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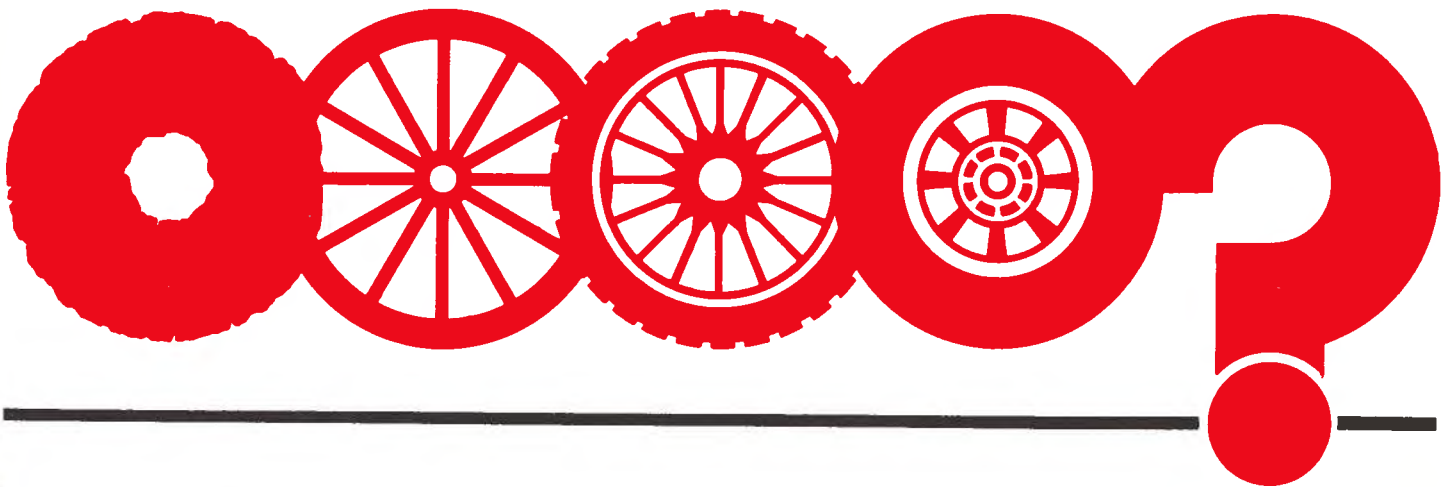
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new products bulletin

bulletin de produits nouveaux

Bulletin 323, December 1982

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new products bulletin

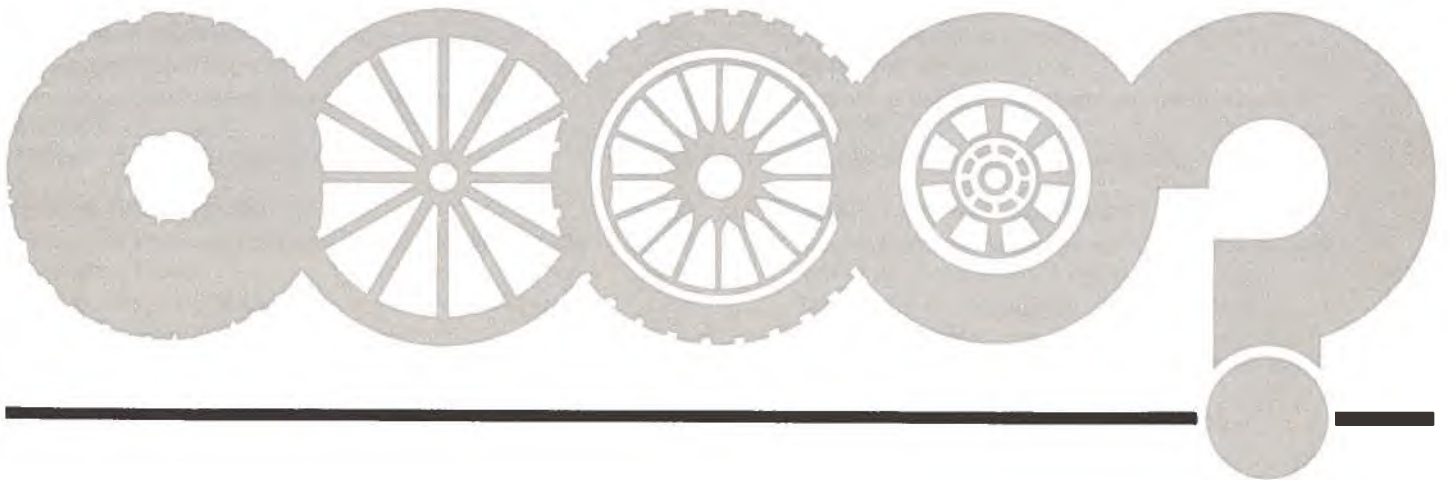
bulletin de produits nouveaux

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.



List of Contents

Page Table des matières

Selected Licensing or Joint Venture Manufacturing Opportunities

Bacterial Agents for Hydrocarbon Extraction	1
VHF/UHF Wave Propagation Computer Prediction Program	1
Terrain Data Base	1
Automatic Life Saving Device	1
Ladder Adjustment Device	2
Hog Dry Feeder	2
Loudspeakers Mounted in Ceiling Tiles	3
Looms	3
Fuel from biomass	3

Canadian Patents Available for Licensing or Sale in Canada Issued October 1982

5

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

11

Licensing Opportunities Through the University of Virginia Alumni Patents Foundations, U.S.

24

Whisker Heat Exchanger	24
Miniature Electromagnetic Field Measurement Probe	24
Formol Sucrose/Gum Sucrose Paraffin Techniques of Processing Tissue	24
Critical Care Patient Island	25
External Long Bone Fixation Device	25
A Grooved Caster Wheel Tire to Suppress Shimmy	25
Sonic Level	25
Orthopedic Traction Plinth	25
Automated Radioimmunoassay	25
Radiation Scanning Unit	26
Visual Luminescence Oxygen Concentration Monitor	26
Protein for Electrophoresis	26

Licenses from Japan

27

Extrusion Process for High-Expansion Polyolefin Insulated Pipes	27
Engineering and Manufacturing of Pneumatic Conveyor Systems	27
Engineering and Manufacturing of Industrial Unique Air-Conditioning	28
Centralized Control System for Knitting Machines	28

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

Agents bactériens pour extraire les hydrocarbures
Programme de prédiction par ordinateur de la propagation des ondes radio
Base de données terrain
Dispositif de sauvetage automatique
Dispositif de réglage pour échelles
Auge de porcherie (nourriture sèche)
Haut-parleurs intégrés dans des carreaux acoustiques
Métiers à tisser
Carburant tiré de la biomasse

Liste des brevets canadiens disponibles pour octroi de licence ou vente au Canada délivrés en octobre 1982

Demandes de brevet adressées au gouvernement des États-Unis, pour l'obtention de licences américaines et étrangères éventuellement disponibles

Possibilités d'acquisition de licences par l'intermédiaire de la "University of Virginia Alumni Patents Foundation", É.-U.

