matériau en bande/300

Une compagnie américaine cherche au Canada des partenaires prêts à travailler au développement d'un procédé et d'une installation uniques pour le revêtement unilatéral d'une bande de matériau (brevet É.-U. 4 178 397). Cette installation pourrait être utilisée dans un certain nombre de procédés de traitement de matériau en bande, tels que la galvanisation unilatérale de tôles. Le procédé, caractérisé par des opérations simples sans pièces mobiles, permet la transformation peu coûteuse d'installations classiques de revêtement bilatéral par bain chaud. La firme offre à ceux qui sont intéressés à investir dans la recherche ultérieure, l'amélioration et la production d'essai les résultats des essais, la disposition initiale de l'installation et les critères de conception. Le procédé nécessite un masque à coussin pneumatique. La bande passe autour du masque, qui est partiellement immergé dans un bain de liquide. Des trous pratiqués dans le masque permettent au gaz mis en pression à l'intérieur du masque de produire un mince coussin pneumatique sur lequel passe la bande. Par conséquent, le liquide ne peut atteindre le côté de la bande qui passe sur le coussin pneumatique tandis que l'autre côté est en contact avec le liquide. Le gaz du coussin devrait être à peu près à la même température que le liquide du bain. D'ailleurs, on peut utiliser un gaz non corrosif pour empêcher la corrosion du côté de la bande qui passe sur le coussin pneumatique. S'adresser à Mr. A.K. Eichler, Bethlehem International Engineering Corporation, Bethlehem, Pennsylvanie 18016 et faire parvenir une copie de votre correspondance initiale au Consulat du Canada, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113, É.-U.

Thermoshrinkable Tubes with Elastic Memory/300

Canadian agent for a Polish licensing organization offers a Canadian company original technology, design of manufacturing facilities, training of personnel and technical assistance for thermoshrinkable tubes. Tubes, ranging in thickness from 0.6 to 132 mm, can be shrunk to assume dimensions of element inside tube to form a tightly fitting layer with insulating, anti-corrosive, dielectric and joining characteristics. Shrinkage is 50 to 70 percent on the diameter and a few percent longitudenally. Tubes can be used in cable boxes and heads, repairing cable insulation, insulating connections of groups of conductors and anti-corrosion sleeves. Write: Dalimpex Limited, 4200 Poirier Boule-

Tubes thermorétractables à mémoire élastique/300

Une agence canadienne représentant un organisme polonais chargé de la concession de licences offre aux compagnies canadiennes les connaissances techniques permettant la fabrication de tubes thermorétractables en plus de fournir les plans des installations de production, la formation professionnelle et l'assistance technique pertinentes. Les tubes, dont l'épaisseur peut varier entre 0,6 à 132 mm, peuvent se contracter au diamètre intérieur d'autres tubes de façon à former des raccords serrés qui sont isolants, à l'épreuve de la corrosion, diélectriques et qui assurent un bon joint. La contraction fait varier le diamètre des tubes de 50 à 70%, et leur longueur, de quelques pour cent seule-

vard, St. Laurent, Quebec H4R 2C5 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.

ment. Les tubes peuvent trouver une utilisation dans les boîtes de jonction et les bornes, dans la réparation des câbles isolés et celle de connexions isolantes de faisceaux de conducteurs et de gaines anticorrosion. Écrire à Dalimpex Limited, 4200 boulevard Poirier, St-Laurent, (Québec) H4R 2C5 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.

Touch Control Panel/300

American company offers worldwide non-exclusive licensing rights to a Canadian company for the manufacture and sale of a touch control panel. The panel assembly fits a standard 38 cm cathode-ray tube. Adding this panel to a CRT which produces a pictorial display, allows the user to communicate directly with the computer simply by touching the panel. It has application for example in 1) burglar alarm systems where the problem is displayed on the face of the CRT and the operator responds by actually selecting the proper action by touching the corresponding area of the display; 2) a fire alarm and extinguishing system react the same way; 3) educational systems that require responses from the student; 4) information retrieval systems that provide interaction with the operator; 5) medical diagnostic systems that optimize the interaction between the doctor and the medical information display; and, 6) entertainment systems that require interaction between the machine display and the players. The license includes the documentation (specifications, quality control standards, drawings, etc.) necessary to properly manufacture and assemble the panels. A front end payment plus a royalty per unit made or sold is required. (See illustration page 43.) Write: Control Data Worldtech, 474 Concordia Avenue, St. Paul, Minnesota 55103, U.S.A. and send a copy of your initial correspondence to Canadian Consulate, 15 South Fifth Street, Minneapolis, Minnesota 55402, U.S.A.

Panneau de commande à effleurement/300

Une firme américaine offre à une société canadienne une licence de fabrication et de vente mondiale non exclusive couvrant un panneau de commande à effleurement. Le panneau s'adapte sur l'écran d'un tube à rayons cathodiques normalisé de 38 cm. L'addition de ce panneau à un écran cathodique d'affichage permet à l'usager de communiquer directement avec l'ordinateur en effleurant le panneau transparent installé sur l'écran du tube. Voici plusieurs exemples d'usage du panneau: 1) Systèmes d'alarme antivol: le problème est affiché sur l'écran et l'opérateur réagit en choisissant l'action voulue et en touchant légèrement la zone correspondante. 2) Systèmes de détection d'incendie avec extinction fonctionnant de la même manière. 3) Systèmes éducationnels qui demandent des réponses de la part des étudiants. 4) Systèmes de collection des données qui offrent un dialogue avec l'opérateur. 5) Systèmes de diagnostiques médicaux qui optimisent l'interaction entre le docteur et les données affichées. 6) Systèmes de jeux électroniques qui demandent une interaction entre les joueurs et l'écran de présentation de la machine. Le brevet comprend tous les documents nécessaires à la fabrication (spécifications, normes de contrôle de la qualité, dessins, etc.). Les conditions financières sont: un paiement forfaitaire de départ plus une redevance fixe par appareil fabriqué ou vendu. (Voir l'illustration page 43.) Écrire à: Control Data Worldtech, 474 Concordia Avenue, St-Paul, Minnesota 55103, U.S.A. et faire parvenir une copie de votre correspondance initiale au Consulat canadien, 15, South Fifth Street, Minneapolis, Minnesota 55402, É.-U.

Furniture/300

German manufacturer of an interior decorating system of wall furniture wishes to contact a Canadian firm interested in obtaining licensing rights for Canada. The system is suitable for any room in the home or office and consists of matching pieces such as desks, bedside tables, bars with built-in refrigerators, stereo cabinet and pullout shelves for video equipment, etc. Classic lines have been incorporated into the system and through the use of variable width friezes, a range of ceiling heights may be accommodated. Canadian licensee must have the necessary manufacturing equipment and an established sales organization. Write: Dr. E. Rockenbauer, Interform Einrichtungs-Ges.m.b.H., Dr.-Karl-Lueger-Platz 4, 1010 Wien, Austria and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Luegerring 10, 1010 Vienna, Austria.

Mobilier/300

Un fabricant allemand d'éléments décoratifs muraux désire entrer en contact avec une entreprise canadienne intéressée par les droits d'exploitation sous licence. Ces éléments modulaires conviennent pour les pièces d'une maison ou pour un bureau. Ils se composent de meubles assortis comme des bureaux, des tables de nuit, des bars avec réfrigérateur incorporé, des meubles pour chaîne stéréo, des tablettes à coulisse pour équipement vidéo, etc. De lignes classiques, il peuvent être adaptés à différentes hauteurs de plafond grâce à l'usage de frises de diverses largeurs. Le futur titulaire de licence doit posséder le matériel de fabrication nécessaire et un service ventes bien établi. S'adresser à Dr. E. Rockenbauer, Interform Einrichtungs-Ges.m.b.H., Dr.-Karl-Lueger-Platz 4, 1010 Vienne, Autriche et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Luegerring 10, 1010 Vienne, Autriche.

Material Handling/300

American company offers the manufacturing and marketing rights in Canada on the structural equipment for its Quik Pac® order picking system. The system increases order picking speed and accuracy by the use of gravity flow racks and Nestier® plastic containers. These racks shorten the order picking process by permitting 1) easy access to, and restocking of, the items; 2) more accurate order picking; 3) less damage; 4) labour saving. The racks also save floor space by reducing the frontage area, are infinitely adjustable at any point on the vertical frames, incorporate the Rolla-Trak® design and, due to their high strength, provide maximum product density. (See illustration page 43.) Write: Midland-Ross Corporation, Material Handling Division, 10605 Chester Road, Cincinnati, Ohio 45215 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113, U.S.A.

Matériel de manutention/300

Une compagnie américaine offre les droits de fabrication et de commercialisation pour le Canada du système de triage sur rayonnage Quick Pac® . Ce système augmente le rythme et la précision du triage grâce aux rayons à distribution par gravité et aux bacs en plastique Nestier® qu'il utilise. Ces rayons accélèrent les opérations de triage: 1) en facilitant l'accès à la marchandise et son restockage; 2) en permettant un triage plus précis; 3) en prévenant les dégats; 4) en économisant la main-d'oeuvre. Les rayons rendent également possible l'utilisation d'une surface plus petite en permettant de réduire la face d'accès. Ils sont munis du système Rolla-Trak®, peuvent être réglés à toutes les hauteurs le long des longerons et procurent une densité de stockage maximale à cause de leur grade résistance. (Voir l'illustration page 43.) Écrire à: Midland-Ross Corporation, Material Handling Division, 10605 Chester Road, Cincinnati, Ohio 45215 et faire parvenir une copie de votre correspondance initiale au Consulat canadien, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113, É.-U.

Roll Up Shutters/300

French manufacturer of roll up shutter accessories offers the licensing rights to a Canadian company to assemble its metal roll up shutters using its accessories and manufacturing process. The externally-mounted shutters are controlled from inside the building and provide security, energy conservation and protection from the weather. Popular in Europe for many years, these shutters are claimed to be gaining popularity in North America. Sales in the United States in 1979 amounted to 2,000,000. FF C.I.F. They are not sold in Canada. Cutting and assembly of accessories do not require special tools. (See illustrations page 44.) Write: Acmex International, 28, rue de la République, 25000 Besançon (France) and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 35 Avenue Montaigne, 75008 Paris, France.

Volets roulants/300

Un fabricant français d'accessoires de volets roulants offre à une entreprise canadienne les droits sous licence pour l'assemblage de ses volets roulants métalliques à l'aide de ses accessoires et procédés de fabrication. Montés à l'extérieur et commandés de l'intérieur, les volets offrent sécurité, économie d'énergie et protection contre les intempéries. Ces dispositifs sont fort utilisés en Europe depuis de nombreuses années, et semblent devenir de plus en plus populaires en Amérique du Nord. En 1979, les ventes aux États-Unis ont atteint 2 000 000 FF (prix C.I.F.). Les volets ne sont pas vendus au Canada. Le découpage et le montage des accessoires n'exigent aucun outil spécial. (Voir les illustrations page 44.) Écrire à: Acmex International, 28, rue de la République, 25000 Besançon (France) et faire parvenir une copie de votre correspondance initiale à la Division Commerciale, Ambassade du Canada, 35, Avenue Montaigne, 75008 Paris, France.

Method and Apparatus for Measuring the Speed of a Rotating Shaft/300

American company offers the licensing rights to a method and apparatus for measuring the speed of a rotating shaft which has been produced in its Corporate Research and Development Center. The inventor is available for consultation if necessary. The apparatus consists of a pair of polyphase electrical machines with interconnected rotor windings which are mechanically coupled together and driven by a rotating shaft. One stator winding is excited by a fixed carrier frequency, and the output frequency at the other stator winding is proportional to shaft speed. The output signal frequency is not zero at zero shaft speed and is unique for both directions of shaft speed. Brushes, slip rings, and electrical connections to the rotating shaft are not required. Write: Mr. M. Keith Burk, Technology Transfer Services, General Electric Co., Corporate Research and Development, 120 Erie Blvd., Schenectady, New York 12305 and send a copy of your initial correspondence to Cana-

Méthode de mesure du régime d'un arbre tournant/300

Une société américaine offre les droits de licence d'une méthode et d'un dispositif découlant d'un procédé pour mesurer le régime d'un arbre tournant produits dans son centre de recherche et de développement (Corporate Research and Development Center). L'inventeur peut répondre aux questions des intéressés. Le dispositif se compose d'une paire de machines électriques polyphasées dont les enroulements rotoriques sont interconnectés. Les arbres de ces machines sont solidaires l'un de l'autre et entraînés par un autre arbre tournant. Un enroulement statorique est excité par une onde porteuse de fréquence fixe; la fréquence du courant de sortie de l'autre enroulement statorique est proportionnelle au régime de l'arbre. Cette fréquence n'est pas "zéro" quand l'arbre est immobile; de plus, pour un régime donné en sens horaire, elle est différente de celle produite au même régime en sens antihoraire. Aucun balai, aucune bague collectrice et aucun

dian Consulate, One Marine Midland Center, Suite 3550, Buffalo, New York 14203, U.S.A.

Tire Clamp/300

West German firm offers a Canadian company the manufacturing and North American marketing rights to the SETRAC™ tire grip clamp for mounting on a universal range of different sized tires. It is used on military or private vehicles to aid in crossing impassable terrain such as sandy soil, mud, gravel, snow, extreme grades or to get a vehicle clear without outside help when bogged down. Currently manufactured in Germany and South Africa the patented device operates as a skid chain, is simply constructed of heavy, hardy material, is easily and rapidly mounted and requires little storage space. (See illustrations page 43.) Write: Mr. Hanns W. Luecke, Zugspitzstrasse 67, D-8104 Grainau, West Germany and send a copy of your initial correspondence to Canadian Consulate General, Immermannstrasse 3, 4 Duesseldorf, West Germany.

Heating and Cooking Appliances/300

Austrian company offers the manufacturing and exclusive North American marketing rights to a Canadian company for the "CELUS® " slow burning stoves and ranges which use wood and other solid fuels. The wood stoves with genuine ceramic tiles feature: a secondary heating surface for maximum continuous combustion; a special shaker grate for burning wood (patent applied for); a long flame flue for maximum heat storage; an extra large loading door for convenient operation; an opening for the removal of fly ash in damper; a cinder-proof floorplate with removable ashpan guard; an additional ash catcher under the ashpan; draught control and shaking device at the top; a special loading door flap (two positions). The technically advanced ranges come in a wide choice of sizes, which are tastefully styled, have many special features, i.e., cupboard type shell, or rustic styling with a broad frame; add on ranges for gas or electric ranges; and come in various sizes ideal for heating new homes, small apartments or rugged domestic styles for a farm. They have a steel worktop and a cast iron fast heating plate; enamelled double wall body and parts (water basin, oven door, baking sheet, etc.); removable fuel drawer which moves on guides and can take up to 35 cm logs; convertible grate; loading door flap; ash catcher under ashpan door; built-in oil tank with safety oil valve; electrical ignition; flue connections at back or side; firebrick lining and asbestos-gasketed cooktop and doors, etc. (See illustrations page 44.) Write: Mr. Jos. Schaller, Dipl. Ing. Patzelt, Rotensterngasse 21, A-1020 Wien, Austria and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Luegerring 10, 1010 Vienna, Austria.

raccord électrique sur l'arbre ne sont nécessaires. Écrire à: M. Keith Burk, Technology Transfer Services, General Electric Co., Corporate Research and Development, 120 Erie Blvd., Schenectady, New York 12305 et faire parvenir une copie de votre correspondance initiale au Consulat du Canada, One Marine Midland Center, Suite 3550, Buffalo, New York 14203, É.-U.

Aide à la traction/300

Une firme ouest-allemande offre à une compagnie canadienne les droits exclusifs de fabrication et de mise en marché en Amérique du Nord de son aide à la traction SETRAC™ adaptable à une gamme universelle de pneus de différentes grosseurs. Il permet à des véhicules civils et militaires de traverser des terrains infranchissables: sols sablonneux, boueux, gravelés, enneigés ou terrain en très forte pente, et de se dégager d'eux-mêmes s'ils se sont enlisés. Fabriqué d'un matériau robuste et épais, ce dispositif breveté, présentement fabriqué en Allemagne et en Afrique du Sud, agit comme des chaînes antidérapantes. Il se pose rapidement et n'exige que peu d'espace de rangement. (Voir les illustrations page 43.) Écrire à: M. Hanns W. Luecke, Zugspitzstrasse 67, D-8104 Grainau, Allemagne de l'Ouest et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, Immermannstrasse 3, 4 Duesseldorf, Allemagne de l'Ouest.

Appareils de chauffage et de cuisson/300

Une compagnie autrichienne offre les droits de fabrication et les droits exclusifs de commercialisation en Amérique du Nord à une compagnie canadienne sur les poêles et cuisinières à feu continu "CELUS® " qui utilisent le bois et d'autres combustibles solides. Les cuisinières à bois avec carreaux de céramique véritable comportent les caractéristiques suivantes: surface de chauffe secondaire pour une combustion aussi continue que possible; grille à secousses spéciale pour la combustion du bois (brevet demandé); long conduit de flammes pour un stockage maximum de la chaleur; porte de chargement extra grande pour plus de commodité; ouverture pour l'enlèvement des cendres du registre; plaque de parquet incombustible avec plaque de garde amovible pour le cendrier; garde-cendres additionnel sous le cendrier; commande de tirage et dispositif à secousses sur le dessus; abattant spécial de la porte de chargement (deux positions). Très perfectionnés, les poêles "CELUS® " sont disponibles en de nombreux modèles de dimensions variées. Conçus avec goût, ils comportent de nombreuses caractéristiques particulières: enveloppe donnant l'apparence d'une armoire ou style rustique avec un corps large; parties ajoutables pour cuisinières à gaz ou électriques. Grâce à la grande variété des modèles et des dimensions, ils conviennent aussi bien aux habitations modernes qu'aux petits appartements ou aux fermes (style rustique). Leur plan de travail est en acier et ils comportent également une plaque de fonte pour cuisson rapide; un corps à double parois et des accessoires émaillés (réservoir d'eau, porte de four, tôle à pâtisseries, etc.); un tiroir à combustibles amovible sur glissières pouvant contenir des bûches jusqu'à 35 cm; une grille mobile; un abattant de chargement; un garde-cendres sous la porte du cendrier; un réservoir à mazout incorporé avec robinet de sécurité; un allumage électrique; des raccordements de conduit de flammes à l'arrière ou sur le côté; un chemisage

de briques réfractaires; des portes et un dessus avec joints en amiante, etc. (Voir les illustrations page 44.) Écrire à: M. Jos. Schaller, Dipl. Ing. Patzelt, Rotensterngasse 21, A-1020 Vienne, Autriche et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Luegerring 10, 1010 Vienne, Autriche.

Liquid Medication Dispenser/300

American paramedic inventors offer a Canadian company the licensing rights to their U.S. Patent Number 4,196,730 for a liquid dispenser on which further development is required for the automatic delivery of liquid drugs for use in hospitals (in surgery, trauma, cardiac and emergency rooms or on each floor for floor arrests), medical centers, some physicians' offices and paramedic or ambulance vehicles. The unit cost is estimated at $1,500. to $2,000. It has a transparent frame which houses a rotatable mounting assembly of a plurality of mounted liquid compressible containers with needle discharge outlets and covering caps to block liquid flow. The unit can be controlled so that the mounting assembly is rotated by a motor secured to the frame, and locked into discharge position when a selected container needle is aligned with a discharge passage in the frame. A motor-driven compression drive unit secured to the frame is operated to move a gear rack forward so that a flange secured to the rack engages the end of the liquid container to drive it forward to cause the container needle to puncture its cover cap and also a diaphragm at the frame discharge passage. After the diaphragm is punctured, the flange compresses the liquid in the container through the container needle through the frame discharge passage to connect the passage to a catheter extending to a needle inserted in the body of a patient. Another catheter connects the valve to a bag of dextrose. A wheel is mounted to the frame with a link engaged to a handle operating the valve so that a drive ramp attached to the rack rotates the wheel to move the valve handle simultaneously with forward rack movement to allow discharge of the liquid from the frame passage through the catheter extending to the patient. A scale associated with the frame and with the compression drive unit indicates to the operator how much liquid has been discharged through the needle extending into the patient's body. The rack can be driven rearward so that the wheel can move the valve handle to position the valve to connect the dextrose bag with the needle in the patient. The machine can be programmed to inject smaller doses for children. Other features are planned. Write: Mr. Dennis R. Wilson 39 Sugar Leaf Drive, Saint Charles, Missouri 63301 and send a copy of your initial correspondence to Canadian Consulate General, 310 South Michigan Avenue, 12th Floor, Chicago, Illinois 60604, U.S.A.

Distributeur automatique de médicaments sous forme liquide/300

Des Américains travaillant dans le domaine paramédical offrent à une compagnie canadienne les droits d'exploitation sous licence d'un distributeur de liquides. Ce dispositif est protégé par le brevet américain n° 4 196 730, mais d'autres recherches devront être effectuées sur ce système destiné à être utilisé dans les hôpitaux (bloc opératoire, salles de traumatologie, de cardiologie et salles d'urgence ou à chaque étage en cas d'arrêt cardiaque chez des personnes déjà hospitalisées), dans les centres médicaux, dans certains cabinets de médecins, ainsi que dans les véhicules des unités paramédicales et dans les ambulances. On évalue le coût de ce dispositif à $1,500-$2,000. Son bâti qui est constitué de parois transparentes loge de nombreux contenants compressibles reliés à une aiguille recouverte d'un protège-aiguille. Le tout est monté sur une plaque entraînée par un moteur fixe au bâti. On fait donc tourner cette plaque jusqu'à ce qu'elle soit en position d'injection où on la bloque lorsque l'aiguille du contenant désiré est en face d'un orifice d'injection. Un compresseur actionné par moteur et fixé au bâti permet de faire avancer une crémaillère qui pousse sur l'arrière d'un contenant. L'aiguille perce alors le protège-aiguille et son extrémité traverse un diaphragme dans l'orifice. Le contenant est ensuite comprimé, expulsant par l'aiguille son liquide vers l'orifice, et de là, dans un tube terminé par une deuxième aiguille avec laquelle on pique le blessé. Un autre tube reli la valve à un sac contenant une solution de dextrose. Une roue dentée montée sur le bâti est reliée à une manette permettant d'actionner la valve. Une tige à rainure hélicoïdale fixée à la crémaillère entraîne cette roue pour actionner la valve lorsque la crémaillère se déplace vers l'avant. Le liquide peut alors être administré par le même orifice d'injection. Une graduation permet d'en mesurer la quantité. La crémaillère peut être déplacée dans l'autre direction, ce qui permet alors d'administrer du dextrose au blessé par l'entremise de la même aiguille. On peut régler le dispositif pour obtenir des doses plus faibles (p. ex., pour les enfants). Nous prévoyons perfectionner encore plus cet appareil. Écrire à: M. Dennis R. Wilson, 39 Sugar Leaf Drive, Saint Charles, Missouri 63301 et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, 310 South Michigan Avenue, 12th Floor, Chicago, Illinois 60604, É.-U.

Welding Technique/300

British R&D company offers Canadian heat exchanger manufacturers non-exclusive license agreements for a duration of ten years to operate its patented IRDEX process (Canadian Patent 1,033,198) worldwide. The British firm will provide know-how and training of licensees' staff in return for an initial down payment and royalty payments

Technique de soudage/300

Une société britannique de recherche et de développement offre à des fabricants canadiens d'échangeurs de chaleur, les droits d'exploitation non exclusifs, et ce pour une période de dix ans, de son procédé de soudage IRDEX (brevet canadien 1 033 198), à l'échelle mondiale. La société britannique s'engage à fournir les connaissances tech-

from the second year of the agreement. The IRDEX explosive welding technique, developed by IRD for manufacturing and repairing heat exchangers, allows a much smaller 'stand off' gap between components than other explosive welding techniques. It also saves on boring and machining 'stand off' distances of down to .0125 cm being used when welding tubes to tubeplates, compared with a normal allowance of about half the thickness of the tube wall, which could be .3125 cm. Tapered tubeplate holes need not be machined to obtain a weld. An impactor material is placed between the explosive charge and the two components to be welded. This rapidly accelerates the weld, and so allows the narrower 'stand off' gap. During this process the impactor is burned. In manufacturing heat exchangers, this technique can replace fusion welding or mechanical joining methods such as roller expansion and can increase strength and durability. It has recently been used to re-tube twelve high-pressure water heaters for a British power station, where weld lengths about five times the diameter of the tubes were used. The technique also is suitable for repair work and for plugging faulty tubes. To date the method has been applied to tubes varying in size from 1.55 cm to 11.25 cm outer diameter, with wall thicknesses from .09 cm to .925 cm. Write: International Research & Development Co. Ltd., Fossway, Newcastle upon Tyne, NE6 2YD, England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London, W1X 0AB, England.

niques et la formation du personnel des titulaires de permis moyennant un paiement initial et le paiement des redevances à compter de la deuxième année de l'entente. La technique de soudage par explosion IRDEX, mise au point par IRD pour la fabrication et la réparation des échangeurs de chaleur, permet d'obtenir un jeu beaucoup plus petit entre l'épaulement du joint et le calibre des pièces par rapport aux autres techniques de soudage par explosion. Cette technique permet aussi de réduire à 0,0125 cm l'écart entre épaulement et calibre, en matière d'alésage et d'usinage pour le soudage des tubes à des plaques tubulaires, comparativement au jeu normal égal à la moitié de l'épaisseur de la paroi du tube, et pouvant atteindre 0,3125 cm. Pour obtenir une soudure, il n'est pas nécessaire d'usiner des trous coniques dans la plaque tubulaire. Un matériau d'impact est incorporé entre la charge explosive et les deux pièces à souder. Ce matériau a pour effet d'accélérer le soudage et permet d'obtenir le jeu plus faible entre l'épaulement du joint et le calibre. Au cours de l'opération, le matériau d'impact brûle. Dans la fabrication d'échangeurs de chaleur, la présente technique remplace le soudage par fusion ou de branchement mécanique comme la dilatation des rouleaux et permet d'améliorer la résistance et d'accroître la durabilité des pièces. Cette technique a récemment été utilisée pour le branchement de douze chauffe-eau haute pression dans une centrale énergétique britannique; des tronçons soudés avaient un diamètre environ cinq fois supérieur à celui des tubes. La technique convient aussi à la réparation et au colmatage des tubes défectueux. Jusqu'à présent le procédé a été utilisé pour des tubes dont le diamètre extérieur variait de 1,55 à 11,25 cm et dont l'épaisseur de la paroi variait de 0,09 à 0,925 cm. Écrire à: International Research & Development Co. Ltd, Fossway, Newcastle upon Tyne, NE6 2YD, Angleterre et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Haut-Commissariat du Canada, One Grosvenor Square, Londres, W1X 0AB, Angleterre.

Admixture for Portland Cement/300

Japanese inventor offers a Canadian company the manufacturing and exclusive North American, and Japanese non-exclusive, marketing rights for the production of KADMIX, an admixture for Portland cement which cuts in half the time required for autoclave hardening of concrete, prevents efflorescence, reduces shrinkage to one-tenth of normal, and improves compatibility with glass fibre reinforcement. These features can result in increased productivity, energy saving of 30 to 90 per cent, and more attractive precast concrete. Typical applications are continuous production of large decorative tiles, coloured precast panels, and road repair needing fast cures. KADMIX is sold as a powder or liquid, is prepared from readily available materials, and is protected by a Canadian patent. For further information, evidence of market success in Japan, and licensing arrangements, write: Mr. H. Kokuta, Chigasaki 1020, Chigasaki-shi, Kanagawa-ken, 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.

Adjuvant pour ciment Portland/300

Un inventeur japonais offre à une compagnie canadienne les droits de fabrication et de commercialisation d'un adjuvant. Ces droits sont exclusifs pour l'Amérique du Nord et non-exclusifs pour le Japon. Cet adjuvant, KADMIX, réduit de moitié le temps de durcissement en autoclave, évite l'efflorescence, réduit le retrait à un dixième de la normale, et améliore la compatibilité avec les fibres de verre utilisées pour le renforcement. Ces caractéristiques peuvent augmenter la productivité, réduire de 30 à 90% la consommation d'énergie, et donner un aspect attrayant au béton préfabriqué. Parmi les applications citons la production continue de pavés décoratifs, de panneaux préfabriqués de couleur, et la réparation des routes qui nécessitent une cure rapide. KADMIX est vendu sous forme de poudre ou de liquide. Il est préparé à partir de matériaux actuellement disponibles et protégé par un brevet canadien. Pour toute information, preuve du succès commercial au Japon, et dispositions de licence, écrire à Mr. H. Kokuta, Chigasaki 1020, Chigasaki-shi, Kanagawa-ken, Japon et envoyer une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japon.

Hand Trucks/300

American inventor offers the outright sale of, or a manufacturing and marketing license under his design patent, for a "Roll Ramp" hand truck. The truck suspends an adjustable platform for holding barrels, drums, cans, kegs, boxes or packaged goods, from wheel bearings by an arm assembly which is free to rotate 360° while transporting goods over uneven surfaces and up or down stairs and curbs. The "Roll Ramp" swings up and around the arm as the tire rolls over the apex of the stair or curb and swings back down as the tire completes the climb ready to begin another cycle. This momentum greatly reduces the lifting force and lowest center of gravity ensures easy balancing. When lowering a load, the momentum is absorbed by the swing, the downward pull is greatly reduced, and descending workloads are cushioned against shock. The "Roll Ramp" will not drag downward, and damage to lawns or carpets are eliminated. Other specifications: ideal looped handle for hand protection; 225 kg. capacity strong and rugged welded tubing construction; engineered side frame reinforcement; three vertical main frame members for extra strength; an adjustable can holder may be turned out of the way when handling boxes or bales. (See illustrations page 44.) Write: Mr. Frank Brkic, Manager, Mosaic Enterprises, Inc., 2450 Virginia Avenue, North-West, Washington, D.C. 20037 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Diable de manutention/300

Un inventeur américain propose la vente et la fabrication sous licence de son brevet pour un diable de manutention "Roll Ramp". Ce diable comporte une plate-forme réglable pour la manutention des tonneaux, barils, bidons, boîtes et autres emballages qui suspendus sur des roulements à un bras qui peut pivoter sur 360° pour transporter les marchandises sur des surfaces irrégulières, dans les escaliers et sur les trottoirs. Le bras pivote quand le pneu passe sur les marches ou trottoirs, et revient quand il a terminé la montée et est prêt à recommencer le cycle. La force d'inertie réduit considérablement l'effort de levage et le centre de gravité bas facilite le mouvement de bascule. Pour descendre la charge, la force d'inertie est absorbée par le pivotement, la force descendante est réduite amortissant la descente de la charge. Dans son mouvement, la "Roll Ramp" n'entraîne pas en descendant et n'abîme pas les tapis ni les pelouses. Autres caractéristiques: poignée arrondie pour protéger les mains; 225 kg de capacité, construction tubulaire solide; longerons de renfort sur les côtés; trois montants verticaux pour le cadre; support de bidons réglable. (Voir les illustrations page 44.) Écrire à: M. Frank Brkic, Directeur, Mosaic Enterprises, Inc., 2450 Virginia Avenue, North-West, Washington, D.C. 20037 et envoyer une copie de votre correspondance initiale au Consulat canadien 3 Parkway Building, Suite 1310, Philadelphie, Pennsylvanie 19102, U.S.A.

Porous Solar Collectors/300

Belgian inventor offers the Canadian manufacturing and marketing rights to three inventions using a patented porous solar collector material which incorporates low cost raw materials such as glass, rock wool, silicone and asbestos foam. The first is a solar heating brick which can be made to any dimension and incorporates the porous collector material on one surface. The brick permits the collection of solar energy and transfer of heat to a building interior. Another device is a flexible solar heating cover suitable for insulating pipes and pipelines. It can also be used as a construction material for such applications as tents, greenhouses, hanging roofs, bulk cargo covers, etc. The final product is a liquid double glazed solar collector which utilizes the porous collector material, has a copper heat transfer system and is enclosed in a plastic covered cardboard body. Write: Mr. Bartholemen Marius Strzelczyk, 66 Avenue Vander Bruggen, 1070 Brussels, Belgium and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, rue de Loxum 6, B-1000 Brussels, Belgium.

Collecteurs solaires à base de tissu poreux/300

Un inventeur belge offre les droits de fabrication et de commercialisation au Canada de trois inventions utilisant un tissu solaire poreux fait de matériaux bon marché comme le verre, la laine de roche, le silicium et la mousse d'amiante. La première invention est une brique pour chauffage solaire réalisable en toutes dimensions et couverte d'un tissu collecteur poreux sur une surface. La brique capte l'énergie solaire, la convertit en chaleur et transmet celle-ci à l'intérieur de l'immeuble. La deuxième invention est un revêtement solaire souple pour l'isolation des tuyaux et des pipe-lines. Le revêtement peut aussi servir de matériau de construction (tentes, serres, bâches, etc.). La troisième invention est un collecteur double à caloporteur liquide à échangeur thermique en cuivre, contenu dans un boîtier cartonné plastifié. Écrire à: M. Bartholemen Marius Strzelczyk, 66, avenue Vander Bruggen, 1070 Bruxelles, Belgique et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 6, rue de Loxum, B-1000 Bruxelles, Belgique.

Telephone Support Device/300

French inventor offers exclusive licensing rights to a Canadian company experienced in the production of plastic products to manufacture and market a device, on which a patent is pending in Canada, to hold a telephone receiver in the listening position without the use of hands. The device clips on to the receiver and consists of two telescopic arms which are adjustable to fit the user's physique, one arm fitting around the neck to hold the listening end at the

Dispositif de support de combiné téléphonique/300

Un inventeur français offre à une compagnie canadienne ayant de l'expérience dans la production de produits en plastique les droits de licence exclusifs pour fabriquer et mettre en marché un dispositif, pour lequel un brevet est en instance au Canada, destiné à soutenir un combiné téléphonique en position d'écoute, sans aide manuelle. Le dispositif se fixe au combiné et est formé de deux bras mobiles et articulés qui sont réglables selon le physique

right height, the other arm holding the speaking end in the correct position. The arms are mounted on springs, and can be released by a touch of the thumb. Write: M. Gaëtan Guibert, 9, rue de Montesson, 95870 Bezons (France) and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 35 Avenue Montaigne, 75008 Paris, France.

de l'utilisateur; un des bras forme une crosse d'appui sur le cou de l'utilisateur et maintient l'écouteur à la bonne hauteur, l'autre bras maintenant le microphone dans la bonne position. Les bras sont montés sur des ressorts et peuvent être libérés par une pression du pouce. Écrire à: M. Gaëtan Guibert, 9, rue de Montesson, 95870 Bezons (France) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris (France).

Portable Utility Case/300

Canadian inventor offers the licensing rights to his Canadian, U.S., and possibly other patents, for a portable casing with conveniently arranged compartments to hold replaceable modular accessory units, in particular, a flashlight, a disposable or permanent type lighter and a measuring tape. The modular flashlight and lighter units removably fit in upright compartments with the switch and flint wheel arranged for easy actuation by a fore and aft motion of the same thumb. The tape measure is stored in a longitudinal compartment underneath with a sliding door on the front wall for easy replacement. The tape has an operative and outwardly extending pull out tab secured to it which projects beyond the bottom of the casing. A laterall wall of the casing has a sliding door for easy access to the other units. A magnifying glass is installed in an opening in the flashlight compartment wall to provide a stronger glow of light from the permanent shock and shatter-proof light bulb. Batteries only need replacing when necessary. Write: Mr. Roland Paquette, 4307-6th Street, Chomedey, Laval, Quebec H7W 2C6 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Boîtier utilitaire portatif/300

En vertu de ses brevets au Canada, aux États-Unis et, éventuellement, dans d'autres pays, un inventeur canadien offre les droits de mise en marché d'un boîtier portatif compartimenté destiné à contenir des éléments modulaires amovibles comme, entre autres, une lampe de poche, un briquet permanent ou jetable et un ruban à mesurer. La lampe de poche et le briquet prennent place dans des compartiments verticaux, l'interrupteur de la lampe et la molette du briquet s'actionnant d'un seul geste avant-arrière du pouce. Le ruban est enroulé dans le compartiment longitudinal du fond. Il se remplace facilement au besoin, car il se trouve derrière une porte placée à l'avant du boîtier. Le ruban se termine par une languette qui dépasse du fond du boîtier. Une traction sur cette languette fait sortir le ruban. Une porte coulissante latérale donne accès aux autres éléments. Une loupe est encastrée dans une ouverture de la paroi du compartiment de la lampe de poche; l'éclairement de l'ampoule permanente antichocs de la lampe est donc augmenté. Il suffit de remplacer la pile quand elle est épuisée. Écrire à: M. Roland Paquette, 4307, 6e rue, Chomedey, Laval (Québec) H7W 2C6 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.