Échangeur de chaleur rapide
Sonde sub-miniature de mesureur de champ électromagnétique
Technique de traitement des tissus à la paraffine — formol saccharose/résine saccharose
Ilôt pour malades nécessitant des soins intensifs
Dispositif externe de fixation des os longs
Pneu rainuré pour supprimer le flottement des roulettes
Dispositif sonore de mise au niveau
Dispositif de traction orthopédique
Épreuve de radio-immunité automatisée
Détecteur de radiations
Doseur d'oxygène utilisant la luminescence visuelle
Protéines pour électrophorèse

Produits nouveaux du Japon

Procédé de moulage par extrusion des tuyaux isolés en polyoléfine à haute expansion
Technique et fabrication de convoyeurs pneumatiques
Technique et fabrication d'un dispositif unique de conditionnement d'air
Mécanisme de contrôle centralisé pour machines à tricoter

Bibliography	29
Small Business Assistance — Government of Newfoundland and Labrador	29
Newfoundland and Labrador Development Corporation (N.L.D.C.)	29
Rural Development Authority	29
Department of Development	29
Regional Economic Expansion Regional Development Incentive Program (RDIA)	29
Small Business Assistance — Province of British Columbia	30
Small Manufacturers' Development Assistance — \$10 Million	30
Low Interest Loan Assistance — \$20 Million	31
British Columbia Small Business Development Fund — \$170 Million	31
Market Development Program	32
Incoming Buyers' Program	32
Trade Show Program	32
Technical Assistance Program	33
Management Assistance Program (MAP)	33
International Invention and Technology Licensing Exhibitions 1983/84	35
Illustrations	37

Bibliographie	
Small Business Assistance — Government of Newfoundland and Labrador	
Newfoundland and Labrador Development Corporation (N.L.D.C.)	
Rural Development Authority	
Department of Development	
Regional Economic Expansion Regional Development Incentive Program (RDIA)	
Small Business Assistance — Province of British Columbia	
Small Manufacturers' Development Assistance — \$10 Million	
Low Interest Loan Assistance — \$20 Million	
British Columbia Small Business Development Fund — \$170 Million	
Market Development Program	
Incoming Buyers' Program	
Trade Show Program	
Technical Assistance B.C.	
Management Assistance Program (MAP)	
Expositions internationales sur la réglementation des inventions et des techniques, 1983/84	
Illustrations	

Selected Licensing or Joint Venture Manufacturing Opportunities

Bacterial Agents for Hydrocarbon Extraction/323

A new microbiological process for the preparation of extraction agents from existing and recently isolated strains of bacteria. These selected strains, during aerobic cultivation, produce agents with greatly improved properties for the extraction of oil and bitumen from mineral deposits. Write: **Case 6599**, 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, Ontario K1A 0H5.

VHF/UHF Wave Propagation Computer Prediction Program/323

This interactive computer program can accurately, quickly and cheaply predict system path-losses and received signal strengths of existing and proposed VHF/UHF transmitters. Moreover, it can be used without the need for personnel highly skilled in the field of radio-wave propagation. (See also Case 7705 for a data base compiled for use with this program.) Write: **Case 7704**, 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, Ontario K1A 0H5.

Terrain Data Base/323

A 500 metre terrain data base specifically compiled for use with Case 7704 exists on computer disk for all of Ontario to about 49° latitude and about half of the area of the Atlantic provinces. The points represented in the data base are in a square array and are separated from each other by 500 metres. For each point the elevation and a surface type identification code is stored. Write: **Case 7705**, 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, Ontario K1A 0H5.

Automatic Life Saving Device/323

Dutch manufacturer offers, through its Spanish representative, a licence and technical know-how plus American and Canadian marketing rights for an automatic life saving

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

Agents bactériens pour extraire les hydrocarbures/323

Il s'agit d'une nouvelle méthode microbiologique permettant de préparer des agents d'extraction à partir de souches bactériennes existantes et de souches récemment isolées. En culture aérobie, ces souches produisent des agents permettant d'extraire beaucoup plus efficacement le pétrole et le bitume des gisements minéraux. Écrire: **Cas 6599**, 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 (Ontario) K1A 0H5.

Programme de prédiction par ordinateur de la propagation des ondes radio/323

Ce programme informatique interactif peut prédire de façon précise et peu coûteuse l'affaiblissement sur le trajet et l'intensité des signaux d'arrivée des émetteurs VHF/UHF existants et projetés. Qui plus est, il n'est pas nécessaire que l'utilisateur soit familier avec le domaine de la propagation des ondes radio. (Voir aussi le Cas 7705, relatif à une base de données compilées pour ce programme.) Écrire: **Cas 7704**, 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 (Ontario) K1A 0H5.

Base de données terrain/323

Une base de données terrain de 500 mètres spécifiquement compilées pour le Cas 7704 existe sur disque informatique pour tout l'Ontario jusque vers 49° de latitude N et pour environ la moitié de la superficie des provinces de l'Atlantique. Les points représentés dans la base de données sont disposés dans un ensemble carré et sont distants de 500 mètres les uns des autres. Pour chacun des points, l'altitude et un code d'identification du type de surface ont été mémorisés. Écrire: **Cas 7705**, 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 (Ontario) K1A 0H5.

Dispositif de sauvetage automatique/323

Un fabricant néerlandais offre, par l'intermédiaire de son représentant espagnol, la licence et le savoir-faire technique ainsi que les droits de mise en marché aux États-Unis

device. The life saver is a yoke type emergency life vest contained in a plastic grenade 13 cm long; 8.5 cm in diameter; weight 285 grams, and a buoyancy of 9 kg when inflated. The life saving device does not require unique manufacturing facilities and is not highly technical. The compact grenade can be easily thrown to a person requiring assistance. When the grenade lands in the water, the life saver inflates within seconds. The grenade comes complete with a holder that can be affixed to any surface, i.e., or a wall, or worn on the belt. Advantages include: very little storage space needed for device, always handy, is ideal for fishermen, yachtsmen, police, and all persons who work on or near the water. (See illustrations page 37.) Write: Wilhelm H.E. Isings, Apartado 17, LaNucia (Alicante) Spain and send a copy of your initial correspondence to Canadian Embassy, Apartado 117, 35, Nunez de Balboa, Madrid, Spain.