Canadian Patents Available for Licensing or Sale Issued November 1980

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

Patent 929,865

Stereophonic Phonograph Pickup/300

A stereophonic phonograph pickup of the magnetic type is disclosed wherein the stereophonic output is produced by an elongated tubular armature of permeable material pivotally mounted at one end for movement of its opposite end within a triangular cluster of pole pieces. The pole pieces form the terminal portions of two closed path magnetic circuits, each of which is completed through a core having a voltage generating coil wound thereabout. One of the pole pieces forms a portion of a common leg for both circuits. Magnetomotive force is provided by a stationary permanent magnet, magnetically coupled with the pivotally mounted end of the armature. A capacitance device is coupled between the coils and an inductance device couples the magnetic circuits to minimize cross talk. Write: Computer Patent Annuities, Union House, Union Street, St. Helier, Jersey, Channel Islands and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London, W1X 0AB, England.

Patent 930,629

Method and Apparatus for the Rearing of Fish in an Artificial Environment/300

This invention relates to a fish rearing tank in which water is introduced into the bottom of the tank and flows upward to spill over the top of the tank through a circumferential screen, thereby providing a controlled environment for rearing fish at a high density while removing waste products through the flushing action of the water flow. Continuous high volume water circulation through a plurality of tanks and a raceway is also disclosed, together with appropriate water treatment steps, to make economically feasible the raising of fish at high density. Water is successively circulated through a plurality of tanks and a raceway which may be connected in the series. Between each tank turbulence is introduced to throw off carbon dioxide, ammonia and other deleterious constituents that may be present. Between each tank air is drawn into the flowing water to increase its oxygen content to near saturation. In addition, oxygen may also be injected to maintain the dissolved oxygen content of the water at or near saturation. The system thereby provided permits growing fish at very high density to provide a fish husbandry system in which efficent use is made of available land, available water and oxygen. Write: Computer Patent Annuities, Union House, Union Street, St. Helier, Jersey, Channel Islands and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London, W1X 0AB, England.

Patent 949,870

Hinge Iron for Posture Chair/300

Spring-biassed hinge iron for a posture chair which hinge iron is readily adjustable by the user even while such a person is seated on the chair. Write: George H. Riches & Associates, Suite 2900, 2 Bloor Street East, Toronto, Ontario M4W 3J5 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.

Liste des brevets canadiens disponibles pour octroi de licence ou vente délivrés en novembre 1980

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

Brevet 929,865

Tête de lecture stéréophonique/300

Brevet 930,629

Méthode et appareil pour l'étenage de poissons dans un environnement artificiel/300

Brevet 949,870

Charnière en acier pour chaise-posture/300

Patent 960,572

Chair Height Control/300

A chair height control having an outer non-rotatable tube fixed to the chair base or legs, an innermost longitudinally telescoping tube supporting the chair seat, and an intermediate locking tube rotatable with respect to the fixed tube, by suitable bearing means incorporated within the fixed tube, and a releasable catch means is provided within the innermost longitudinally extendible tube, which is releasably operable from immediately beneath the seat, and provided for interlocking engagement with a series of recesses in the intermediate tube, whereby the innermost tube can be extended or retracted with respect to the intermediate tube, and fastened in any desired height, and, when fastened in position, both the inner tube and the intermediate tube rotate together in unison with relation to the outer fixed tube. Write: George H. Riches & Associates, Suite 2900, 2 Bloor Street East, Toronto, Ontario M4W 3J5 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.

Brevet 960,572

Contrôle de hauteur pour chaise/300

Patent 961,402

Adjustable Back Rest Support for Chairs/300

This specification disclosed an adjustment device for a back rest cushion or chair back which may readily be fastened in position against the underside of the seat cushion of the chair, and which incorporates means for adjusting the height of the back rest cushion, and separate means for adjusting the angular location of the back rest cushion, both such means being operated by simple spring loaded locking means, so that an adjustment may be made while actually sitting in the chair, with the locking device snapping into place as soon as the most desirable position is reached. Write: George H. Riches & Associates, Suite 2900, 2 Bloor Street East, Toronto, Ontario M4W 3J5 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.

Brevet 961,402

Support réglable pour dossier de chaises/300

Patent 976,723

Guide Apparatus for Continuously Cast Strip/300

Apparatus for guiding metal strip continuously cast on the inside surface of a rotating ring through an open end thereof with minimum twisting comprises a plurality of pairs of guide rolls positioned and adjusted to cause the strip to travel in a spiral path of decreasing curvature on the surface of an imaginary cone, the axis of which passes through the ring. Write: Computer Patent Annuities, Union House, Union Street, St. Helier, Jersey, Channel Islands and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London, W1X 0AB, England.

Brevet 976,723

Appareil de guidage pour la coulée en continu de rubans métalliques/300

Patent 1,088,701

Fabric for Use in Protector Pads for Chain Saws/300

The invention provides a pad for protecting against injuries caused by moving chain saw blades. A plurality of superposed woven composite fabrics formed of a tough synthetic resin are firmly held together at the periphery of the pad. Each composite fabric comprises at least two superposed fabric layers which are interwoven into a single layer along spaced substantially parallel strips. The interwoven strips allow the number of fabric layers to be reduced without reducing the effectiveness of the protective pad. Write: Wheelabrator Corporation of Canada Limited, P.O. Box 370, 235 Speers Road, Oakville, Ontario L6J 5A9 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Brevet 1,088,701

Tissu pour la fabrication de tampons protecteurs pour scies mécaniques à chaîne/300

Patent 1,088,886

Bag Opening Device/300

A device is provided for opening bags and discharging their contents. Such a device comprises an open topped container, having a pair of mutually opposed end walls, an open bottom (which preferably is covered with a perforated or mesh material), and a cutting blade within the container, the blade consisting essentially of a pair of thin, substantially rectangular blades joined together at adjacent ends to be of inverted "V"-shape, with the other ends of the

Brevet 1,088,886

Dispositif pour ouvrir des sacs/300

blades being secured to the respective opposed end walls, and with the apex of the inverted "V" situated near the center of the container. It is noted that the bag is opened and discharged through a side thereof, and not, as traditionally done, through the opened top. A device is thus provided which short-cuts the time required to open and empty bags containing dry products. The screen in the preferred embodiment can hold back and eventually sieve lumps that are common in many dry products, e.g., bagged fertilizer and bagged cement. The device can also be set directly over a hopper, and from there can be augered into a fertilizer or other dry solids container. In this way, a farmer can quickly and conveniently convert from bagged to bulk dry solids. Write: Henry Duchek, P.O. Box 813, Esterhazy, Saskatchewan S0A 0X0 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Patent 1,088,908

Roll Stand with Means for Joining a Web to Another When Unwound from Rolls/300

Brevet 1,088,908

Train de bobinage à dispositif d'aboutement de feuilles lors du débobinage/300

A roller stand incorporating a device adapted to join a running web of material being unwound from a first roll to a web of material of a second roll and comprising a roll-holding device including two unwinding stations; means to cut the running web; a mechanism to exert a braking force on the spindles supporting said first and second rolls; and, means provided to transfer rotational motion of said roll-support spindles to said braking mechanism by means of free-wheel members, said members arranged to control said braking mechanism selectively for application of braking force on the roll-support spindle that at the moment has the highest rotational speed. Write: AB Amals Mekaniska Verkstad, Vastra Bangatan 8, S-662 00 Amal, Sweden and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, P.O. Box 16129, S-103 23 Stockholm 16, Sweden.

Patent 1,088,957

Process for the Purification of Methanol Obtained from Kraft Pulping Condensates/300

Brevet 1,088,957

Procédé de purification du méthanol extrait des condensats résultant de la fabrication de pâte Kraft/300

A process for the purification of odorous methanol or an odorous methanol-water solution derived from condensates of a kraft pulping process in which the solution is treated with dilute acid. The methanol is concentrated from the treated solution and then treated with an oxidating agent under alkaline conditions after which purified methanol is recovered from the aqueous alkaline solution. Write: Kemi Oy, 94200 Kemi 20, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

Patent 1,089,066

Shifting of CO_2 Laser Radiation Using Rotational Raman Resonances in H_2 and D_2/300

Brevet 1,089,066

Déplacement des rayonnements laser au CO_2 par l'effet des résonnances Raman rotationelles dans le H_2 et le D_2/300

A device for shifting the frequency of infrared radiation from a CO_2 laser by stimulated Raman scattering in either H_2 or D_2. The device of the preferred embodiment comprises an H_2 Raman laser having dichroic mirrors which are reflective for 16 μm radiation and transmittive for 10 μm, disposed at opposite ends of an interaction cell. The interaction cell contains a diatomic molecular gas, e.g., either H_2 or D_2, and a capillary waveguide disposed within the cell. A liquid nitrogen jacket is provided around the capillary waveguide for the purpose of cooling. In another embodiment the input CO_2 radiation is circularly polarized using a Fresnel rhomb $\lambda/4$ plate and applied to an interaction cell of much longer length for single pass operation. Write: 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, U.S.A.

Patent 1,089,232

Homohedral Module Genus Extender/300

Brevet 1,089,232

Blocs genus extender à module homohédrique/300

The genus extender is a toy block designed to be used with a plurality of homohedral modules, either by itself or with other genus extenders, in constructing geometric models with a topological genus of two or more. Write: John P. Hogan, 600 Elm Street, Williamsburg, Iowa 52361 and send a copy of your initial correspondence to Canadian Consulate General, 310 South Michigan Avenue, 12th Floor, Chicago, Illinois 60604, U.S.A.

Brevet 1,089,302

Indicateur de direction et de vitesse du vent/300

Un **indicateur de direction et de vitesse du vent** muni d'une base verticale fixe et d'un bras horizontal monté en rotation sur cette base. Une coquille est montée en glissière sur ce bras alors qu'un ressort, dans la base, est relié à cette coquille par un fil de sorte à limiter le glissement extérieur de celle-ci par rapport au bras. Un premier détecteur, monté dans la base, fournit une indication quant à la direction du vent par détection de la position du bras rotatif lorsque le vent frappe la coquille qui alors se déplace par rapport à la base fixe. Un second détecteur également monté dans la base fournit une indication quant à la vitesse du vent par détection de la position du fil qui se déplace linéairement lorsque le vent frappe la coquille. Écrire: M. James H. VanSant, 18, rue Langevin, Chambly (Québec) J3L 2G2 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 1,089,302

Wind Speed and Direction Indicator/300

Patent 1,089,501

Hydraulic Stabilizer/300

A system for balancing the shock loads on the two sides of an axle of a vehicle. A hydraulic cylinder is mounted vertically adjacent to each opposed wheel of a common axle, to the axle with the piston rod of each cylinder mounted to the frame of the vehicle and with the upper chamber of each cylinder connected through a valve to the lower chamber of the other cylinder. The valve is formed with a rotatable member that joins all chambers of the two cylinders in common when the system is to be disabled. A charging chamber fitted with a check valve inlet is connected to a chamber in each cylinder to maintain the hydraulic fluid under pressure in the static condition. Write: Gary L. Finch, P.O. Box 6, Eureka, Montana 59917 and send a copy of your initial correspondence to Canadian Consulate General, 412 Plaza 600, Sixth and Stewart, Seattle, Washington 98101, U.S.A.

Brevet 1,089,501

Stabilisateur hydraulique/300

Patent 1,089,575

Foamed and Solid Rubber-Graft Copolymer Compositions and Method of Preparation/300

Starch graft polymers prepared by reacting a water-soluble starch xanthate with hydrogen peroxide and vinyl monomer. The vinyl monomer has a general formula $CH_2 = CH\text{-}R$ wherein R is an organic material which imparts polymerizable character to the vinyl monomer. Write: George G. Maher, Simpson Drive, Dunlap, Illinois 61525 and send a copy of your initial correspondence to Canadian Consulate General, 310 South Michigan Avenue, 12th Floor, Chicago, Illinois 60604, U.S.A.

Brevet 1,089,575

Procédé d'obtention de produits moussés et pleins de copolymères greffés de caoutchouc/300

Patent 1,089,622

Decorative Wall Panel/300

A decorative wall panel to be detachably mounted on a wall comprising a plurality of contiguous elongated rigid sections. A flexible adhesive backing on the non-visible side secures adjacent sections together. A flexible decorative covering is fixed to these sections to cover their visible sides and is creasable between adjacent sections. Means are provided to releasably secure the panels to the wall surface adjacent a wall surface to be covered by the wall panel. The panel sections are foldable in accordion fashion for storage or transportation. Such a wall panel may be used to cover walls where traditional panelling or wallpaper may not be desired, for example where a tenant wishes to cover a wall in an apartment building. Write: Leslie Boyer, 2026 Falkirk Crescent, Ottawa, Ontario K1B 4Y7 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.

Brevet 1,089,622

Panneau mural décoratif/300

Patent 1,089,679

Change Speed Gearing for Vehicle Mounted Winches/300

A gear housing arranged for use with a vehicle mounted winch has an input shaft driven by a power supply such as a reversible electric motor. The housing has an output shaft with an output gear thereon meshing with an idler gear journaled in the housing. A shiftable gear assembly is secured on the input shaft for rotation therewith and includes different diameter gears selectively engageable with the idler gear to produce different powered drive

Brevet 1,089,679

Boîte de vitesses pour treuils montés sur engin motorisé/300

speed ratios to the output shaft. Write: Elmer L. Notestine, 2232 S.E. 154th Avenue, Portland, Oregon 97233 and send a copy of your initial correspondence to Canadian Consulate General, 412 Plaza 600, Sixth and Stewart, Seattle, Washington 98101, U.S.A.

Patent 1,089,719

Minimum Tillage Planter/300

A planter for seed crops, such as grains. A wheeled framework supports the apparatus for movement about a field. At the front of the framework is a row of transversely spaced chisels which produce tilled areas parallel to the path of movement of the framework and separated from one another by strips of untilled soil. Each chisel carries a roller that breaks up any resulting clods of soil. Liquid fertilizer is directed to the tilled areas by delivery conduits extending along the rear of each chisel to their respective lower ends. The rollers provide a cover of soil to the liquid fertilizer. A drill apparatus is mounted to the framework behind the chisels, with individual openers in longitudinal alignment with the respective chisels for planting seeds in the tilled soil at an elevation above the elevation at which fertilizer has been supplied and without disturbing the strips of untilled soil. The seed is therefore located in a tilled furrow with a cover of soil between the seed and the liquid fertilizer to prevent seed damage before germination. Write: Idaho Research Foundation, Inc., University Station Box 3367, University of Idaho, Moscow, Idaho 83843 and send a copy of your initial correspondence to Canadian Consulate General, 412 Plaza 600, Sixth and Stewart, Seattle, Washington 98101, U.S.A.

Brevet 1,089,719

Machine à préparer le sol et à planter/300

Patent 1,089,728

Fuel-Air Mixer for Carburetors/300

A fuel-air mixing improvement for the carburetor of an internal combustion engine breaks droplets of fuel progressively into finer droplets as they pass through the fuel "jet" or supply tube between the fuel reservoir and the carburetor induction tube. A twisted wire mesh screen is mounted within the supply tube. The twists increase in pitch from an upstream end to the discharge of the tube so that fuel droplets and air being pulled through the screen are progressively more frequently engaged by the screen and the droplets are thereby broken into finer droplets, resulting in an extremely fine spray. This is accomplished before this rich fuel and air mixture enters into the air passing through the carburetor induction tube. The rich mixture then leaving the supply tube has already developed a swirling path and readily mixes with the air being drawn through the induction tube and venturi. To assure that the wire mesh screen will not overly obstruct the fuel and air passage through the supply tube, a tapered ring is mounted to the venturi for guiding or restricting air flow to a path primarily through the venturi rather than through the open space between the venturi and remainder of the induction tube. Also, for adjustment purposes an air-bleed mechanism is provided whereby air may be taken upstream of the venturi and directed into the associated fuel reservoir adjacent the intake end of the fuel supply tube. Adjustment is provided with this arrangement such that air may be bled selectively into the area to be premixed with the fuel prior to its reception and passage through the spiral screen within the fuel supply tube. Write: Walther Gohnert, 26300 S.E. 424th, Lot 1, Enumclaw, Washington 98022 and send a copy of your initial correspondence to Canadian Consulate General, 412 Plaza 600, Sixth and Stewart, Seattle, Washington 98101, U.S.A.

Brevet 1,089,728

Mélangeur combustible-air pour carburateurs/300

Patent 1,089,965

Photosensitive Diodes for Simplified Optical Heterodyning and Cavity Length Control/300

Disclosed herein is a ring laser gyroscope in which the output photodetector assembly is a laminated structure having three electrically mutually isolated photodiodes on a common substrate, located directly behind a multilayer dielectric-coated, partially light-transmissive mirror that is one of the reflective elements of the ring laser. A small proportion of light energy of the beams incident on the mirror is allowed to pass through the mirror and strikes the photodiodes. Two of the diodes are masked in such a manner that they generate a heterodyne beat signal which represents lateral displacement of the interference fringe pattern set up in the area of intersection of the two oppositely directed beams in the ring laser. The resulting output signal is used to determine the rate of rotation of the ring laser body. The third diode sums the light intensity of the fringe pattern and generates an output signal which, in a feedback arrangement, is applied to a cavity length control circuit. Write: Litton Systems, Inc., 360 North Crescent Drive, Beverly Hills, California 90210 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014, U.S.A.