Ladder Adjustment Device/323

British manufacturer offers a Canadian company the manufacturing and marketing rights to a solid two piece, cast aluminum ladder attachment safety device which permits either leg of a ladder to be adjusted up to 45 cm for use on uneven ground or steps. It has application in the commercial, industrial, construction, rental and do-it-yourself markets. The "Ladajack" takes only seconds to adjust in .63 cm increments, withstands applied force up to 62 kN, fits either leg of most ladders and can be secured or removed quickly with only hand pressure. (See illustration page 37.) Write: Mr. George W.K. King, G.W.K. King Associates, Box 105, Eagle Road, R.D. 2, Newtown, Pennsylvania 18940 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102-1366, U.S.A.

Hog Dry Feeder/323

Dutch company offers a Canadian manufacturer the licensing rights to its dry feeder unit for pig farms. Patents are pending. Except for the E.E.C., marketing rights are negotiable worldwide. The feeder has a turnable rack which can be pulled out of the feeder by hand to allow for thorough cleaning. This is advantageous as the sticking of fodder under the spiller ridge, growth of fungi and bacteria can be one hundred percent eliminated for healthier pigs. The rack is such that it cannot be pushed open by the pigs. The spill-proof trough of galvanized steel weighs 100 kilos when full and 52 kilos when empty. Feed can be rationed by adjusting the front sheets. (See illustrations page 37.) Write: Messrs. Stalmeester, Mierdseweg 3A, Reusel, Holland and send a copy of your initial correspondence to Canadian Embassy, Sophialaan 7, The Hague, Netherlands.

et au Canada pour un dispositif de sauvetage automatique. Ce dispositif est un gilet en forme de fer à cheval contenu dans une "grenade" en plastique de 13 cm de longueur, 8.5 cm de diamètre et 285 grammes de poids avec une flottabilité de 9 kg une fois gonflé. Le dispositif ne nécessite aucune installation particulière pour la fabrication et n'est pas d'une haute technicité. La grenade peut être facilement lancée par la personne en détresse; quand elle touche le sol ou l'eau, le gilet de sauvetage se gonfle en quelques secondes. La grenade est livrée complète avec un support qui permet la fixation à une surface quelconque, un mur par exemple, ou le port à la ceinture. Le dispositif a l'avantage d'être peu encombrant, il est pratique pour les pêcheurs, les amateurs de voile, les policiers et tous ceux qui travaillent près de l'eau. (Voir l'illustration page 37.) Écrire à: Wilhelm H.E. Isings, Apartado 17, LaNucia, Alicante (Espagne) et faire parvenir une copie de votre correspondance initiale à l'Ambassade du Canada, Apartado 117, 35, Nunez de Balboa, Madrid (Espagne).

Dispositif de réglage pour échelles/323

Une entreprise britannique offre à une société canadienne les droits de fabrication et de commercialisation d'un dispositif de sécurité formé de deux pièces en aluminium coulé et destiné à être fixé aux échelles de manière à permettre un réglage de 45 cm sur escaliers ou sol inégal. Cet article peut intéresser le secteur commercial et industriel, les entreprises de construction et de location d'outils ainsi que le monde des bricoleurs. Le "Ladajack" se règle en quelques secondes par crans de 0.63 cm, résiste à des forces maximales de 62 kN, s'ajuste aux montants de la plupart des échelles, et peut être rapidement assujéti ou enlevé d'une simple pression de la main. (Voir l'illustration page 37.) Écrire à: M. George W.K. King, G.W.K. King Associates, Box 105, Eagle Road, R.D. 2, Newton (Pennsylvanie) 18940 et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, 3 Parkway Building, Suite 1310, Philadelphie (Pennsylvanie) 19102-1366, É.-U.

Auge de porcherie (nourriture sèche)/323

Une société hollandaise offre à un fabricant canadien les droits de fabrication sous licence de son dispositif d'alimentation des porcs (nourriture sèche). Le brevet est en instance d'acceptation. On peut négocier les droits de mise en marché partout dans le monde, sauf sur le territoire de la C.E.E. Le dispositif est muni d'un ratelier que l'on peut enlever manuellement pour un nettoyage à fond. L'avantage de ce système, c'est qu'il empêche l'accumulation de nourriture sous le rebord de distribution, ce qui élimine complètement les champignons et les bactéries. De ce fait, les porcs sont en meilleure santé. Le ratelier est conçu de façon qu'il ne puisse être ouvert par les porcs. L'auge, qui est à l'épreuve du gaspillage, est fabriquée d'acier galvanisé; elle pèse 100 Kg en pleine charge et 52 Kg à vide. On peut régler la quantité de nourriture en ajustant les plaques frontales. (Voir les illustrations page 37). Écrire à: Messrs. Stalmeester, Mierdseweg 3A, Reusel (Hollande) et faire parvenir une copie de votre correspondance initiale à l'Ambassade du Canada, Sophialaan 7, la Haye (Pays-Bas).

Loudspeakers Mounted in Ceiling Tiles/323

American company offers the manufacturing and marketing rights under U.S. Patent 4,330,691, for an integral ceiling tile-loudspeaker system. This system electronically interconnects loudspeakers mounted on ceiling or wall tiles. By using this approach, entire ceilings or walls can be made to radiate sound providing excellent geographic area coverage in buildings, auditoriums, and theaters and extremely wideband audio response for accurate sound reproduction. The patent covers "electronic focusing" of the sound by using electrical delay networks between tiles; in addition, the sound can be "focused" by curving the ceiling or the walls so that almost any kind of spatial effect can be created. Write: Mr. Theodore J. Gordon, The Futures Group, 76 Eastern Boulevard, Glastonbury CT 06033 and send a copy of your initial correspondence to Canadian Consulate General, 1251 Avenue of the Americas, New York City, N.Y. 10020-1175, U.S.A.

Looms/323

American manufacturer offers a Canadian company the licensing rights to manufacture and market the Oola and Erica weaving looms. The Oola is designed for easy use by young children, and having an automatic tension control, it warps evenly, positively and quickly. The limited weaving area strengthens all users' ability to learn, design and create. The Erica loom weaves 62.5 cm wide, is capable of producing popular weaving styles and for producing clothing without seams and materials up to 4.5 m long. The loom has an eight dent coarse heddle and a fine 10 dent heddle, a yarn threader, two shuttles, a yarn cut in the shuttle, a shed stick, an arrow to center the weaving and a design similar to advanced table and floor looms which affords a smooth transition to working on such looms. (See illustration page 37.) Write: Mr. Frank Brkik, Mosaic Enterprises, Inc., P.O. Box 667, Arlington, Virginia 22216 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102-1366, U.S.A.