Brevet 1,089,965

Diodes photosensibles pour hétérodynage optique simplifié et commande de longueur de cavité/300

Brevet 1,090,015

Lit d'hôpital/300

Lit d'hôpital comportant une cuve partiellement remplie d'un liquide ou d'un gel. Dans la cuve est disposée une pluralité de flotteurs individuels juxtaposés, astreints à des mouvements sensiblement verticaux et surmontés chacun d'un support l'ensemble des supports définissant en position de repos une surface d'appui sensiblement continue. Écrire: Jean Guigan, 9, rue Jean Mermoz, 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 1,090,015

Hospital Bed/300

Patent 1,090,018

Decontamination of Radionuclides from Water with Chitin/300

The invention relates to a process for decontaminating or removing radionuclides from aqueous solution. Write: 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, U.S.A.

Brevet 1,090,018

Épuration par la chitine d'eau contaminée par des radionucléides/300

Patent 1,090,131

Air Drying Apparatus of the Condensation Type/300

A condensation air drying apparatus comprising a refrigeration system, the evaporator of which is used for cooling an air flow to or below its dew point whereby the moisture in the air as drawn through the cooler by a fan is condensed on the cooler and drained off. A switch over valve enables the cooler to be temporarily connected as a condenser in the refrigeration system, whereby the cooler is heatable for defrosting. A temperature sensor mounted direct on the cooler serves to control the fan power for optimal economy in normal operation and to detect frost formation and control start and stop of the defrosting cycles in response to such detection. The control equipment may include an air temperature sensor adjusting the working characteristic of the cooler temperature sensor in an optimal manner according to the temperature of the air to be dried. Write: A/S Dantherm, Jegstrupvej, 7800 Skive, Denmark and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Kr. Bernikowsgade 1, 1105 Copenhagen K, Denmark.

Brevet 1,090,131

Sécheur d'air à condensation/300

Patent 1,090,162

Optoacoustic Cell for Identifying Liquids/300

An optoacoustic cell is a device which measures the amount of light energy absorbed in a medium through the acoustic pressure resulting from the absorption. The cell normally consists of a container with a pressure measuring device. In particular the two functions may be combined if the container, a piezoceramic cylinder, is itself a pressure measuring device. The medium under study is contained in the cell by an optical window or windows. In the present example two windows seal the ends of the cylinder which contains a fluid to be identified. Commonly, one of two types of light beam traverses the cylinder axis of the optoacoustic cell: either (1) a periodically modulated light beam of continuous, constant intensity or (2) a short duration light pulse. In this application we employ the second type. The advancement in the art consists in the recognition that the signal produced by the pressure measuring device depends both on the type of piezoceramic cylinder used and the exact nature of the contained fluid. The dependency is complicated and when the signal of the pressure measuring device is viewed against a time axis a pattern results, commonly called a fingerprint, which is specific to the particular fluid contained in the optoacoustic cell. The reason for this fingerprinting ability may be explained on the basis of the natural oscillation modes in the cylinder. The utility of the invention lies in its providing a new means for identification of fluids. Fluid mixtures could also be identified. Write: James A. Burt, 19 Delair Crescent, Thornhill, Ontario L3T 2M3 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre (34/3), Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Brevet 1,090,162

Cellule opto-acoustique servant à identifier les liquides/300

Patent 1,090,190

Air Circulator/300

An air circulating device for suspension from a roof or ceiling structure and including a duct through which upper room air may be directed for discharge into lower temperature air immediately above the room floor. A support structure houses a fan and motor assembly and a duct mounting collar to receive the duct upper end. The duct is of an inflatable, yieldable nature and terminates in spaced relationship to the floor. Write: Douglas B. Rusth, 1335 Southwest 66th Avenue, Apartment 404, Portland, Oregon 97225, U.S.A.; David A. Martin, 14025 Southwest Bonnie Brae Court, Beaverton, Oregon 97005, U.S.A. and send a copy of your initial correspondence to Canadian Consulate General, 412 Plaza 600, Sixth and Stewart, Seattle, Washington 98101, U.S.A.

Brevet 1,090,190

Ventilateur de circulation/300

Patent 1,090,209

Process for Forming a Metal or Metal Compound Coating on a Face of a Continuously Longitudinally Moving Glass Ribbon and Apparatus for Use in Forming Such Coating/300

The process comprises the steps of contacting the glass ribbon face while it is at elevated temperature, at a zone along the ribbon path, with a fluid medium containing a substance which undergoes chemical reaction or decomposition to form the metal or metal compound on the face, discharging at least part of the fluid medium against the face in stream formation having (1) a velocity component in the direction of movement of the glass ribbon and (2) an inclination to the face so that the acute or mean acute angle of incidence of the stream formation on the face, measured in a plane normal to the face and parallel with the direction of the glass ribbon movement, is not more than 60°. Write: BFG Glassgroup, Rue Caumartin 43, Paris, France and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 35 Avenue Montaigne, 75008 Paris, France.

Brevet 1,090,209

Méthode pour le dépôt d'une couche de métal ou de composition métallique sur la face d'une bande de verre défilant longitudinalement et continuellement; appareil servant à déposer une telle couche/300

Patent 1,090,210

Process for Producing Good Adherence Between Metal and Polysulphide Material, and Articles Obtained Thereby/300

A process for producing a strong and water-resistant bond between aluminum or an aluminum-based alloy and a polysulphide material by means of a primer which is applied to the metal, characterized in that the primer is a solution of a strongly basic alkali metal compound such as alkali metal hydroxides, phosphates and carbonates. The present invention also includes articles treated by the aforementioned process. Write: Thor Borresen, Strandgaten 30, 3190 Horten, Norway and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Postuttak, Oslo 1, Norway.

Brevet 1,090,210

Procédé permettant d'obtenir une bonne adhérence entre un métal et un matériau polysulfureux, et articles ainsi obtenus/300

Patent 1,090,322

Method to Draw Out Wires and Their Hanging Up in Poles/300

The present invention provides a method of drawing out wire from a reel, particularly line wires which are to be suspended from poles, comprising suspending said reel below an aircraft on a supporting frame, and flying the aircraft over the poles so that the wire is laid on supports attached thereto as the wire is unwound from the reel. Write: Aktiebolaget Skogsflyg, Cassel Aero, Angsta 1150, S-890 31 Arnäsvall, Sweden and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, P.O. Box 16129, S-103 23 Stockholm 16, Sweden.

Brevet 1,090,322

Méthode de débobinage des fils et de leur pose sur des poteaux/300

Patent 1,090,384

Golf Game Board Assembly/300

An assembly to play golf on a game board and characterized by using die-like polyhedrons which are each marked on the faces thereof with indicia defining playing directions cooperatively associated with the polyhedron to indicate achieved move or results corresponding to those of a real golf game. Each polyhedron and the indicia thereon are cooperatively associated to define substantially the same proportional likelihood of achieving any particular result as in a real golf game at the tee, along the fairway, and on the green. This is achieved by the assembly comprising separate polyhedrons for driving, for the fairway, and for putting, and such that any polyhedron is shaped and marked to respect the above-mentioned proportional likelihood upon operative throwing thereof. The polyhedrons include a largest polyhedron of 50 faces, an intermediate polyhedron of 26 faces and a smallest polyhedron of 12 faces. Write: Gérard N. Séguin, 3318 Maréchal Street, Montréal, Québec H3T 1M8 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.

Brevet 1,090,384

Jeu de golf de table/300

Patent 1,090,390

Easy Cab Entry and Exit/300

A footstep carried by a cab of a large automotive truck so that a driver of the vehicle can more easily step up or step down between the cab and ground; the footstep being vertically movable so to minimize a stepping distance; the device including a hydraulic or pneumatic powered cylinder having a slidable piston to which the footstep is rigidly secured. Write: James A. Marshall, Sr., c/o Richard L. Miller, 3612 Woolworth Building, New York, N.Y. 10007 and send a copy of your initial correspondence to Canadian Consulate General, 1251 Avenue of the Americas, New York City, N.Y. 10020, U.S.A.

Brevet 1,090,390

Marchepied pour cabine de camion/300

Patent 1,090,428

Remote Control Portable Wirefeed Arc Welding System/300

A remote control unit for closing a normally open contactor in response to closing of a normally open gun switch in a portable wirefeed arc welding system having a power source including the contactor, a portable wirefeed unit, a welding gun, a ground cable interconnecting the power source and the work, an electrode power cable interconnecting the power source and the wirefeed unit and gun, and control leads interconnecting the wirefeed unit with the work and the gun; wherein a capacitor in the control unit is operable to place an override current on the ground and electrode power cables in response to closing of the gun switch, and sensing means comprising a control sensor employing the Hall effect and a sense relay are operable in response to such override current to effect closing of a normally open cycle hold delay relay and the contactor, and a cycle hold delay relay that, in turn, closes a fourth or rearming delay relay which opens the circuit to the sense relay. So long as welding current is drawn, the first control relay remains closed to hold the cycle hold delay relay closed. An interruption of welding current for two seconds causes the cycle hold delay relay to time out to open the rearming delay relay and the contactor. Write: Stella B. Matasovic, (Executor), Route 1, Mokena, Illinois 60448 and send a copy of your initial correspondence to Canadian Consulate General, 310 South Michigan Avenue, 12th Floor, Chicago, Illinois 60604, U.S.A.

Brevet 1,090,428

Système de télécommande pour appareil mobile de sondage à arc, à fil-électrode/300

United States Government Patent Applications Available For U.S. and Possibly Foreign Licensing

Paper or microfiche copies of the following U.S. patent applications may be purchased from NTIS for $5.00 (PC) and $3.50 (MF) unless otherwise indicated, using Visa, Master Charge, American Express, NTIS deposit account, cheque or money order in U.S. funds. Requests for information to license the corresponding Canadian patent rights should be addressed to the U.S. departments indicated with a copy of your initial correspondence forwarded to the Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102. If you are advised that a corresponding Canadian patent has not been sought, you may wish to enquire through Mrs. D. Johnson of the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5, telephone Area Code 613-995-5771, concerning guidance for any further action that may be taken.

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DOE
Mr. James E. Denny
Assistant General Counsel for Patents
Office of the General Counsel
U.S. Department of Energy
Washington, D.C. 20545

NASA
Negotiating centers for NASA patent applications and the Canadian trade offices concerned are listed with the item

Les centres de négociation pour les demandes de brevet de la NASA et les bureaux commerciaux du gouvernement canadien concernés sont indiqués avec l'article

PAT-APPL-6-147 417

Dynamic Binary Fourier Filtered Imaging System/300

Système d'imagerie à filtrage de Fourier binaire dynamique/300

Filed May 6, 1980, by the Department of the Air Force. An apparatus for altering the spatial frequency content of recorded patterns by selectively filtering the patterns after they are transformed into the fourier domain is disclosed. The filter characteristics are spatially and temporarily variable while the real space image of the altered pattern is being observed. A laser beam is projected through a transparency containing the pattern. The patterned beam, with diffraction interference effects, is transformed to the fourier domain at the surface of a liquid crystal light valve response to a spatially and temporarily varying light projector. The projector activated regions reflect areas of the fourier domain beam, while other areas are absorbed or incoherently reflected. A beam splitter redirects a portion of the reflected beam to a continuously observable image plane after transformation back into real space. Write: NTIS.

PAT-APPL-6-149 793

Stable Ultraviolet Bandpass Chemical Filter/300

Filtre chimique stable ne laissant passer que l'UV/300

Filed May 14, 1980, by the Department of the Air Force. This document discloses a liquid chemical filter for suppressing the heat producing portion of the solar spectrum emanating from a simulated solar source and composed of a mixture of hydrochloric acid, cobalt sulfate and distilled water positioned between two ultraviolet transmitting fused silica windows. Write: NTIS.

PAT-APPL-6-150 522

Lens System Having Wide Angle Objectives/300

Système de lentilles à objectifs grand angle/300

Filed May 16, 1980, by the Department of the Air Force. This document discloses wide angle optical objectives for use in aerial mapping cameras to provide improved resolving power and improved contrast rendition derived from the pattern of glass types and lens data employed. The outermost elements are weakly positive menisci to produce an initial convergence of rays before the mating negative elements are introduced thereby keeping the physical length of the system within modest proportions. Strong negative elements lying outside of centrally located strong positive elements provide favorable illumination over a wide angle field. Wafer elements near the center of the system serve to minimize chromatic astigmatism and to reduce the actual sagittal depth of the aspherics. Wafers of high index flint glass are located next to the central stop in order to obtain good chromatic spherical correction in the tangential rays over the field. Write: NTIS.

PAT-APPL-6-003 559

Apparatus for Checking the Direction of Polarization of Shear-Wave Ultrasonic Transducers/300

Appareil pour contrôler le sens de la polarisation des transducteurs ultrasoniques d'ondes de cisaillement/300

Filed January 15, 1979, by the Department of Energy. An apparatus for checking the direction of polarization of shear-wave ultrasonic transducers comprises a first planar surface for mounting the shear-wave transducer, a second planar surface inclined at a predetermined angle to the first surface to generate longitudinal waves by mode conversion, and a third planar surface disposed at a second predetermined angle to the first for mounting a longitudinal-wave ultrasonic transducer. In an alternate embodiment, two second planar surfaces at the predetermined angle are placed at an angle to each other. The magnitude of the shear wave is a function of the angle between the direction of polarization of the transducer and the mode-conversion surface. Write: DOE.

PAT-APPL-6-003 840

Material for Radioactive Protection/300

Matériau de protection contre la radioactivité/300

Filed January 16, 1979, by the Department of Energy. A boron containing burn resistant, low-level radiation protection material useful, for example, as a liner for radioactive waste disposal and storage, a component for neutron ab-

sorber, and a shield for a neutron source is described. The material is basically composed of borax in the range of 25 to 50%, coal tar in the range of 25 to 37.5%, with the remainder being an epoxy resin mix. A preferred composition is 50% borax, 25% coal tar and 25% epoxy resin. The material is not susceptible to burning and is about 1/5th the cost of existing radiation protection material utilized in similar applications. Write: DOE.

PAT-APPL-6-009 623

Perfluorocarbon Vapor Tagging of Blasting Cap Detonators/300

Utilisation de perfluorocarbone pour repérer des amorces/300

Filed February 6, 1979, by the Department of Energy. A plug for a blasting cap is made of an elastomer in which is dissolved a perfluorocarbon. The perfluorocarbon is released as a vapor into the ambient over a long period of time to serve as a detectable taggant. Write: DOE.

PAT-APPL-6-019 808

Ductile Alloy and Process for Preparing Composite Superconducting Wire/300

Alliage ductile et procédé de préparation d'une composition pour fils supraconducteurs/300

Filed March 12, 1979, by the Department of Energy. An alloy for the commercial production of ductile superconducting wire is prepared by melting together copper and at least 15 weight percent niobium under non-oxygen-contaminating conditions, and rapidly cooling the melt to form a ductile composite consisting of discrete, randomly distributed and oriented dendritic-shaped particles of niobium in a copper matrix. As the wire is worked, the dendritic particles are realigned parallel to the longitudinal axis and when drawn form a plurality of very fine ductile superconductors in a ductile copper matrix. The drawn wire may be tin coated and wound into magnets or the like before diffusing the tin into the wire to react with the niobium. Impurities such as aluminum or gallium may be added to improve upper critical field characteristics. Write: DOE.

PAT-APPL-6-024 339

Salt-Soda Sinter Process for Recovering Aluminum from Fly Ash/300

Frittage en présence de chlorure-carbonate de sodium en vue de récupérer l'aluminium contenu dans les cendres volantes/300

Filed March 27, 1979, by the Department of Energy. A method for recovering aluminum values from fly ash comprises sintering the fly ash with a mixture of NaCl and Na sub 2 CO sub 3 to a temperature in the range 700 exp 0 to 900 exp 0 C for a period of time sufficient to convert greater than 90% of the aluminum content of the fly ash into an acidsoluble fraction and then contacting the thus-treated fraction with an aqueous solution of nitric or sulfuric acid to effect dissolution of aluminum and other metal values in said solution. Write: DOE.

PAT-APPL-6-026 508

Terpolymerication of Ethylene, Sulfur Dioxide and Carbon Monoxide/300

Préparation d'un terpolymère à partir d'éthylène, de dioxyde soufre et de monoxyde de carbone/300

Price per copy from NTIS: PC U.S. $6.00/MF U.S. $3.50, filed April 3, 1979, by the Department of Energy. This invention relates to high molecular weight terpolymer of ethylene, sulfur dioxide and carbon monoxide stable to 280 exp 0 C and containing as little as 36 mo1% ethylene and about 41 to 51 mo1% sulfur dioxide, and to the method of producing said terpolymer by irradiation of a liquid and gaseous mixture of ethylene, sulfur dioxide and carbon monoxide by means of Co-60 gamma rays or an electron beam, at a temperature of about 10 to 50 exp 0 C, and at a pressure of about 140 to 680 atmospheres, to initiate polymerization. Write: DOE.

PAT-APPL-6-028 780

Communications System Using a Mirror Kept in Outer Space by Electromagnetic Radiation Pressure/300

Système de télécommunications à miroir gardé dans l'espace extra-terrestre par la pression de radiateur électromagnétique/300

Filed April 10, 1979, by the Department of Energy. A communication system is disclosed which uses an electromagnetic energy reflector or mirror kept in outer space by electromagnetic radiation pressure. Using this system line-of-sight electromagnetic wave transmission could be provided to areas lacking line-of-sight broadcasting or ground relay stations without the use of earth orbiting satellites or long cables. In addition, the transmission system could cover large areas of the planet at a lower cost, using less power, and achieving higher efficiency than an earth orbiting satellite and do so without ionospheric interference of signal transmission. Write: DOE.

PAT-APPL-6-031 810

Miniature Quartz Resonator Force Transducer/300

Transducteur de forces à résonateur de quartz miniature/300

Filed April 20, 1979, by the Department of Energy. The invention relates to a piezoelectric quartz force transducer having the shape of a double-ended tuning fork. Write: DOE.