Fuel from Biomass/323

American inventor offers a licensing agreement to a Canadian company or dairy cooperative interested in participating in an engineering contract for a plant design for the application of a patented method of solvent extraction claimed to be cheaper than distillation methods of producing neutral spirits from agricultural matter. The process produces n-butanol, acetom, ethanol, CO₂, H₂ and dried distillers grain (DDG) from wheat stover, corn and corn residues, molasses, paper mill wastes, nut hulls, fruit and fruit wastes, cheese whey (pentose, lactose, hydrolized starch). The extracted products have application as diesel engine fuel (direct admixture up to 50 percent); gasoline engine fuel or octane enhancer (up to 100 percent); and as a substitute for heating fuel (LPG). Production cost is \$U.S. 0.45 to 0.85 per

Haut-parleurs intégrés dans des carreaux acoustiques/323

Une société américaine offre, aux termes du brevet É.-U. 4,330,691, les droits de fabrication et de commercialisation d'un ensemble intégré comportant carreau acoustique et haut-parleur. Le dispositif raccorde électroniquement les haut-parleurs fixés sur des carreaux acoustiques ou muraux. De cette manière, il est possible de propager le son sur la pleine surface d'un plafond ou d'un mur et d'offrir ainsi à la fois une excellente zone de diffusion dans les immeubles, les salles publiques et les théâtres, et une bande passante audio extrêmement large pour une reproduction exacte. Le brevet englobe la "focalisation électronique du son" réalisée à l'aide de réseaux de retard électrique entre les carreaux; en outre, le son peut être "focalisé" en incurvant le plafond ou les murs de manière à créer à peu près tous les effets spatiaux désirés. Écrire à: M. Theodore J. Gordon, The Futures Group, 76 Eastern Boulevard, Glastonbury, CT-06033, et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, 1251 Avenue of the Americas, New York City (N.Y.) 10020-1175 (É.-U.).

Métiers à tisser/323

Un fabricant américain offre à une société canadienne les droits de licence pour la fabrication et la commercialisation des métiers à tisser Oola et Erica. Le métier Oola, conçu pour être facilement utilisé par les enfants, comporte un dispositif de contrôle automatique de la tension qui assure un tissage uniforme, solide et rapide. L'aire de tissage limitée facilite l'apprentissage et la créativité. Le métier Erica, dont la largeur de tissage est de 62.5 cm, permet la création de styles populaires, la confection de vêtements sans couture ainsi que la fabrication de tissus pouvant atteindre une longueur de 4.5 m. Ce métier présente les caractéristiques suivantes: une lisse à huit grosses dents et une lisse à 10 petites dents, un enfileur, deux navettes, une entaille dans la navette, une baguette d'envergure et une flèche permettant de centrer la pièce à tisser. Étant donné que les métiers de table et sur pied fonctionnent selon le même principe, il est possible de passer de l'un à l'autre sans difficulté. (Voir l'illustration page 37.) Écrire à: M. Frank Brkik, Mosaic Enterprises, Inc., P.O. Box 667, Arlington (Virginie) 22216, et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, 3 Parkway Building, Suite 1310, Philadelphie (Pennsylvanie) 19102-1366 (É.-U.).

Carburant tiré de la biomasse/323

Un inventeur américain offre les droits d'exploitation sous licence à une compagnie ou coopérative laitière du Canada intéressée à participer dans le cadre d'un contrat de génie à la conception d'une usine permettant l'application d'une méthode brevetée d'extraction par solvant que l'on affirme être moins coûteuse que les méthodes par distillation employées pour produire des esprits neutres à partir de matière végétale d'origine agricole. Ce procédé permet de produire du n-butanol, de l'acétone, de l'éthanol, du CO₂, de l'H₂ et des résidus secs granulés de distillation à partir de paille de blé, de maïs et de résidus de maïs, de mélasses, de déchets d'usines de papier, d'écales de noix, de fruits et de résidus de fruits et de petit-lait (pentose, lactose, amidon hydrolisé). Les produits extraits peuvent ser-

gallon depending on raw material costs. Write: Mr. H.L. Daneman, Baeol Corp. P.O. Box 2261, Santa Fe, New Mexico 87501 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014-1377, U.S.A.

vir de carburant diesel (addition directe jusqu'à 50%), de carburant à moteur à essence ou comme additif pour élever l'indice d'octane (jusqu'à 100%) et comme substitut de combustible (GPL) de chauffage. Le coût de production varie entre 0,45 et 0,85 \$ amér. le gallon, selon le coût de la matière première. Écrire à: M. H.L. Daneman, Baeol Corp., P.O. Box 2261, Santa Fe (Nouveau-Mexique) 87501 et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, 510 West Sixth Street, Los Angeles (Californie) 90014-1377, É.-U.

Canadian Patents Available for Licensing or Sale in Canada Issued October 1982

Liste des brevets canadiens disponibles pour octroi de licences ou vente au Canada délivrés en octobre 1982

Note:

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

Note:

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

Chewing Gum Flavour Combination/323

Gomme à mâcher à saveurs combinées/323

An invert sugar flavoured gum center is coated with a flavoured mixture of sucrose or dextrose. The flavour consisting of a mixture of spearmint and pepsin. Write: **PATENT 1,109,320**, Donna Yakimischak, 21-115 Sherbrook Street, Winnipeg, Manitoba R3C 2B5 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.

Attachment for Drive Shaft of Rotary Lawn Mowers/323

Accessoire sur arbre moteur de tondeuse de parterres/323

An attachment is provided for the lower end of the drive shaft of the motor of a conventional rotary lawn mower, edger, trimmer or the like; and preferably includes two or more nonmetallic cutting lines, such as monofilament fishing line of suitable diameter for rotation therewith in the cutting plane, although a single line may be effective for some purposes. Each nonmetallic cutting line is characterized by possessing an effective diameter, and of a material composition such as to render the line flexible and yielding to the extent that it is substantially incapable of causing damage or injury when contacting persons, animals, trees, etc. Novel means are provided detachably associating the line or lines to the member carrying it so that the same may be easily and rapidly replaced after wear, and also efficiently stored in suitable length when in the nonworking condition, the same including novel and highly efficient means whereby the effective working length of the line or lines may be lengthened at desired times as it becomes shortened during use, etc. A simplified form comprises a single spool located in coaxial alignment with the motor shaft, the spool having a single cutting strand centrally wound thereabout so as to present two free travelling ends extending oppositely of each other during the cutting or mowing operation, and or it may be marketed in the form of an attachment for ready substitution, permanent or otherwise, for the horizontally extending metallic cutting bar which is most often furnished as part of the original equipment of rotary lawn mowers. Write: **PATENT 1,111,660**, Mr. Alfred A. Frantello, Frantello Patent Holding Co. Inc., U.S. #1, Sandrift Apartments, P.O. Box 689, Sebastian, Florida 32958 and send a copy of your initial correspondence to Canadian Consulate General, P.O. Box 56169, Atlanta, Georgia 30303-1290, U.S.A.