PAT-APPL-6-033 076

Process for Changing Caking Coals to Noncaking coals/300

Procédé de conversion des charbons agglutinants en charbons non agglutinants/300

Filed April 25, 1979, by the Department of Energy. Caking coals are treated in a slurry including alkaline earth metal hydroxides at moderate pressures and temperatures in air to form noncaking carbonaceous material. Hydroxides such as calcium hydroxide, magnesium hydroxide or barium hydroxide are contemplated for slurrying with the coal to interact with the agglomerating constituents. The slurry is subsequently dewatered and dried in air at atmospheric pressure to produce a nonagglomerating carbonaceous material that can be conveniently handled in various coal conversion and combustion processes. Write: DOE.

PAT-APPL-6-037 603

Hydrogen Isotope Separation/300

Séparation des isotopes de l'hydrogène/300

Filed May 10, 1979, by the Department of Energy. Disclosed is a system of four cryogenic fractional distillation columns interlinked with two equilibrators for separating a DT and hydrogen feed stream into four product streams, consisting of a stream of high purity D sub 2, DT, T sub 2, and a tritium-free stream of HD for waste disposal. Write: DOE.

PAT-APPL-6-043 855

Method of Handling Radioactive Alkali Metal Waste/300

Méthode de traitement de déchets constitués d'alcalis métalliques radioactifs/300

Filed May 30, 1980, by the Department of Energy. Radioactive alkali metal is mixed with particulate silica in a rotary drum reactor in which the alkali metal is converted to the monoxide during rotation of the reactor to produce particulate silica coated with the alkali metal monoxide suitable as a feed material to make a glass for storing radioactive material. Silica particles, the majority of which pass through a 95 mesh screen or preferably through a 200 mesh screen, are employed in this process, and the preferred weight ratio of silica to alkali metal is 7 to 1 in order to produce a feed material for the final glass product having a silica to alkali metal monoxide ratio of about 5 to 1. Write: DOE.

PAT-APPL-6-050 407

Selective Screening Methods for Selecting and Identifying Hyper-Cellulolytic Microbial Mutants; Hyper-Cellulolytic Mutant Microorganisms; and Processes for Their Utilization/300

Méthode de dépistage sélectif pour choisir et identifier des mutants microbiens hypercellulolytiques et des microorganismes mutants hypercellulolytiques; méthodes visant leur utilisation/300

Price per copy from NTIS: PC U.S. $7.00/MF U.S. $3.50, filed June 20, 1979, by the Department of Energy. A process for identifying and selecting microorganism strains, e.g., of the Trichoderma reesei species is described. Various hyper-cellulolytic characteristics, as described in greater detail, conducting one or more of various mutation and selection steps in any order or sequence followed by a mutation and selection step for microbial strains with constitutive cellulolytic activity by culturing in this latter step the microbial strains on a general non-enzyme-inducing culture medium and then detecting constitutive mutant microbial strains by overlayering with a culture medium that will detect cellulase and cellobiase activity with the proviso that any further protein synthesis is inhibited is disclosed. The selection process is useful for identifying and selecting microbial strains with the ability to produce various enzymes capable of breaking down various cellulosic and cellobiosic materials into smaller sugar units, e.g., glucose units, which can be subsequently used for the production of alcohol and other organic chemicals in a conventional fermentation process under anaerobic or aerobic conditions. Various novel mutant strains of Trichoderma reesei developed and selected using the approach above and their use in producing enzymes and hydrolysis of cellulosic materials are disclosed. Write: DOE.

PAT-APPL-6-050 860

Isotropically Sensitive Optical Filter Employing Atomic Resonance Transitions/300

Filtre optique à sensibilité isotrope faisant appel à des transitions de résonance atomique/300

Filed June 21, 1979, by the Department of Energy. An ultra-high Q isotropically sensitive optical filter or optical detector is disclosed employing atomic resonance transitions. More specifically, atomic resonance transitions utilized in conjunction with two optical bandpass filters provide an optical detector having a wide field of view (approx. 2 pi steradians) and very narrow acceptance bandwidth approaching 0.01A. A light signal to be detected is transmitted through an outer bandpass filter into a resonantly absorbing atomic vapor, the excited atomic vapor then providing a fluorescence signal at a different wavelength which is transmitted through an inner bandpass filters have no common transmission band, thereby resulting in complete blockage of all optical signals that are not resonantly shifted in wavelength by the intervening atomic vapor. Two embodiments are disclosed, one in which the light signal raises atoms contained in the atomic vapor from the ground state to an excited state from which fluorescence occurs, and the other in which a pump laser is used to raise the atoms in the ground state to a first excited state from which the light signal then is resonantly absorbed, thereby raising the atoms to a second excited state from which fluorescence occurs. A specific application is described in which an optical detector according to the present invention can be located in an orbiting satellite. Write: DOE.

PAT-APPL-6-058 420

Electric Controlled Air Incinerator for Radioactive Wastes/300

Incinérateur électrique de déchets radioactifs à alimentation d'air contrôlée/300

Filed July 18, 1979, by the Department of Energy. A two-stage incinerator is provided which includes a primary combustion chamber and an afterburner chamber for off-gases. The latter is formed by a plurality of vertical tubes in combination with associated manifolds which connect the tubes together to form a continuous tortuous path. Electrically-controlled heaters surround the tubes while electrically controlled plate heaters heat the manifolds. A gravity-type ash removal system is located at the bottom of the first afterburner tube while an air mixer is disposed in that same tube just above the outlet from the primary chamber. A ram injector in combination with rotary magazine feeds waste to a horizontal tube forming the primary combustion chamber. Write: DOE.

PAT-APPL-6-061 152

One-Directional Uniformly Coated Fibers, Method of Preparation and Uses Therefor/300

Fibres à enduit unidirectionnel uniforme, méthode de préparation et usages/300

Price per copy from NTIS: PC U.S. $6.00/MF U.S. $3.50, filed July 26, 1979, by the Department of Energy. A problem addressed by this invention was how to obtain very long lengths of refractory metal-coated multifilamentary yarns having a uniform coating on the filaments which make up each yarn, the coating being uniform throughout the length of the yarn such that the coated yarns are suitable for being woven and are suitable for a variety of other uses. The solution is a continuous process which employs a chemical vapor deposition reaction at relatively low temperature and pressure and a separation of the gaseous reaction products from the coated yarn prior to allowing the coated yarn to cool. Write: DOE.

PAT-APPL-6-062 373

Hydrogen Production by the Decomposition of Water/300

Production d'hydrogène par la décomposition de l'eau/300

Filed July 31, 1979, by the Department of Energy. A process is described for the production of hydrogen from water by a sulfuric acid process employing electrolysis and thermochemical decomposition. The water containing SO sub 2 is electrolyzed to produce H sub 2 at the cathode and to oxidize the SO sub 2 to form H sub 2 SO sub 4 at the anode. After the H sub 2 has been separated, a compound of the type M/sub r/X/sub s/ is added to produce a water insoluble sulfate of M and a water insoluble oxide of the metal in the radical X. In the compound M/sub r/X/sub s/, M is at least one metal selected from the group consisting of Ba exp 2 +; Ca exp 2 +, Sr exp 2 +, La exp 2 +, and Pb exp 2 +; X is at least one radical selected from the group consisting of molybdate (MoO sub 42-), tungstate (WO sub 42-), and metaborate (BO sub 21-); and r and s are either 1, 2, or 3 depending upon the valence of M and X. The precipitated mixture is filtered and heated to a temperature sufficiently high to form SO sub 3 gas and to reform M/sub r/X/sub s/. The SO sub 3 is dissolved in a small amount of H sub 2 O to produce concentrated H sub 2 SO sub 4, and the M/sub r/X/sub s/ is recycled to the process. Alternatively, the SO sub 3 gas can be recycled to the beginning of the process to provide a continuous process for the production of H sub 2 in which only water need be added in a substantial amount. Write: DOE.

PAT-APPL-6-076 528

Method of Fabricating Thin-Walled Articles of Tungsten-Nickel-Iron Alloy/300

Méthode de fabrication d'articles à paroi mince en alliage tungstène-nickel-fer/300

Filed September 18, 1979, by the Department of Energy. The present invention relates to a method for fabricating thin-walled high-density structures of tungsten-nickel-iron alloys. A powdered blend of the selected alloy constituents is plasma sprayed onto a mandrel having the desired article configuration. The sprayed deposit is removed from the mandrel and subjected to liquid phase sintering to provide the alloyed structure. The formation of the thin-walled structure by plasma spraying significantly reduces shrinkage, and cracking while increasing physical properties of the structure over that obtainable by employing previously known powder metallurgical procedures. Write: DOE.

PAT-APPL-6-078 759

Cadmium Telluride Photovoltaic Radiation Detector/300

Dosimètre photovoltaïque à polycristal de tellurure de cadmium/300

Filed September 25, 1979, by the Department of Energy. A dosimetry-type radiation detector is provided which employs a polycrystalline, chlorine-compensated cadmium telluride wafer fabricated to operate as a photovoltaic current generator used as the basic detecting element. A photovoltaic junction is formed in the wafer by painting one face of the cadmium telluride wafer with an n-type semi-conductive material. The opposite face of the wafer is painted with an electrically conductive material to serve as a current collector. The detector is mounted in a hermetically sealed vacuum containment. The detector is operated in a photovoltaic mode (zero bias) while DC coupled to a symmetrical differential current amplifier having a very low input impedance. The amplifier converts the current signal generated by radiation impinging upon the barrier surface face of the wafer to a voltage which is supplied to a voltmeter calibrated to read quantitatively the level of radiation incident upon the detecting wafer. Write: DOE.

PAT-APPL-6-114 522

Metal Hydride Actuation Device/300 **Déclencheur à hydrure métallique/300**

Filed January 23, 1980, by the Department of the Interior. This invention is a metal hydride actuation device. Its basic components include: a heat source to supply heat to a chamber containing a metal hydride and the capability of releasing the gas (hydrogen) give off as the hydride is heated; a movable piston against which the gas is given off acts; a resetting biasing member (spring) associated with the piston to normally maintain it in one position; an actuator movable with the piston in response to increased pressure build-up to trigger the actuation of a different fire suppressant medium; and some device to deactivate the heat source to allow the biasing member to return the piston to its normal state. The primary object of this invention is an improved actuating device which allows a piston to automatically return to its normally cocked position. Write: NTIS.

PAT-APPL-6-161 253

Low Temperature Cross Linking Polyimides/300 **Polyimides réticulés préparés à basse température/300**

Filed June 20, 1980, by NASA. A way of forming a prepolymer polyimide which can be cross-linked at a relatively low temperature is disclosed. Usually a polyimide is formed by cross linking a prepolymer formed by reacting a polyfunctional ester, a polyfunctional amine, and an end-capping unit. By providing a styrene derivative end-capping unit, the prepolymer is curable at a temperature of about 175 to 245 C. Write: NASA, Lewis Research Center, 21000 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113, U.S.A.

PAT-APPL-6-161 254

A Silicon-Slurry/Aluminide Coating/300 **Revêtement constitué d'une boue de silicium/aluminure/300**

Filed June 20, 1980, by NASA. A low cost coating is disclosed which protects metallic base system substrates from high temperatures, high gas velocity oxidation, thermal fatigue and hot corrosion. The coating is particularly useful for protecting vanes and blades in aircraft and land based gas turbine engines. A lacquer slurry comprising cellulose nitrate containing high purity silicon powder is sprayed onto the superalloy substrates. The silicon layer is then aluminized to complete the coating. The Si-Al coating is less costly to produce than advanced aluminides and protects the substrate from oxidation and thermal fatigue for a much longer period of time than the conventional aluminide coatings. While more expensive Pt-Al coatings and physical vapor deposited MCrALY coatings on certain superalloys in high gas velocity oxidation and thermal fatigue. Also, the Si-Al coating increased the resistance of certain superalloys to hot corrosion. Write: NASA, Lewis Research Center, 21000 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113, U.S.A.

PAT-APPL-6-153 240

JFET Oscillator/300 **Oscillateur JFET/300**

Filed May 27, 1980, by NASA. A high frequency oscillator circuit is described. The circuit uses a low cost junction type field effect transistor (T sub 1) with a tuned circuit connected to its gate. The frequency of operation is determined by the tuned circuit and the capacitance reflected from the source to the gate. The transistor is matched to the frequency of operation so that this frequency falls within the roll-off portion of the transistor's transconductance verses frequency curve, above the 3 db point in frequency. Phase shifting necessary to sustain oscillation occur to the operation of the transistor in the roll off portion of the curve and the addition of a phase shifting network (R sub 1 C) at the source. The resulting oscillator is small, stable, linear, and inexpensive. 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, U.S.A.

PAT-APPL-6-153 246

An Implantable Electrical Device/300 **Dispositif électrique implantable/300**

Filed May 27, 1980, by NASA. A fully implantable and self-contained therapeutic device for stimulating the regeneration of severed nerves by electrical energy is disclosed. The device is composed of a flexible electrode array for surrounding damaged nerves and a signal generator for driving the electrode array with periodic electrical im-

pulses of nanoampere magnitude to induce regeneration of the damaged nerves. 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, U.S.A.

PAT-APPL-6-161 255

Cell and Method for Electrolysis of Water and Anode Therefore/300

Cuve, anode et méthode d'électrolyse de l'eau/300

Filed June 20, 1980, by NASA. An electrolytic cell for the conversion of water vapor to oxygen and hydrogen is disclosed. The electrolytic converter includes an anode comprising a foraminous conductive metal base member having a coating thereon of 65-85 weight percent iridium oxide and 15-35 weight percent of a high temperature resin binder. Also included are a matrix member and a cathode, with the matrix member containing an electrolyte and the cathode being substantially inert to the electrolyte. The foraminous metal member is most desirably expanded tantalum mesh, and the cell desirably includes reservoir elements of porous sintered metal in contact with the anode to receive and discharge electrolyte to the matrix member as required. Upon entry of a water vapor-containing airstream into contact with the outer surface of the anode and thence into contact with iridium oxide coating, the water vapor is electrolytically converted to hydrogen ions and oxygen with the hydrogen ions migrating through the matrix to the cathode and the oxygen gas produced at the anode to enrich the air stream passing by the anode. 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, U.S.A.

PAT-APPL-6-163 838

Preparation of Perfluorinated 1,2,4-Oxadiazoles/300

Préparation de 1,2,3-Oxadiazoles perfluorés/300

Filed June 27, 1980, by NASA. A method of preparing fluorinated alkyl or alkylether 1,2,4-oxadiazoles is disclosed. The oxadiazoles are synthesized by cyclizing the corresponding alkyl or alkylether imidoylamidoximes in vacuo or in an inert atmosphere at a temperature within the range of 40 to 100 C for a period of 8 to 144 hours in the presence of an acid compound which can accept ammonia to form a salt. The imidoylamidoximes usable in this process may be either polymeric or nonpolymeric. As a result of the low cyclization temperatures, the quality and quantity of the 1,2,4-oxydiazole polymers are better than other disclosed processes. Write: NASA, Ames Research Center, Mail Code: 200-11A, Moffett Field, California 94035 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, U.S.A.

PAT-APPL-6-163 839

Preparation of Perfluorinated Imidoylamidoximes/300

Préparation d'imidoylamidoximes perfluorées/300

Filed June 27, 1980, by NASA. A method of preparing perfluorinated imidoylamidoximes is disclosed. The imidoylamidoximes are synthesized by the condensation of a perfluorinated nitrile with a perfluorinated amidoxime in vacuo or in an inert atmosphere at a temperature within the range of about 20 to 70 C for a period of 24 to 240 hours. When both the nitrile and the amidoxime reactants are difunctional, oligomeric or polymeric product are obtained, which, after cyclization of the imidoylamidoxime groups to 1,2,4-oxadiazole linkages, yield excellent heat, chemical, and solvent resistant elastomers. Write: NASA, Ames Research Center, Mail Code: 200-11A, Moffett Field, California 94035 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, U.S.A.

PAT-APPL-6-116 310

Autocatalytic Coal Liquefaction Process/300

Procédé autocatalytique de liquéfaction des charbons/300

Price per copy from NTIS: PC U.S. $6.00/MF U.S. $3.50, filed January 28, 1980, by NASA. An improved process is disclosed for liquefying coal in which coal minerals at high content are utilized as a hydrocracking catalyst. A slurry of 10 to 60% by weight of coal in recycled liquefied coal product which contains 15% to 30% by weight of coal minerals, is pressurized with excess hydrogen to a pressure of 2,000 to 4,000 psi and heated to a temperature of 450 to 550 C. The coal minerals autocatalytically convert coal solids to a low viscosity liquid product and to gas product in high yields while reducing oxygen, nitrogen and sulfur content of the coal product as compared to other coal liquefaction processes under development. Write: Mr. Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code:

180-601, 4800 Oak Grove Drive, Pasadena, California 91103 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014, U.S.A.

PAT-APPL-6-161 257

Improved Method for Driving Two-Phase Turbines with Enhanced Efficient/300

Méthode améliorée d'entraînement plus efficace de turbines à deux étages/300

Filed June 20, 1980, by NASA. A method is disclosed for driving a two-phase turbine characterized by an output shaft having at least one stage including a bladed rotor connected in driving relation with the shaft. A two-phase fluid is introduced into the stage at a known flow velocity and caused to pass through the rotor in order to impart angular velocity. The speed of the rotor is controlled so that the angular velocity of the blade tips is equal to at least 50% of the velocity of the flow of the two-phase fluid. Write: Mr. Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code: 180-601, 4800 Oak Grove Drive, Pasadena, California 91103 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014, U.S.A.