High Efficiency Fireplace Modification/323

Modification d'un foyer à feu nu pour améliorer son rendement thermique/323

A fireplace extension is provided, which extends forwardly from a traditional fireplace, having two sets of doors, a first set of doors within the extension, and a second set of doors which close the extension. Fresh air duct means open into the fireplace extension between the first and second set of doors, and damper means are provided in the first set of doors, whereby, a surprising increase in efficiency in the fireplace itself is achieved, not only from the point of view of heat generated, but from the duration of time during which such fireplace is effective in generating heat. Write: **PATENT 1,132,870**, Harold Aidla, 4027 - 75 Street, Edmonton, Alberta T6K 0X2 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.

Bitumen Separator/323

Séparateur de bitume/323

Bitumen is separated from tar sand using a shallow, cylindrical tank for receiving the sand and diesel oil. The diesel oil solvent and sand are mixed using rotating paddles, and the oil/solvent mixture thus separated is decanted by tilting the tank into a storage container or fed directly to a refinery for further treatment. Water is added to the tank and mixed with the sand using the paddles. Oil rising to the top of the supernatant liquid is scraped into radially extending troughs using rotatable skimmer blades mounted in the tank above the paddles. The material thus skimmed is also fed to storage or the refinery. Write: **PATENT 1,132,928**, Fritjof J. Miller, P.O. Box 35, Wildwood, Alberta T0E 2M0 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.

Cementing Mixtures/323

Mélanges de cimentation/323

A process for producing improved cementing mixtures by adding coal materials thereto. Low carbon content coal materials are crushed and screened to produce coal materials having a maximum diameter of .9 cm then exposed to a number of wetting and drying cycles, followed by a thorough leaching to remove water soluble and adhering substances therefrom, and produce therefrom a cleansed coal material. The cleansed coal materials are separated into first, second and third portions. In a first embodiment, an improved cementing mixture is produced by adding cleansed coal material containing therein the requisite cement-making chemical ingredients, and fuel energy content sufficient to effect its own calcination, to a cement making kiln mixture in substitution for the raw material clays or shales normally used therewith. The cleansed coal material first portion so added, is made in a proportion of at least 60% coal material to 40% non-coal material portions of the mixture. In a second embodiment the second portion being soft burned utilizing its own fuel energy source at approximately 315°C such calcination being made prior to being added to the cement making kiln. This calcination provides a second or double cleansing of the coal materials thereby providing a double-cleansed and pre-calcined improved cement-making additive, thus effecting a considerable saving in fuel energy consumption, more pure chemical ingredients and greatly improved cement production. In a third embodiment the third portion cleansed coal material is calcined in the same manner as in the second embodiment except that the temperature of calcination is raised to from 425°C to 1093°C and the calcined materials are converted thereby into highly active improved pozzolanic cementing mixtures, after grinding to produce fine particulate material fillers and larger sized aggregate material. Surplus heated gases are drawn off for recycling of heat and re-utilization of chemicals therein. Write: **PATENT 1,133,021**, Cyril T. Jones, 8413 Lochside Drive, R.R. 1, Saanichton, B.C. V0S 1M0 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.

Temperature Controlled Timer/323

Temporisateur à commande thermostatique/323

A temperature controlled timer useful for controlling the application of power to apparatus such as automobile block heaters or the like. In one embodiment the time of application of power prior to a shut off time is decreased with increasing ambient temperature. In another embodiment the duty cycle of cyclically applied power is changed so that the power on period becomes shorter and the power off period becomes longer with increasing ambient temperature. Significant conservation of power results. Write: **PATENT 1,133,097**, Conserver Group Inc. (The), 320-35 Princess Street, Winnipeg, Manitoba R3B 1K1 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.

Training Foot Stool/323

Tabouret de réadaptation physique/323

A foot stool which is attachable to a side rail of a sleeping bed, and including a horizontal step plate having two vertically upward legs which, at their upper end, are slideably adjustable inside two hollow hooks that hang over the rail. Write: **PATENT 1,133,202**, Pearl T. Valentiano, c/o Richard L. Miller, 3612 Woolworth Building, New York, N.Y. 10020 and send a copy of your initial correspondence to Canadian Consulate General, 1251 Avenue of the Americas, New York City, N.Y. 10020-1175, U.S.A.

Anesthetic System/323

Appareil d'anesthésie/323

This application discloses a unilimb device of universal application to different types of breathing systems. The device comprises two gas carrying tubes, one within the other, the corresponding ends of the tubes being within two common terminal elements. One of the terminal elements provides for two separate passages, each being connectable, one to a source of gas, and the other for disposition of the expiratory gases. The other terminal element includes a nozzle end for connection to the inlet for the patient's respiratory system, with the opposite end serving to receive the other ends of the two flexible tubes and to provide short passages to the nozzle to minimize dead air space. Provision may be made for telescoping each terminal element, and the inlet element may be provided with a member for extending or adapting it to different breathing systems. Write: **PATENT 1,133,350**, Atsuo F. Fukunaga, 13139 Bryson Street, Arleta, California 91331 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014-1377, U.S.A.

Vacuum Ironing Board for Clothes Finishing/323

Planche à repasser à succion pour la finition de vêtements/323

This invention relates to a specially constructed ironing board having a hollow interior space between a non-porous base member and a plurality of upper layers. Transverse spacing members between the base member and the upper layers permit air flow into the hollow space and through an air withdrawal conduit that leads into a moisture trap. A separate exit pipe from the moisture trap provides a hookup to a vacuum cleaner. The suction of the vacuum cleaner maintains the air flow. Write: **PATENT 1,133,379**, George Peterhegyi, 651 Cornwall Street, Victoria, B.C. V8V 4L2 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.

Treatment of High Level Nuclear Reactor Wastes/323

Traitement de déchets nucléaires hautement radioactifs/323

A process for immobilising high level radioactive waste (HLW) calcine comprises the steps of: (1) mixing the HLW calcine with a mixture of oxides, the oxides in the mixture and the relative proportions thereof being selected so as to form a mixture which, when heated and then cooled, crystallises to produce a mineral assemblage containing well-formed crystals capable of providing lattice sites in which elements of the HLW are securely bound, the crystals belonging to or possessing crystal structures closely related to crystals belonging to mineral classes which are resistant to leaching and alteration in appropriate geological environments and including crystals belonging to the titanate classes of minerals; and (2) heating and then cooling the mixture so as to cause crystallisation of the mixture to a mineral assemblage having the elements of the HLW incorporated as solid solutions within the crystals thereof. A mineral assemblage having elements of HLW calcine incorporated within the crystals thereof is also disclosed. Write: **PATENT 1,133,381**, The Australian National University, Acton, Australian Capital Territory, Commonwealth of Australia, Australia and send a copy of your initial correspondence to Canadian Consulate General, A.M.P. Centre, 8th Floor, 50 Bridge Street, Sydney, N.S.W. 2000, Australia.

Containers/323

Contenants/323

A method of improving industrial production comprising the steps of arranging a plurality of full containers in a transporter, the containers being arranged in a predetermined number of stacks of containers, each stack containing a predetermined number of containers, transporting the containers in said configuration to a destination, unloading the containers from the transporter and thereafter introducing the same, or substantially the same, number of containers into the transporter as were transported thereby to said destination but said containers being arranged in a plurality of columns of nested containers, the number of columns being less than said predetermined number of stacks and the space not occupied by the columns of steel containers being utilised to transport other articles to a further destination. Each container comprises a load receiving body, adapted to nest in the body of a similar container, and retractable leg means movable between an operative position, in which the weight of the body is supportable on the legs and a similar container can be stacked above the said container with the weight of said similar container being transmitted to the legs of said one container, and an inoperative position in which the bodies are permitted to nest. Write: **PATENT 1,133,406**, W.H.D. Development Limited, Langwith Junction, Mansfield, England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

Enzymes and Processes Utilising Enzymes/323

Enzymes et procédés faisant appel aux enzymes/323

A novel β -galactosidase comprises an enzyme having a thermal stability such that when in purified form it has an activity half life of at least 1½ hours at 55°C, at least 1 hour at 60°C and at least 10 minutes at 65°C, as measured using ONPG as substrate, said enzyme being derived from a bacterium of species *Bacillus stearothermophilus*. There is also provided a process for the production of the novel β -galactosidase, comprising culturing in a medium containing appropriate nutrients a micro-organism of species *B. stearothermophilus* having characteristics similar to or the same as the strains identified as NCIB 11407-11413, and which contains the β -galactosidase of the invention. Additionally there is provided a process for the hydrolysis of lactose to a product comprising glucose and galactose which comprises contacting lactose with the β -galactosidase of the invention e.g. at a temperature of at least 55°C preferably at least 60°C or especially about 65°C. Write: **PATENT 1,133,410**, National Research Development Corporation, 66-74 Victoria Street, London SW1, England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

Motorcycle Trailer Hitch/323

Attelage de motocyclette/323

This invention relates to a motorcycle trailer hitch and consists of a frame that is permanently attached to the rear of the motorcycle and a jointed link assembly that provides a connection between a transverse tow bar on the frame and a trailer tongue. The assembled hitch provides for articulation about a horizontal axis, tracking about a vertical axis and side tilt or rock about a second horizontal axis. The jointed link assembly can be stored in a side pannier of the motorcycle when not in use. Write: **PATENT 1,133,534**, Melvin H. Opp, 469 Grafton Street, Victoria, B.C. V9A 6S4 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.

Chromate Removal by Precipitation/323

Extraction du chromate par précipitation/323

Chromates are removed from aqueous alkali metal chlorate solutions by either of two processes. In the first process, a water-soluble sulfide such as NaHS is added to the chromate-containing chlorate solution, at a temperature of about 40-60°C and at a pH of 7-8, in an amount ranging from 70-200% (and preferably, 100%) of the stoichiometric value required to react with the chromate; and then a water-soluble ferrous salt (preferably FeSO₄) is added in an amount of from 30-100% (pref-

erably about 57%) of the stoichiometric amount required; and the pH of the solution is adjusted so that the final pH is in the range of about 1.8 to about 3.0. The soluble sulfide is converted to elemental sulfur and the chromate is converted to an insoluble, trivalent Cr-containing material, which is subsequently removed from the solution. The low pH of the filtered liquor renders it particularly suitable for use in a chlorine dioxide generator. In the second process, the pH of the chromate-containing chlorate solution is first adjusted to a value within the range of 7-11, and preferably to about 11, and the solution is heated to a temperature of 40-60°C. An "iron mud" is prepared by reacting a ferrous salt, e.g., FeSO₄, with sodium hydroxide in molar proportions of 1 part ferrous salt to 1.5-1.8 parts of NaOH, the amount of ferrous salt employed being about 3 to about 5 times the stoichiometric amount required to reduce the chromate present in the solution. Then the "iron mud" is added slowly to the chlorate solution with vigorous agitation, and the pH is controlled to a value within the range of 10-12. The insoluble trivalent chromium-containing material so formed is subsequently removed from the solution. This invention is effective in removing chromates from alkali metal chlorate solutions having a NaClO₃ concentration in the range of 600-750 gpl, at which concentration previous processes for the removal of chromates are largely ineffective. Write: **PATENT 1,133,641**, Huron Chemicals Limited, P.O. Box 1145, Kingston, Ontario K7L 4Y5 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.

Prefab Building Panel Structures/323

Panneaux préformés pour la construction/323

Prefab building panel structures of the type comprising prefab panels adapted to be joined together to form walls and characterized by being made with both the exterior and the interior sheathing inclusive of internal furring and an air space, with a strip of plastic sealant to automatically seal the panels along the mating edges upon assembly, with internal wiring for readily connection to an electrical power supply system, with a box-like header beam to readily support loading thereon while providing heat insulation, and with box-like corner posts to provide heat insulation and resistance to torsion. Write: **PATENT 1,133,674**, Noël Girard, 1344, avenue des Peupliers, Mont St. Hilaire (Québec) H3G 4S6 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.

Lawn Edger/323

Taille-bordures de pelouses/323

A portable powered edging tool has a conical blade assembly which rotates about a vertical axis to bevel lawn edges at an angle of about 45°, thereby producing an appealing "picture frame" - like border for the lawn. Write: **PATENT 1,133,704**, Thomas F. Hunt, 1900 Haultain Street, Victoria, B.C. V8R 2L5 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.

Dental Powder with Natural Ingredients/323

Poudre dentifrice contenant des ingrédients naturels/323

A dental composition having natural ingredients is very useful for combating superficial dental and periodontal diseases, and halitosis. Use of the composition provides fresher breath and mouth, cleaner gums and whiter teeth. The dental composition is composed of calcium carbonate, betel nut, ginger, alum, pepper, salt, myrobalan and camphor. Write: **PATENT 1,133,831**, Gita Banik, 4435 King Street, Pierrefonds, Quebec H9H 2G2 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.

Method for Drilling Hard Material/323

Méthode de forage de matériaux durs/323

A method for drilling hard material such as rock by fragmenting the rock by impact in selected spaced-apart areas and simultaneously fragmenting the rock by shear between the selected areas. The invention also covers a drill head with particularly arranged impact hammers for carrying out the method, and a drill unit incorporating the drill head. Write: **PATENT 1,133,954**, Roger Massé, 131, rue Roussin, Thetford Mines (Québec) G6G 1N6 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.

Brake Control for the Lift Axle of a Trailer/323

Système de contrôle du freinage pour essieu auxiliaire rétractable de remorque de camion/323

L'invention a pour objet un perfectionnement à un système de montée et de descente d'un axe auxiliaire rétractable pour remorque de camion, lequel perfectionnement permet la neutralisation du mécanisme de freinage de l'axe auxiliaire pendant sa remontée. Selon l'invention, une valve de sélection montée-descente de l'axe rétractable comprend une valve-relais à tiroir, lequel, selon qu'il est en position ouverte ou fermée, permet ou obstrue le passage du fluide de freinage dans la

canalisation sur laquelle il est connecté. Écrire: **BREVET 1,133,961**, Réal Picard, 170, Des Marguerites, St-Rédempteur, Comté Lévy (Québec) G0S 3B0 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.