PAT-APPL-6-122 335

Fiber Optic System for Transmission of Video Signals by Pulse-Frequency-Modulation/300

Système à fibres optiques de transmission de vidéosignaux par modulation de fréquence d'impulsions/300

Price per copy from NTIS: PC U.S. $6.00/MF U.S. $3.50, filed February 19, 1980, by the Department of the Navy. This document discloses a fiber optic system utilizing pulse-frequency modulation (PFM) for transmission of video information signals substantially enhances the signal-to-noise ratio of the transmitted video signals. FM processing gain is realized together with system noise reduction which results from operation of the fiber optic components in a pulsed mode. The amplitude of a video signal modulates the repetition frequency of a stream of narrow light pulses emitted by a laser diode. The pulses are transmitted through a low loss, wideband optical fiber to an avalanche photodiode biased at an optimum gain point. Further improvement is possible when preemphasis processing of the video signal is performed prior to transmission. Write: Department of the Navy.

PAT-APPL-6-126 590

Transducer Array Crossover Network/300

Filtre séparateur pour réseau de transducteurs/300

Filed March 3, 1980, by the Department of the Navy. A crossover network is coupled to each transducer in an array of acoustic transducers, each transducer having a different frequency band, and all of the crossover networks being coupled in parallel to a single driving amplifier. Each crossover network includes a network inductance connected in parallel with a transducer capacitance to form a parallel LC circuit, the resonant frequency of such circuit being equal to the resonant frequency of a transducer RLC series circuit. The network inductance of each network is coupled to the amplifier in series with a driver inductance and a driver capacitance, which are respectively equal to the inductance and capacitance of the RLC series circuit of a transducer. Write: Department of the Navy.

PAT-APPL-6-137 066

Multiwavelength Self-Pumped Solid State Laser/300

Laser semiconducteurs à auto-pompage et à nombreuses longueurs d'onde/300

Filed April 3, 1980, by the Department of the Navy. A new class of solid-state laser is disclosed which employs self-pumping from internal laser transitions to achieve inversion in other transitions. A LiYF4 laser having an activator of trivalent holmium is pumped by a standard flashlamp or by a double Nd laser to populate the 5S2 manifold. Inversion is achieved betwen 5S2 and 515 at 1.4 micrometers. Employing appropriate mirrors, inversion is then produced between 515 and 517 at 1.7 micrometers. Finally inversion is obtained between 517 and 518 at 2.06 micrometers. Write: Department of the Navy.

PAT-APPL-6-138 773

Small Hydrophone that is Directional at Low Frequencies/300

Petit hydrophone directif aux basses fréquences/300

Filed April 10, 1980, by the Department of the Navy. This document discloses a small hydrophone that is directional at low frequencies. Directional characteristics are achieved by making the device small compared to the wavelength of the wave detected by exploiting the directionality of Rayleigh scattering. The hydrophone includes two small-diameter piezoceramic shells, one larger than the other, mounted in rubber rings a fixed distance from each other with their centers on the same horizontal plane within a long, expanded-metal cylinder. The metal cylinder is covered by a rubber boot to ensure a water tight housing. Both hydrophones are omnidirectional in the horizontal plane and each has a sensitivity that is constant over the desired frequency range. The device can be used for detecting low-frequency sound waves in a fluid medium. A similar arrangement of antennas can be used to detect electromagnetic waves in free space or a dielectric medium. Write: Department of the Navy.

PAT-APPL-6-139 077

Soil Stabilization Materials and Methods/300

Matériaux et méthodes de stabilisation des sols/300

Filed April 10, 1980, by the Department of the Navy. This document discloses a method for stabilizing the soil wherein a liquid selected from the group consisting of a mixture of dimer diisocyanate and dimer diamine; and a mixture of dimer diisocyanate and a ketimine derivative of dimer diamine is applied to the soil and allowed to polymerize to form an elastomeric resin which bonds the soil particles together to form a composite structure. Write: Department of the Navy.

PAT-APPL-6-140 352

Multi-Color Tunable Filter/300

Filtre accordable polychrome/300

Filed April 14, 1980, by the Department of the Navy. A semiconductor multi-color tunable filter is created by multiple epitaxial layers of varying composition. An AC modulation voltage is superimposed on a sweep bias, periodically shift the fundamental absorption edge of each individual epitaxial layer. This arrangement permits a unique voltage to be associated with a particular color. A lock-in filter matches colors observed at a detector with the voltage present for a given observation. Write: Department of the Navy.

PAT-APPL-6-140 398

Two Color Narrow Bandwidth Detector/300

Détecteur dichromatique à largeur de bande étroite/300

Filed April 14, 1980, by the Department of the Navy. This document discloses a narrow two color semiconductor detector created from the built in field between epitaxial layers due to interface traps. Opposite polarity on opposite sides of the interface result in a net photocurrent created on each side which flows in opposing directions. The substrate supporting the epitaxial layers provides a cutoff filter range for light entering through the substrate. Write: Department of the Navy.

PAT-APPL-6-143 257

Electrical Waveform Synthesizer/300

Synthétiseur électrique de formes d'onde/300

Filed April 24, 1980, by the Department of the Navy. An electrical waveform synthesizer comprising a shift register loadable by digital values provided by a programmable logic means is presented. The loaded values correspond to analog waveform amplitudes with the number of samples of the values being inversely proportional to the waveform frequency to decrease harmonic content of the waveform. The values are stepped along the shift register stages by a clock frequency signal applied to a clock input of the shift register. Outputted values can be recirculated back to the input of the register for providing a repetitious waveform or can be continuously inputted and outputted without recirculation. The bandpass of the filter is adjustable by the logic means according to the frequency and complexity of the waveform. The output waveform frequency can be shifted by shifting the clock frequency generated by a fine frequency vernier comprising a plurality of adder circuits connected in series, each adder circuit being loadable with digital values by the logic means with the output of the respective adder being recirculated to the respective adder input under the control of a precision oscillator. Write: Department of the Navy.

PAT-APPL-6-143 398

Method and Apparatus for Obtaining Enhanced NMR Signals/300

Méthode et appareil servant à obtenir des signaux NMR enrichis/300

Price per copy from NTIS: PC U.S. $6.00/MF U.S. $3.50, filed April 24, 1980, by the Department of the Navy. This document discloses a method and device of NMR spectroscopic analysis of liquids whereby magnetization of the spins of one nuclear species is spin-locked along a certain direction and the spin polarization of this species is transferred to a second species through the modulation of the amplitude and/or phase of rf fields applied to one or both species. The NMR signal can be detected directly from the second species. Write: Department of the Navy.

PAT-APPL-6-143 399

Pulse Compression System/300

Système de compression d'impulsions/300

Price per copy from NTIS: PC U.S. $6.00/MF U.S. $3.50, filed April 24, 1980, by the Department of the Navy. This document discloses a system for polyphase encoding transmitted pulses of energy and for decoding the received signals to enhance returns from the range interval being examined during a particular processing period and attenuate returns from contiguous range intervals (pulse compression). The system includes a decoding device which comprises a delay circuit having N distributed outputs including its input for producing a uniform delay between adjacent outputs corresponding to N inputted elements of a received phase-coded signal of length N-squared; a conjugator circuit coupled to the first N/2 successive outputs of the delay circuit; a first signal-combining circuit coupled to the conjugator circuit and to the last N/2 successive outputs of the delay circuit; a multiplier circuit coupled to the first signal-combining circuit; and second signal-combining circuit coupled to the multiplier circuit. Write: Department of the Navy.

PAT-APPL-6-147 412

Thermochemical Energy Transport Process/300

Procédé thermochimique de transport d'énergie/300

Filed May 6, 1980, by the Department of the Navy. The CO2-CH4 reforming-methanation chemical cycle provides an attractive means of transporting energy, such as solar energy, from the place of generation to the place of use. CO2/CH4 molar ratios of 2.0-7.0 permit the use of low-temperature pipelines, while lowering the carbon removal temperature of the system. Catalyst specificity is required to provide high methanation reaction temperature without carbon deposition. Write: Department of the Navy.

PAT-APPL-6-147 413

Switching Quadrature Detector/300

Détecteur de quadrature à commutation/300

Filed May 6, 1980, by the Department of the Navy. This document discloses a quadrature detector wherein the I and Q quadraturely related signals are produced and processed in the same channel rather than parallel channels. A local oscillator feeds a 90 deg phase splitter which produces a pair of quadrature signals. These are alternately fed to a balanced modulator for mixing with an input R.F. signal. The sum and difference frequency signals are fed through a low-pass filter which passes only the I and Q difference-frequency signals. These are then separated to provide two output signals corresponding to quadrature components of the input R.F. signal. Write: Department of the Navy.

PAT-APPL-6-147 992

Low-Barrier-Height Epitaxial Ge-GaAs Mixer Diode/300

Diode pour mélangeur à arséniure de gallium, couche épitaxiale et faible barrière de potentiel/300

Filed May 8, 1980, by the Department of the Navy. This document discloses a high-frequency (9.3 GHz -94 GHz) gallium arsenide (GaAs) mixer diode having a low Schottky barrier height (approximately 0.4 eV) for operating at low noise figure levels at low local oscillator power levels (0.25 mW - 0.75 mW), includes a GaAs substrate, a thin (about 100A) epitaxial layer of germanium on the substrate, the epitaxial germanium being deposited at a rate of about 6 a per minute and at a substrate temperature in the range of 325 C-425 C, a layer of silicon dioxide (SiO2), the SiO2 being etched, and layers of platinum-titanium-molybdenum-gold on the growth of epitaxial germanium. Contact

areas are then plated with a layer of gold. Ohmic contact to the GaAs substrate side includes a deposition of gold-germanium alloy. Each of the layers are individually deposited at certain temperatures and thicknesses in a vacuum. Write: Department of the Navy.

PAT-APPL-6-150 381

Closed Torque Test Machine/300

Générateur de couples fermés/300

Filed May 16, 1980, by the Department of the Navy. This document discloses an apparatus for testing mating splined parts under rotational torsional loading at selectively variable axial misalignments. The apparatus is in the form of what is commonly known as a four-square test machine to which a locked-in static torque is applied to simulate actual loading on splined connector parts during rotation. Write: Department of the Navy.

PAT-APPL-6-150 389

Pivotal Support with Independent Adjusting Elements and Locking Means/300

Pivot de support à éléments réglables et à dispositifs de blocage indépendants/300

Filed May 27, 1980, by the Department of the Navy. This document discloses an optical element support capable of pivoting an optical element on its horizontal and vertical axes. The pivoting adjustments are facilitated by spaced threaded rods screwed into a support element and abutting a surface element extending from a receptacle containing the optical element. The surface element is capable of flexure without causing distortion of the receptacle. The optical element support has a locking element which prevents pivoting in the locking mode. Write: Department of the Navy.

PAT-APPL-6-152 456

Seafloor Attachment Bolts/300

Boulons de fixation au plancher océanique/300

Filed May 22, 1980, by the Department of the Navy. This document discloses a fastener assembly for securing structures to the seafloor including a shaft of circular cross-section having a frusto-conically shaped head on a leading end for insertion into a prepared borehole and a mandril section at the other end having annular grooves around its perimeter. An expansible sleeve is disposed around the shaft in interference fit with the borehole so that when the shaft is pulled upward, the head will force the expansible member to expand against the sides of the borehole. The shaft is disposed with the grooved section extending through an aperture in a workpiece and a malleable collar is positioned around the shaft resting on the workpiece. A conventional blind riveting installation tool may be used to pull the shaft upward to engage the expansible sleeve in the borehole and to swage the malleable collar to the grooved shaft against the workpiece. Write: Department of the Navy.

PAT-APPL-6-153 114

Developer for Dry Silver Paper/300

Développement à sec des papiers argentiques/300

Filed May 27, 1980, by the Department of the Navy. This document discloses a thermal processing device for dry photographic paper using a minimum amount of electrical energy. A cylindrical drum is provided with heating elements on the inside surface and current is applied through a slip ring assembly. A non-metallic belt, substantially equal in width to the length of the cylindrical drum, is supported by rollers so that a portion of the belt engages the cylindrical drum. Rotation of the cylindrical drum causes rotation of the belt and a sheet of paper fed into the device is sandwiched between the belt and drum and is heated thereby to develop the dry photographic paper. Write: Department of the Navy.

PAT-APPL-6-153 123

Combination Exhaust and Relief/Venting Valve/300

Soupape combinée d'échappement, de sûreté et de mise à l'air libre/300

Filed May 27, 1980, by the Department of the Navy. This document discloses a steam valve for use on the low pressure exhaust side of a steam turbine including a housing having an inlet and two outlets with valves upstream of the outlets for selectively permitting steam flow from the inlet to either or both the outlets. The valve arrangement in-

cludes a main valve, which acts as a turbine exhaust isolation valve, and an auxiliary valve which acts both as a relief valve and a personnel protection valve. During operation, when the main valve is open, the auxiliary valve acts as a spring loaded relief valve to relieve upstream over-pressurization, and, when the main valve is closed, the auxiliary valve is restrained open to act as a personnel protection valve to bleed or vent any leaked steam to the atmosphere. Write: Department of the Navy.

PAT-APPL-6-153 473

Precision Laser Pulse Radiometer/300

Radiomètre de précision à impulsions lasers/300

Filed May 27, 1980, by the Department of the Navy. This document discloses an apparatus for automatically detecting and measuring the energy of laser pulses over a wide range of energy levels and in the presence of high ambient light levels. The current produced by a laser pulse striking a photoconductive detector is integrated by a capacitor to obtain a voltage across the capacitor which is proportional to the total energy incident of the detector during the pulse. The total energy of the pulse is then determined by measuring the time from when the capacitor voltage crosses a reference level during current integration to the time when the capacitor voltage, discharging through a resistor recrosses the reference voltage. The leading edge of the capacitor charging voltage is used to couple a high frequency oscillator to the input of a counter. The oscillator is then decoupled from the counter when the voltage of the discharging capacitor crosses a reference level. The count in the counter is transferred to a shift register for transmission to a data processing device. The effects of the ambient light are automatically compensated for with an interrupted feedback loop in which the loop is opened when a laser pulse is detected and the feedback held at the prepulse level for the duration of the RC discharge time. Write: Department of the Navy.

PAT-APPL-6-153 987

Magnetoplasmadynamic Switch/300

Commutateur magnétoplasmadynamique/300

Filed May 28, 1980, by the Department of the Navy. This document discloses a magnetoplasmadynamic switch adapted to be coupled in parallel with an inductive energy storage circuit carrying current through an initially closed circuit interrupter. The switch includes an electrode spaced by a gap from an arcjet source which is triggered by a capacitor. The circuit interrupter is opened after the plasma jet is established between the source and the electrode, and the energy storage circuit current is conducted by the magnetoplasmadynamic switch until the dielectric strength of the circuit interrupter reaches a satisfactory level. Another switch is then closed providing a low impedance conduction path parallel to the arcjet source current. The decay of arc current disrupts the magnetoplasmadynamic force balance, cutting off the plasma jet. Plasma already in the gap, however, continues to leave at high speed reducing the density of conducting material below that needed for high conductivity, thereby opening the switch on the timescale of gap distance divided by plasma jet speed. The current from the inductive energy storage circuit is then diverted into a parallel circuit including an inductive load. Write: Department of the Navy.

PAT-APPL-6-157 126

Phase-Slipped Time Delay and Integration Scanning System/300

Système de balayage à intégration et retard par déphasage/300

Filed June 6, 1980, by the Department of the Navy. This document discloses a scanning system wherein a linear array of N detector elements having a uniform spacing of X cm between their centers is oriented parallel to the line scan dimension of a raster so that each element of the array optically scans the entire field of view at a rate of V cm. per second. The detector elements are sampled every t sub s seconds and each produces, when sampled, an output signal proportional to the integrated energy exposure thereof between samplings. The output signals of the various detector elements are delayed as a function of each element's position within the array and the line scan rate. The delayed imaging signals add to provide an improved signal to noise ratio. The variability of the waveform of the composite output signal for small-sized distant targets is minimized by introducing a progressively increasing phase shift in the relative timing of the sampling signals and initial contact of the image at successive detector elements. the composite output signal of the array then corresponds to an average over all possible relative timings of sampling signals and initial contact of the image at a detector element. Write: Department of the Navy.

PAT-APPL-6-157 925

Micro-Power Magnetometer/300

Magnétomètre de très faible consommation/300

Filed June 6, 1980, by the Department of the Navy. This document discloses a micro-power magnetometer which can be driven by an oscillator with low power expenditure on the order of 50 to 150 microwatts. The low power feature is provided for by using an oscillator circuit with appropriate resistance which lengthens the base current pulse initiated by turn on thus decreasing the repetition rate, duty cycle and total on time. The drive and control windings are wound on a magnetic core. The drive winding is coupled to the collector of a transistor and the control winding is coupled to the base of the transistor. Detection of an ambient magnetic field is done with additional windings on the core which are connected to a balanced pulse-average difference detector. The magnetometer has a dynamic range which is very linear and large in comparison to the earth's magnetic field. Write: Department of the Navy.

PAT-APPL-6-160 034

Heterojunction and Schottky Barrier EBS Targets/300

Cibles de faisceaux électroniques à jonction hétérogène et barrière de Schottky/300

Filed June 16, 1980, by the Department of the Navy. A metal semiconductor field effect transistor (MESFET) has a Schottky barrier gate formed by depositing an electron transparent electrode to allow its modulation by electric fields and electron beams. The electrode is coupled to an electric field source which is maintained constant or is varied for changing the current flow between the source electrode and drain electrode. An impinging modulating electron beam is directed through the transparent gate to further modulate the current flow between the source electrode and drain electrode and to effect an overall gain in the neighborhood of 1,000,000. The accelerating potential of the electron beams is of at least an order of magnitude less than conventional cathode ray tube potentials to reduce the possibility of damage to the MESFET material and, since a number of the MESFETS can be modulated by one or more electron beams, they have wide frequency selectivities broad bandwidths and high switching time capabilities. Write: Department of the Navy.

PAT-APPL-6-160 050

Melting Method for High-Homogeneity Precise-Composition Nickel-Titanium Alloys/300

Méthode de fusion d'alliages de nickel-titane de composition précise et de grande homogénéité/300

Filed June 16, 1980, by the Department of the Navy. This document discloses a method of producing homogeneous nickel-titanium base shape change memory alloys which includes the following steps in order: converting a conventionally prepared nickel-titanium base shape change memory alloy into particles which are in the form of powder, shot, chips, or flakes; blending or mixing the nickel-titanium base alloy particles; melting the nickel-titanium base alloy particles; and allowing the molten nickel-titanium base alloy to solidify into a desired shape. Write: Department of the Navy.

PAT-APPL-6-160 697

Dead-Faced Electrical Connector with Electromagnetic Vulnerability Protection/300

Connecteur électrique à face morte avec protection contre les rayonnements électromagnétiques/300

Filed June 18, 1980, by the Department of the Navy. An electrical connector assembly is disclosed in which the receptacle components are shielded by electromagnetic radiation mask and in which no power is present at the front end of the receptacle when the receptacle is not connected to its mating electrical plug. Intermediate electrical contacts in the receptacle portion of the connector assembly completely close apertures in the mask when the receptacle is not mated and are moved from the mask apertures and into contact with the internal electrical conductors of the receptacle when engaged with the male electrical plug portion of the assembly. Write: Department of the Navy.

PAT-APPL-6-161 183

Integral-Shadow-Grid-Controlled Porosity Dispenser Cathode/300

Cathode émettrice à porosité commandée par grille intégrale/300

Filed June 19, 1980, by the Department of the Navy. In a controlled-porosity dispenser cathode of the type which has a foil with a plurality of holes covering the emitting material so that emitting material is dispensed through the holes to the electron-emitting surface of the foil and electrons are actually emitted through the holes and a small area surrounding each hole, a non emitting shadow grid is laid down on the surface of the foil in such a configuration that it does not obstruct any of the emitting holes, has the same shape as the control grid, and is substantially in precise registration with the control grid. Write: Department of the Navy.

PAT-APPL-6-162 347

Luminescent Hafnia Composition/300

Oxyde d'hafnium luminescent/300

Filed June 23, 1980, by the Department of the Navy. A cubic, yttria stabilized hafnia phosphor, doped with Ce(3+), has been discovered. The phosphor has a blue luminescense, peaking at about 4200A, with a secondary peak in the 3800-4000A region. The optimum composition is 3 HF2O:Y2O3:Ce(3+) where the Ce(3+) dopant ranges from 0.1-1.0 weight %. Write: Department of the Navy.

Licensing Opportunities Through V/O Licensintorg, USSR

The following technologies are offered for manufacture under license in Canada. When requesting additional information, please quote the reference number. Write: V/O Licensintorg, 31 Ul. Kahovka, 113461 Moscow, USSR and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 23 Starokonyushenny Pereulok, Moscow, USSR.

V-182. Anti-Friction Material Resistant to Jet Erosion/300

An anti-friction material incorporating graphite, lead, phenol-formaldehyde resin, talcum, hexamethylenetetramine and calcium hydroxide. The material is manufactured by hot moulding the resin for sliding friction bearings and end-face sealing rings in fresh water, sea water and a number of corrosive media. The material does not swell in water and possesses excellent resistance to jet erosion. Sealing rings for water pumps for cars, marine engines and locomotives are already being mass produced in the Soviet Union. Properties — specific gravity = 3. Coefficient of friction (on steel in water) = 0.08 to 0.10.

IV-60. Device for Detection of Wear in Casing Pipes/300

The device is an electromagnetic profilograph designed to inspect the casing strings in oil and gas wells for technical condition to determine the amount and mode of wear and also to determine the inside diameters, ovality, distortions, ruptures and other troubles likely to occur in pipes. The profilograph apparatus includes a set of borehole instruments lowered on a logging cable, a control panel, a recorder and standard connections. The profilograph operates in combination with any logging station equipped with a three-core logging cable and a recorder. Data on the lateral profiles, at the places where the borehole instrument is stopped, are registered on the profilograph recorder. The results of the spiral scanning of a casing string obtained in the course of motion of the borehole instrument are registered on the logging station recorder. Timely detection of dangerous wear in pipes makes it possible to prevent breakdowns in wells. In some instance the inspection of casing strings proved that the casing pipes were worn to a lesser degree than was anticipated enabling operations to continue. Due to this, it is possible to simplify the design of wells, reduce consumption of pipes and materials, and to obtain an advantage in drilling time.

Possibilités d'acquisition de licences par l'intermédiaire de V/O Licensintorg, URSS

Les techniques suivantes sont proposées pour la fabrication sous licence au Canada. Lors de la demande de renseignements supplémentaires, veuillez citer le numéro de référence. Écrire à: V/O Licensintorg, 31, rue Kakhovka, 113461 Moscou (URSS) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 23 Starokonyushenny Pereulok, Moscou (URSS).

V-182. Matériau antifriction résistant à l'usure, pour la fabrication des bagues d'étanchéité des pompes/300

Le matériau est composé de graphite, de plomb, de résine de phénol formaldéhyde, de talc, d'hexaméthylènetétramine et de chaux vive. Le matériau moulé à chaud est utilisé pour fabriquer des paliers lisses et des bagues d'étanchéité de pompes à eau douce, eau de mer et certains liquides corrosifs. Il ne gonfle pas dans l'eau et résiste très bien à l'usure. Des bagues d'étanchéité de pompes à eau d'automobiles, des moteurs marins et moteurs de propulsion de locomotives sont déjà produites en série en U.R.S.S. Propriétés: Masse spécifique: 3.0. Coefficient de frottement sur l'acier (dans l'eau): 0.08 - 0.1.

IV-60. Appareil de détection d'usure du tubage/300

Il s'agit d'un profilographe électromagnétique destiné à inspecter le tubage des puits de pétrole et de gaz pour y déterminer le genre et l'ampleur de l'usure, et obtenir des renseignements sur les diamètres internes, l'ovalisation, la distorsion, les ruptures et autres ennuis possibles. Le dispositif de profilographie comporte une série d'instruments de sondage descendus au bout d'un câble de carottage, un tableau de commande, un enregistreur et les raccordements habituels. L'appareil fonctionne avec tout poste de diagraphie muni d'un câble à trois âmes et d'un enregistreur. Les données sur les profils latéraux, là où s'arrête l'instrument de sondage, s'inscrivent sur l'enregistreur du profilographe. Les résultats du balayage en spirale d'une colonne de tubage obtenu lors du mouvement de l'instrument de sondage sont inscrits sur l'enregistreur du poste de diagraphie. La détection opportune de l'usure du tubage permet d'éviter les avaries sur les puits. Dans certains cas, l'inspection d'une colonne de tubage permet d'établir que l'usure des tuyaux est moindre que prévue, favorisant ainsi la poursuite des travaux. Il est donc maintenant possible de simplifier la conception des puits, de réduire le volume de matériel et de tuyaux utilisés et de réduire également le temps de forage.

IV-61. Device for Hydraulic Perforation and Hydraulic Fracturing of Oil-Bearing Beds/300

The device is intended for directional zone-by-zone hydraulic perforation and hydraulic fracturing followed by treatment of a productive bed. It consists of a housing and extending nozzles. The device complete with an anchor and centralizer is lowered into a well and performs the treatment of the bottom hole zone without packers. Design features of the device make it possible to accomplish the directional zone-by-zone sand jet perforation, hydraulic fracturing and any kind of treatment inside the bed (by application of hydrochloric acid, mud acid, methanol, surface-active agents and other substances) in a single and uninterrupted process. The device allows for making water shut-off screens at precisely planned depths by injection of the required binding agents into the fractures opened according to the method herein offered. The offered devices permit the required number of hydraulic fractures to be obtained at predetermined distances in one lowering of the device into the well. The technological procedure consists in the following: at first the string is subjected to hydraulic perforation, then follows the hydraulic fracturing, treatment of the bed with the required agents, filling of fractures with sand, etc., without lifting the device from the well. To perform the above operations in the next zone, the device is displaced through a given distance and the operations are repeated. In the aforementioned operations the flow rate of fluid can be changed in a wide range. The distinguishing feature of the method for directional zone-by-zone opening of a bed with the use of the offered device is that by changing the flow rate of fluid injected through the device nozzles, the pressure in the perforation channel is maintained in accordance with a definite mathematical relationship. Mass and overall dimensions of the device depend on diameter of a production string in which the device is used.

VI-68. Fabrication of Oil Ducts in the Cores of Power Transformers/300

Know-how licensing rights are offered for a new design shape for corrugations which makes it possible to fabricate corrugated sheets from the same material as is used for the core of power transformers, namely from electrical steel sheets 0.35 to 0.5 mm thick, without disturbing the structure of the material. The new device corrugates blanks cut to a certain length or continuous, to be cut to the requisite length at a later time. It can also make corrugations at an appropriate angle to the axis of the blank. Corrugations are by stamping. The device offered herein incorporates a shaping punch and a die, a break and a feed mechanism which set the desired pitch of corrugations, limit stops to limit the to-and-fro travel of the blank fed into the corrugating station, and guides between which the blank travels. The good quality of the corrugated oil ducts thus fabricated improves the quality of the core and of the transformer as a whole. When used commercially, the new device has made it possible to mechanize the fabrication of oil ducts, to raise labour productivity by 20 percent, to improve the quality and realiability of transformers, and to save electrical insulating materials.

IV-61. Dispositif pour la perforation et la fracturation hydrauliques des lits pétrolifères/300

Le présent dispositif est destiné à la perforation et à la fracturation hydrauliques par zones de lits pétrolifères productifs avant qu'ils ne soient traités. Une fois équipé d'une ancre et d'un centreur, le dispositif, qui se compose d'une enveloppe et de buses, est descendu dans le puits où il peut attaquer la zone inférieure sans l'aide de packers. Grâce à ses caractéristiques de conception, il peut entreprendre sans interruption et simultanément la perforation par jet de sable par zones, la fracturation hydraulique et le traitement d'un lit, que ce soit à l'acide chlorhydrique, à l'acide à boue, au composé tensio-actif ou par toute autre substance. Selon le procédé décrit ici, le dispositif permet la fermeture des eaux exactement aux profondeurs prévues par l'injection dans les fractures de l'agglutinant approprié. En une seule descente dans le puits, il peut effectuer le nombre voulu de fractures hydrauliques aux profondeurs prescrites. Le procédé technique consiste à exécuter tout d'abord la perforation hydraulique de la couche géologique, puis la fracturation du lit pétrolifère avant de soumettre celui-ci au traitement prévu à l'aide des agents appropriés et, enfin, le remplissage au sable des fractures, le tout sans sortir le dispositif du puits. Pour soumettre la zone voisine au même procédé, il suffit de déplacer le dispositif à la distance voulue et de répéter les mêmes opérations. Tout au long de ce procédé, le débit du fluide utilisé peut varier selon une large plage de réglage. La particularité du procédé appliqué par le présent dispositif à l'ouverture directionnelle par zones d'un lit pétrolifère est que l'on peut maintenir constante la pression dans le canal de perforation en faisant varier le débit du liquide injecté par les buses de l'appareil selon un rapport mathématique bien défini. Le poids et les dimensions hors-tout du dispositif dépendent du diamètre du tube de production auquel il est destiné.

VI-68. Fabrication de canalisations d'huile pour le noyau de transformateurs d'alimentation/300

Les droits d'utilisation de "know-how" sont offerts pour une nouvelle forme d'ondulations permettant d'onduler des feuilles de matériaux utilisés pour les noyaux de transformateurs, à savoir des feuilles d'acier pour utilisation en électricité, de 0,35 à 0,5 mm d'épaisseur, sans en modifier la structure. Le nouveau dispositif ondule par étampage des tôles vierges, soit coupées à la longueur voulue, soit continues et destinées à une coupe ultérieure. Il peut aussi onduler les feuilles à l'angle voulu par rapport à leur axe. Il comprend une presse de mise en forme, une matrice, des mécanismes d'interruption et d'alimentation qui règlent l'angle des ondulations, des butées qui limitent le parcours avant-arrière de la feuille vierge introduite dans le poste d'ondulation, et des guide-feuilles. La grande qualité des canalisations d'huile ondulées améliore celle du noyau et, par conséquent, du transformateur. Employés à l'échelle industrielle, le dispositif a permis de mécaniser la fabrication des canalisations d'huile, a augmenté de 20 pour cent la productivité de la main-d'oeuvre, a amélioré la qualité et la fiabilité des transformateurs et a permis d'économiser les isolants.

II-207. Hydrodynamic Unit for the Preparation of Fine Emulsions/300

The novel hydrodynamic unit opens up new vistas in the commercial implementation of ultrasonic techniques, makes for the practical embodiment of laboratory findings with minimal expenses and slight modifications of the existing apparatus, automatic or flow lines, and the fact that the unit in question is conducive to the development of new, highly efficient production processes in diverse industrial fields. Unlike the best available hydrodynamic transducer, the design of the CRA-3 unit, provides for the generation of a strong acoustic field having the desired frequency and acting upon a fluid medium moving at a high flow rate. If necessary, the fluid medium may be subjected repeatedly to acoustic field effects by causing said medium to circulate in a closed loop or else by providing medium circulation in a stream confined to the apparatus volume. The fineness of emulsion particles obtained per production cycle is 1 μm. The CRA-3 unit is being used to advantage in the following industries: in metal working, for the preparation of fine emulsions or suspensions of superior quality; in the machine-building industry, the present unit is useful for the preparation of fine petroleum fuel-in-water emulsions which, when used in internal combustion engines, raise the octane rating and increase the engine power; in the petrochemical industry, for blending several petroleum grades with a view to obtaining the blend having the desired physico-chemical properties; in metallurgy, for water introduction into masout or waste petroleum products with a view to employing the thus-obtained emulsion as an additional fuel in the blast-furnace process in place of expensive and scarce coke; in the electrical industry, for the intensification of heat and mass transfer processes; in the coal industry for preparing the fluid to be used in hydraulic systems of mechanized complexes; in the food industry, for dairy product homogenization; in the rubber industry, for recovering rubber wastes by communication to a particle size of 5-7 μm; in the paint and varnish and the perfume industry, for attaining a 100-fold reduction of the time required for grinding the starting materials.

II-207. Groupe hydrodynamique pour la préparation d'émulsions fines/300

Ce nouveau groupe hydrodynamique offre de nouvelles perspectives pour l'application commerciale de la technologie des ultrasons et permet d'utiliser à un coût minime des découvertes faites en laboratoire contre de légères modifications du matériel déjà en place, conduites à commande manuelle ou automatique, en plus de favoriser l'élaboration de nouveaux procédés de production à rendement élevé dans divers secteurs de l'industrie. Contrairement au meilleur transducteur hydrodynamique présentement sur le marché, le groupe CGA-3 peut engendrer un champ acoustique puissant à la fréquence désirée qui agit sur un fluide circulant à un débit élevé. Le cas échéant, on peut soumettre à plusieurs reprises le fluide aux effets d'un champ acoustique en le faisant circuler dans une boucle fermée ou dans un circuit contenu dans le groupe même. La finesse de l'émulsion obtenue par cycle de fonctionnement est de 1 μm. Le groupe hydrodynamique CGA-3 est utilisé avantageusement dans les secteurs industriels suivants: le travail des métaux, pour la préparation de particules fines en émulsion ou en suspension de haute qualité; la fabrication de la machinerie, pour la préparation d'émulsions fines de carburant dans l'eau qui permettent de réduire l'indice d'octane et d'augmenter la puissance des moteurs à combustion interne; la pétrochimie, pour le mélange d'essences de qualités diverses en vue d'obtenir un composé aux propriétés physico-chimiques recherchées; la métallurgie, pour le mélange de l'eau à du mazout ou à des produits pétroliers usés afin d'utiliser l'émulsion ainsi obtenue pour l'alimentation des hauts fourneaux à la place du coke, si rare et si dispendieux; la production de l'électricité, pour l'intensification des transferts de masse et de chaleur; l'industrie houillère, pour la préparation du fluide destiné aux circuits hydrauliques de complexes industriels automatisés; l'industrie alimentaire, pour l'homogénéisation des produits laitiers; l'industrie du caoutchouc, pour la récupération des déchets de caoutchouc par la réduction de leur taille à des dimensions de l'ordre de 5 ou 7 μm; l'industrie de la peinture, du vernis et du parfum, pour la pulvérisation de la matière première en 100 fois moins de temps.

V-196. Method and Installation for Sewage Water Decontamination/300

A license for a novel thermal method of sewage water decontamination and an installation for embodying the same. The new continuous installation for carrying out sewage water decontamination by the thermal technique is assembled from standard pieces of equipment: a disintegrator, a storage reservoir, a thermal regenerator (heat exchanger), a heating stage I jet apparatus, an intermediate tank with pump, a heating stage II jet apparatus, and a tube coil circulator. The installation provides for the decontamination of sewage water containing spore-forming and non-sporulating microorganisms as well as a disperse phase (particle size, up to 8 mm) and is capable of heating the sewage water being treated to a temperature of 130°C and upwards. The installation, according to the present license, is noted for its high decontamination efficiency owing to heating the sewage water practically instantaneously to the requisite temperature, to the absence of poorly heated zones, and also due to subsequent holding the sewage water under a pressure corresponding to the satura-

V-196. Méthode et installation pour la stérilisation des eaux usées/300

On demande une licence autorisant l'utilisation d'une nouvelle méthode thermique de stérilisation des eaux usées ainsi que l'installation de l'équipement nécessaire à son application. On peut réaliser ce nouveau type d'installation en continu à partir de pièces classiques d'équipement: un désintégrateur, un réservoir de stockage, un regénérateur thermique (échangeur de chaleur), un premier dispositif de chauffage par jet, un bassin intermédiaire équipé d'une pompe, un second dispositif de chauffage par jet et un circuit à serpentin. Notre méthode permet de stériliser des eaux d'égout (contenant des particules en suspension pouvant mesurer jusqu'à 8 mm) en éliminant les microorganismes se reproduisant par sporulation ou autrement; l'eau usée peut être chauffée jusqu'à 130°C et au-delà. D'après la licence actuelle, l'installation est d'une grande efficacité, car elle permet de chauffer l'eau à la température requise pour le traitement presque instantanément et de façon uniforme, puis de la maintenir à la pression correspondant à la température de saturation. On assure la conti-

tion temperature. Process continuity is attained as a result of maintaining the flow of the liquid in a pipeline system of a rated length, the pipeline system comprising a tube coil arranged in the form of a compact pack. In case the temperature to which the sewage water has been heated is below the requisite temperature of inactivation, the liquid being processed shall be automatically recycled to the storage reservoir for subsequent repeated thermal treatment. Starting the installation, controlling the process parameters and monitoring the process of decontamination are effected from a remote-control board.