Sink Unpluggger/323

Débouchoir de vidage d'évier/323

The invention relates generally to a method and apparatus useful for cleaning out drainage systems. The invention comprises a method of internally scouring a drainage system comprising the introduction of an abrasive, non-toxic and slowly dissoluble granular compound into a stream of fluid under pressure, directing the fluid into a drain pipe of the system whereupon the compound is caused to contact the interal wall of the pipe and thereby remove accumulated sediment therefrom; subsequently maintaining a flow of fluid under pressure through the system for a period of time sufficient to substantially complete the dissolution of such compound as may remain within the system. Furthermore, the invention contemplates drain cleaning apparatus comprising fluid conduit means adapted at one of its ends for interconnection with a source of fluid under pressure, the other of its ends being adapted for insertion within a drain opening, the fluid conduit means being further provided, intermediate the length thereof with secondary inlet means; and container means releasably attached to the secondary inlet means such that the contents of the container means may gravitate freely through the inlet means into the fluid conduit. Write: **PATENT 1,134,108**, John G. Field, 11146 - 63rd Avenue, Edmonton, Alberta T6H 1R2 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.

Squat Seabed Mooring System/323

Système surbaissé d'amarrage aux fonds marins/323

For mooring a vessel such as an oil tanker, especially in shallow water, a squat base unit is located on the sea bed. The lower end of an articulated swivelling arm is built into the base unit in such a way that the upper end is free to rotate about three axis and to move vertically and horizontally around and over the base unit within the confines of a circle whose radius is defined by the geometry and weight of the arm and the height and attitude of the top section of the arm. A hawser, attached to the head of the arm, enables the head to be lifted by a tanker until the head of the arm engages into a reception chamber built into the underside of the tanker hull. By hauling in the hawser and lifting the head, the tanker locates itself within a working radius of the base unit and is moored by the arm to the base unit. The head of the mooring arm is held rigidly in the reception chamber and is able to move with the ship by virtue of its' freedom of movement. The base unit can take the form of an oil reservoir and the arm can be formed of hollow tubes which are used to transfer fluid between the base unit and the tanker. When not in use the mooring arm lies flat on the base unit on the sea bed (or within a depression in the sea bed), where it is in no danger of damage from deep keels. Write: **PATENT 1,134,154**, John A. Statham, 309 Ironwood Road, Guelph, Ontario N1G 3G2 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.

Combined Heat Pump and Chiller Which Needs No Pumps or Compressors/323

Appareil échangeur de chaleur pour le réchauffement et le refroidissement sans pompes ni compresseurs/323

This invention deals with a system of "reverse refrigeration", or in other words a heat pump, and is not concerned with removing heat from a building and throwing it away into the atmosphere, but in collecting free heat from any source such as Solar Energy, Heat from waste water, Heat collected from refrigerated spaces and re-used, heat from waste air ejected from a building, etc. The novelty of this system also rests in the fact that it is unique in requiring no pumps or compressors to circulate the refrigerant or the absorbant solution as will be seen in the specifications. It is also claimed by the inventor that this system is unique in that it provides Heat and Cold at the same time without having to reverse the flow of the system. Any or all of the above mentioned sources of energy are collected and stored in holding reservoirs of both hot and chilled water for later use as domestic hot water and for both heating in winter and cooling in summer. Write: **PATENT 1,134,158**, Denham L. Brown, 6230 Dewdney Avenue, Regina, Saskatchewan S4T 1E2 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.

Driving System for Elevators in Particular and Other Material Handling Installations in General/323

Système d'entraînement pour ascenseurs en particulier et autres appareils de manutention en général/323

A driving system which enables to move people or goods in a vertical, inclined, horizontal, circular pattern, or any other direction from a starting point "A" to a destination point "B", said driving system being based on the idea to transform rotational energy in translation movement by using two components: a rotating drive sheave secured to a body carriage and equipped with an external helicoidal profile having a nominal medium diameter "Dm" and pitch "R", and a guiding path extending between said points "A" and "B", comprising a plurality of equally spaced apart rollers, wherein the dis-

tance between two adjacent rollers is equal to said pitch "R"; sustaining means holding the said drive sheave in a constant adjacent relation to said guiding path, wherein the distance between the centre line of said drive sheave's helicoidal profile and the radial centre line axis of the adjacent engaged guiding path's roller is equal to " $Dm/2$ ", enables that accordingly to the said drive sheave's direction of rotation, the said body carriage to be moved between said points "A" and "B" onward or backward. Or a driving system as described above where the two said components are: a supporting body having wrapped around a helicoidal pattern a plurality of rollers, and a guiding path comprising a plurality of helicoidal sectors; both said components being coaxially disposed and having the same nominal diameter " Dm " and pitch "R". Write: **PATENT 1,134,288**, Vladimir M. Pascal, 51 Springhead Gardens, Richmond Hill, Ontario L4C 5C1 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.

Fluid Injection Pouch and Dispensing System Incorporating the Same/323

Sac d'injection et dispositif débiteur connexe/323

A fluid injection pouch for use in refilling a dispenser having a refill well with refill apertures therein and a piercing member therein, the pouch having a flexible wall hermetically sealed for containing fluid, and a docking adaptor loosely disposed within the pouch and for insertion into the refill well so as to push the wall of the pouch upon the piercing member to pierce the wall and provide an opening for discharge of fluid from the pouch through the refill aperture and into an associated dispenser; there also is provided a fluid dispensing system incorporating such an injection pouch. Write: **PATENT 1,134,325**, Steiner Sales Co. of Canada Ltd., c/o Beull, Ellis, Sargent & Russell, 744 Hastings Street, Vancouver, B.C. V6A 1R5 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.

Pill Dispenser/323

Distributeur temporisé pour comprimés/323

A pill dispenser is provided to enable individuals to take medication at regular specified times throughout the day. The dispenser has an open container with a divider means having a plurality of compartment-forming walls which divide the container into a number of compartments, each compartment adapted to receive and store medication to be taken at a prescribed time as identified with an hour label associated with the compartment, and a rotatable cover enclosing the container and having a sector-shaped opening, which can be moved over a selected compartment for the removal of the medication contained therein. If all compartments are used for holding medication, the sector-shaped opening may be covered with a closure tab which is openable so that the first dose of medication can be taken at the first prescribed time. The divider means may be detachably secured in the container so that it can be replaced with another divider means having a larger or smaller number of compartment-forming walls to thereby accommodate different dosage time periods. The assembly of the dispenser components may be achieved with a separate securing means or the components may be constructed in a particular way without using separate securing means. Write: **PATENT 1,134,330**, Helen M. Krebs, 104 Gold Kettle Drive, Gaithersburg, Maryland 20760 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102-1366, U.S.A.