IV-67. Plant for Complex Power-Technological Processing of Coal/300

This power-generating, fully automated fuel-producing and chemical processing plant (the 3TX-175 plant) is intended for the manufacture of solid pulverized fuel (semicoke and its fines which feature a high calorific power and are readily transportable to thousands of kilometers), tar and gas. The output of the plant is 175 t/h. Controlled from a central control board, the plant is intended for a highly intensive thermal processing (high-speed pyrolisis) of bituminous non-coking (mostly, brown) coals with a wide range of adjustment of the yield and the quality of solid, liquid and gaseous products. The plant is being employed in the USSR on a large industrial scale for complex power-technological processing of Kansk-Achinsk brown coal with the use of a high-speed pyrolisis according to a combined heat carrier flowsheet. This method is most effective for thermal treatment of solid fuels including low-grade bituminous and brown coals. In the already existing industrial plants, the rate of heating of lump fuel is less than 1°C/s, whereas in the 3TX-175 plant, where a pulverized fuel is employed in some of the stages of the flowsheet, the rate of heating of fine pulverized fuel particles may be as high as 1 million °C/s. This, combined with a short time of reaction, greatly (1.5-2 times) raises the yield and improves the quality of liquid products, as compared to the ordinary process of slow heating of fuel. Use of semicoke produced in the plant in power generation, metallurgy (for a partial replacement of the costly metallurgical coke) and other industries, provides considerable economy.

nuité de l'opération en déversant constamment les eaux dans un serpentin de longueur déterminée et agencé de manière compacte. Lorsqu'elles ne sont pas suffisamment chaudes pour être stérilisées, les eaux sont automatiquement renvoyées au réservoir de stockage où elles sont chauffées de nouveau. La mise en marche, la surveillance des paramètres et le contrôle de l'assainissement s'effectuent par commande à distance.

IV-67. Usine de transformation du charbon en produits combustibles/300

L'usine 3TX-175 de transformation chimique du charbon en produits combustibles est entièrement automatisée; elle est conçue pour produire des combustibles solides pulvérisés (semi-coke et ses fines caractérisés par leur pouvoir calorifique élevé et transportables directement sur de grandes distances), des goudrons et des gaz. La production de l'usine est de 175 t/h. Commandée à partir d'un pupitre central, l'usine fait appel à un procédé essentiellement thermique (pyrolyse rapide) de transformation de charbons bitumineux non cokéfiants (principalement des lignites) qui permet d'obtenir une vaste gamme de rendements et de qualités de produits solides, liquides et gazeux. L'usine 3TX-175 est employée en URSS à l'échelle industrielle pour transformer la lignite de Kansk-Achinsk en produits combustibles par un procédé de pyrolyse rapide selon un diagramme de circulation du caloporteur. Cette méthode est des plus efficaces pour le traitement thermique des combustibles solides, y compris les charbons bitumineux et les lignites pauvres. Dans les usines existantes, la température du combustible brut est élevée à raison de moins de 1°C/s, tandis que dans l'usine 3TX-175, où l'on utilise un combustible pulvérisé dans certaines étapes du diagramme de circulation, ce chiffre peut être porté à 1 million °C/h. Ce facteur, ajouté à un court temps de réaction, augmente considérablement (de 1,5 à 2 fois) le rendement et la qualité des produits liquides, par rapport au procédé classique de chauffage lent des combustibles. L'utilisation du semi-coke, produit par l'usine 3TX-175, dans les industries de production d'électricité, métallurgique (pour remplacer dans une certaine mesure le coke qui coûte cher) et autres, permet des économies considérables.

Manufacturing Opportunity Abroad/300

Kuala Lumpur — A large semi-governmental organization wishes to acquire technologies for newly patented products and processes under license to establish small entrepreneurs into manufacturing businesses. Write: Mr. San Seong Choy, Acting General Manager, MIDF Industrial Consultants, 9th Floor, MIDG Building, 195A Jalan Pekeliling, Kuala Lumpur, Malaysia and send a copy of your initial correspondence to: Commercial Division, Canadian High Commission, P.O. Box 990, A.I.A. Building, Ampang Road, Kuala Lumpur, Malaysia.

Bibliography

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This booklet outlines some of the basic services of the Department, tells you how to make use of them and whom to contact for further information on the Department's services and programs. Copies are available from:

The Business Centre (34/2)
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235 Queen Street
Ottawa, Ontario K1A 0H5
Telephone: (613) 995-5771

or by calling the Business Information Centre nearest to you:

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If the call to your nearest Business Information Centre is long distance use the toll-free number by asking the operator for Zenith 0-3200.

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Price: U.S. $12.00 per year. A monthly publication devoted to providing a review of new and interesting technologies for sale and technologies wanted. Published by:

Control Data WORLDTECH, Inc.
474 Concordia Avenue
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Possibilité de fabrication à l'étranger/300

Kuala Lumpur — Un grand organisme semi-gouvernemental désire conclure des accords de licences pour l'acquisition de technologies portant sur des produits et procédés brevetés récemment, ce qui lui permettrait d'établir des petites entreprises de fabrication. Écrire à: Mr. San Seong Choy, Acting General Manager, MIDF Industrial Consultants, 9th Floor, MIDG Building, 195A Jalan Pekeliling, Kuala Lumpur, Malaysia et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Haut-commissariat du Canada, C.P. 990, A.I.A. Building, Ampang Road, Kuala Lumpur, Malaysia.

Bibliographie

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Téléphone: (613) 995-5771

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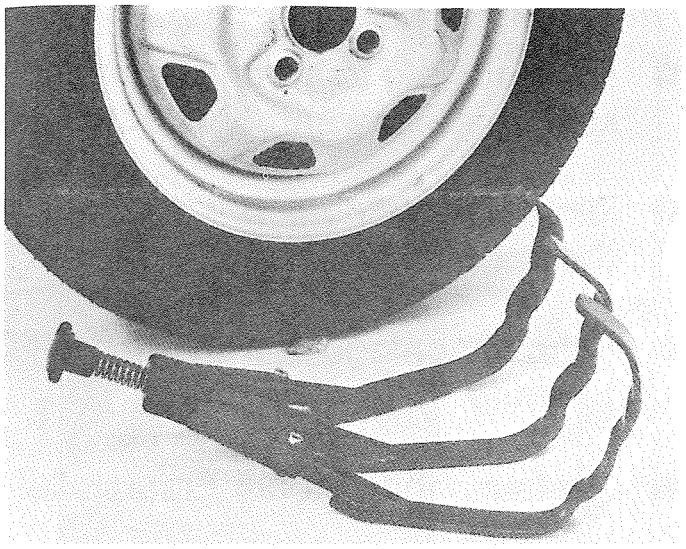

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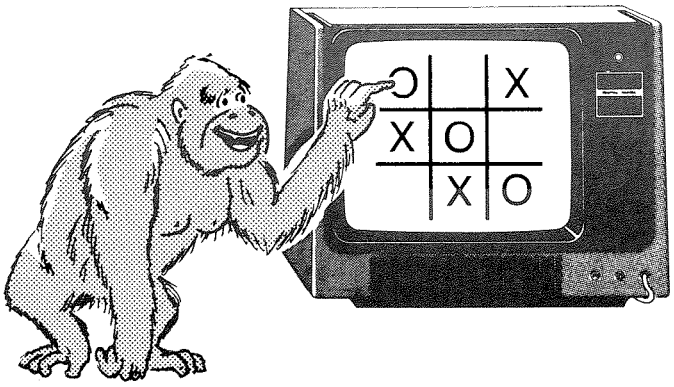

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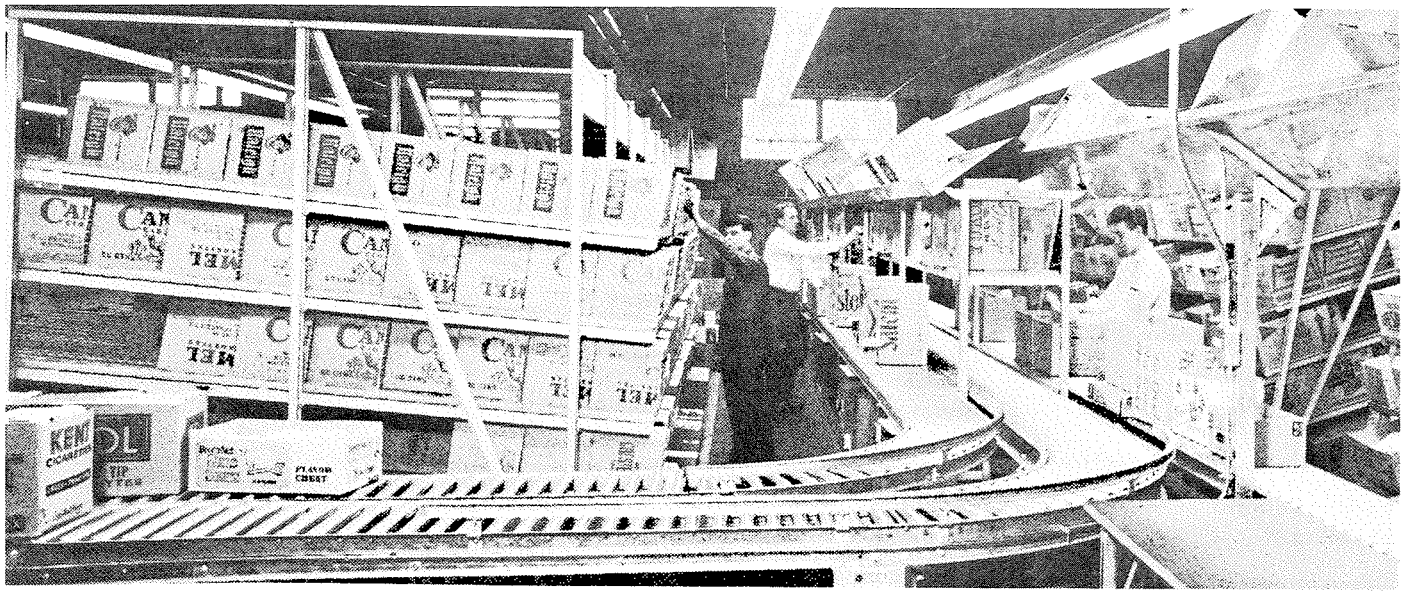

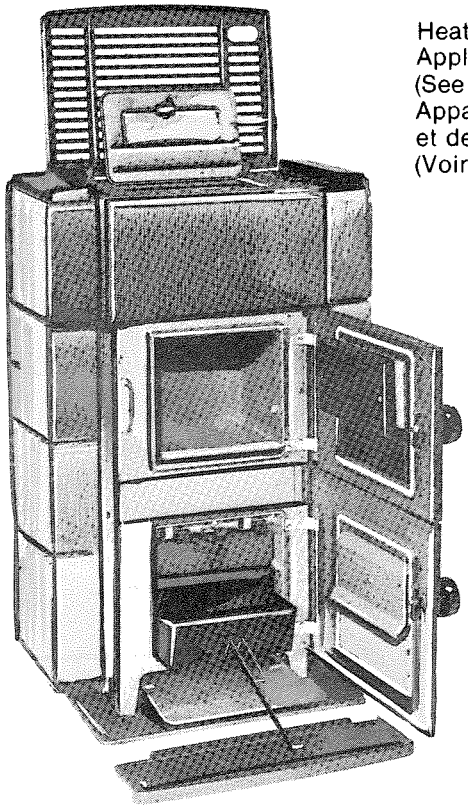

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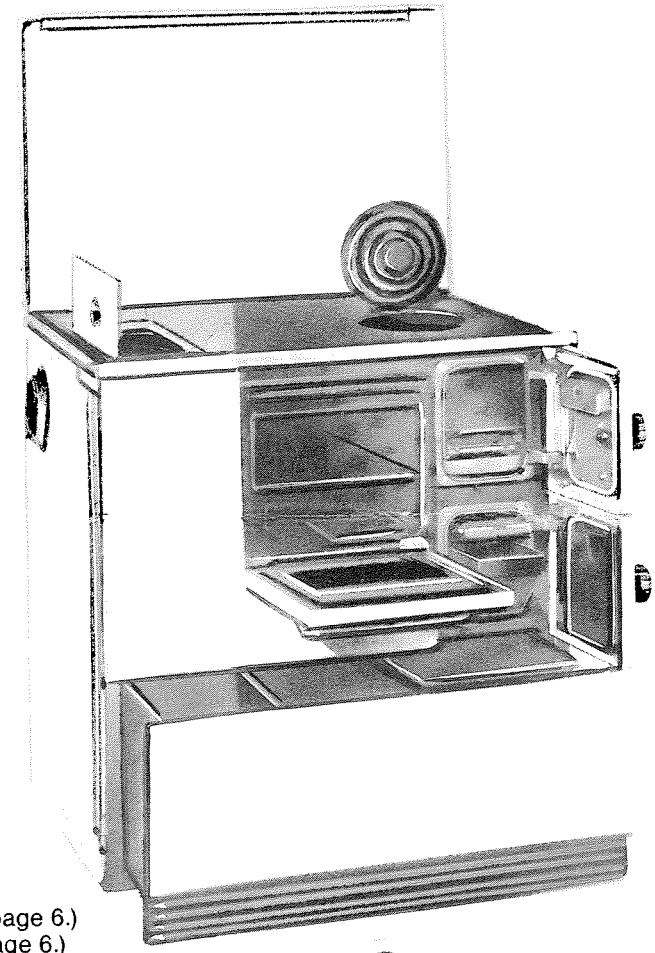

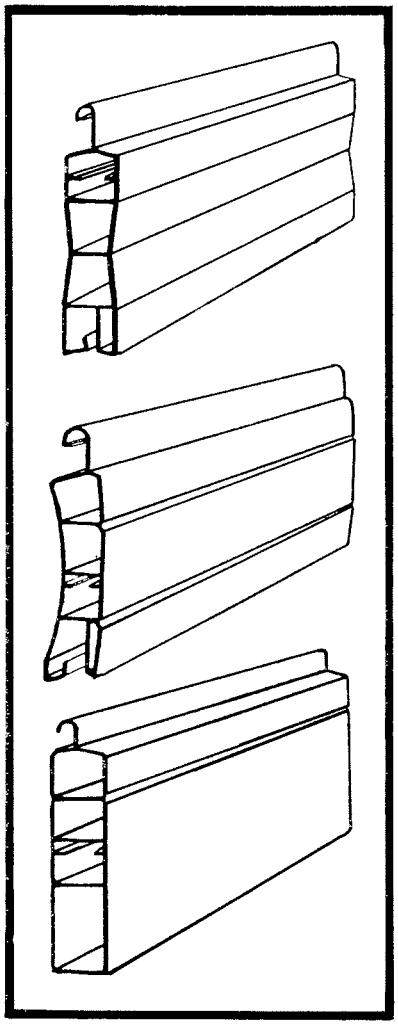

◀ Roll Up Shutters (See page 6.)
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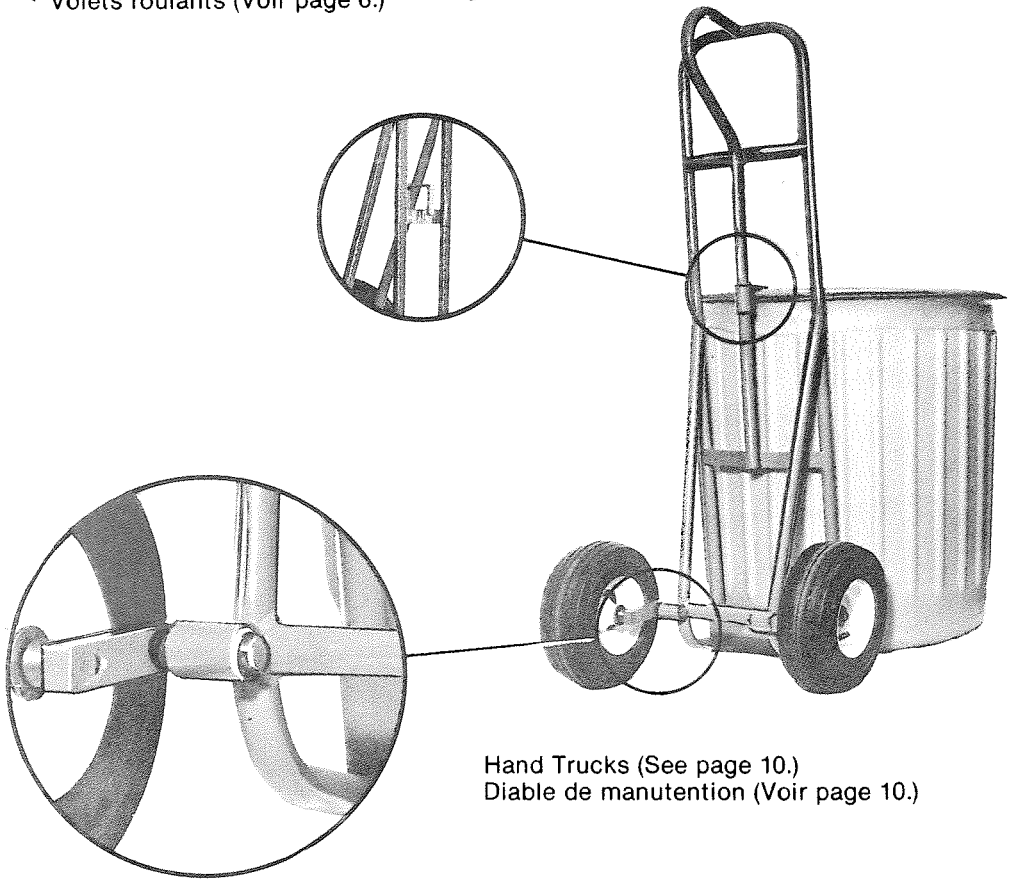

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