Olefin Production/323

Production d'oléfines/323

Olefins and liquid mononuclear aromatic hydrocarbons (BTX) can be produced by catalytically hydrogenating a cut of a coal-derived oil which has a major proportion of naphthenes to a product which is substantially completely saturated, optionally stripping the product of light ends then cracking the product to yield olefins and mononuclear aromatics. Yields similar to yields of olefins from cracking a petroleum naphtha feedstock can be obtained. Write: **PATENT 1,134,395**, Coal Industry (Patents) Limited, Hobart House, Grosvenor Place, London S.W.1., England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

Truck Box Tarpaulin Assembly/323

Bâche pour boîte de camion/323

A tarpaulin is held by one edge along one side of the truck body and is rolled on a longitudinally extending roller assembly so that when the roller assembly is rotated, the tarpaulin rolls across the top of the truck box transversely. Spring loaded check cables extend from the ends of the roller and are fastened to the truck body on the other side of the truck body to control the roller and tarpaulin as the roller is being rotated to cover and uncover the top of the box. Write: **PATENT 1,134,411**, Gordon Block, Box 265, Leroy, Saskatchewan S0K 2P0 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.

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Navy

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

Process and Compositions for Preserving Fresh Hides and Skins/323

Filed March 10, 1982, by the Department of Agriculture. This invention relates to the preservation of fresh cattlehides and hides and skins of other animals and more particularly to a method of preserving fresh hides and skins which conserves time, energy and water. The invention also relates to compositions for preserving fresh hides. Write: **PAT-APPL-6-356 865**, NTIS.

Preparation of Acylurea Compounds/323

Filed April 20, 1982, by the Department of Agriculture. This invention relates to a process for preparing fatty acylurea derivatives and more particularly to the process for preparing acylarylureas and acylalkylureas rapidly and at temperatures below that at which dissociation and decomposition of the desired acylureas occurs. Write: **PAT-APPL-6-370 018**, NTIS.

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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.

Procédé et produits pour la conservation des peaux fraîches/323

Préparation de dérivés d'acylurée/323

Telemetry Load Link Assembly/323**Ensemble de télémessure de la charge imposée à un câble/323**

Filed August 21, 1981, by the Department of the Air Force. The patent application describes a mid-air recovery system having an aircraft with a winch and cable system for recovering parachute descending objects wherein a telemetry load link system monitors the strain placed upon a cable by having a telemetry load link assembly connected into the cable so strain data is transmitted to a radio receiver on board the aircraft for monitoring the strain placed upon the cable. Write: **PAT-APPL-6-295 034**, NTIS.

Unstable Optical Resonator with Cancelling Edge Waves/323**Résonateur optique instable à suppression des ondes de séparation/323**

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed March 2, 1982, by the Department of the Air Force. A structural improvement to the feedback (i.e., output) mirror of an unstable optical resonator. The improvement may comprise either a step-like projection (either convex or concave) on the internal surface of the feedback mirror, or a change in curvature of the internal surface of the mirror. Each of these improvements actually constitutes a discontinuity in the internal surface of the mirror, with the curvature of the mirror on either side (i.e., around) the improvement remaining the same. The improvement cancels the interfering edge waves at the geometric source point of the resonator, thereby minimizing the effect of edge diffraction, and results in yielding more 'geometric' modes having relatively uniform intensity profiles and large differences in feedback ratios between the dominant and higher-order modes. Write: **PAT-APPL-6-353 981**, NTIS.

Pressure Control System for Convergent-Divergent Exhaust Nozzle/323**Commande de pression pour tuyère à sortie convergente-divergente/323**

Filed March 2, 1982, by the Department of the Air Force. The instant invention relates to a pressure control system for a convergent-divergent exhaust nozzle of a gas turbine engine, and more particularly to a jet aircraft turbofan engine having either an axi-symmetrical (i.e., round) or a 2D (i.e., rectangular) exhaust nozzle. Write: **PAT-APPL-6-353 984**, NTIS.

Process for Preparing Carbon Fibers Having an Irregular Surface Configuration/323**Méthode de préparation de fibres de carbone présentant une configuration irrégulière en surface/323**

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed March 2, 1982, by the Department of the Air Force. The present invention provides a method for preparing polyacrylonitrile-based carbon fibers with improved surface characteristics. The polyacrylonitrile-based precursor fibers are wet spun under carefully controlled and specifically selected condition which alter fiber shape while maintaining internal fine structure. Write: **PAT-APPL-6-353 995**, NTIS.

Acetylene-Containing Aromatic Benzothiazole Compounds/323**Benzothiazoles aromatiques contenant des groupements acétyléniques/323**

Filed March 9, 1982, by the Department of the Air Force. Mono- and di-acetylenic-substituted 2-phenylbenzothiazoles are prepared by reacting the corresponding mono- or di-halogen-substituted 2-methyl-3-butyn-2-ol in the presence of a suitable catalyst. Write: **PAT-APPL-6-356 576**, NTIS.

Programmable Arithmetic Logic Unit/323**Unité logique et arithmétique programmable/323**

Filed March 12, 1982, by the Department of the Air Force. A programmable arithmetic logic unit for performing high speed bit sliced, pipelined computations at very low power is fabricated as an LSI component using CMOS/SOS technology. It is microprogrammable and operates in conjunction with a fast microprogram store program memory and controller. Dual input ports which supply data from eight sources are latched and operated on while new data is simultaneously fetched. Instruction bits shift data in either port left or right, select complements and select an operand between device input and output data in one port. The data processed in each port is compared and is added to provide a latched tristate output to an external device. Write: **PAT-APPL-6-357 440**, NTIS.

Segmented, Zoned Fuel Injection System for Use with a Combustor/323**Circuit compartimenté d'injection de carburant pour chambre de combustion/323**

Filed March 23, 1982, by the Department of the Air Force. A segmented, zoned fuel injection system for use within the entrance area of a combustor is disclosed. The fuel injection system has a plurality of spray bars formed as part of closely-spaced

apart segments. The spray bars are zoned to permit additional control of profile and flow rate of fuel injected into the combustor. This design permits radial profile control within the combustor, maintains higher efficiency at low fuel flows and easy replacement and/or maintenance of the components thereof. Write: **PAT-APPL-6-361 015**, NTIS.

Stereoscopic Video Imagery Generation/323

Production d'images vidéo stéréoscopiques/323

Filed March 23, 1982, by the Department of the Air Force. Flying spot scanner technology is combined with stereo photography in motion to produce two channels of video imagery which can be optically combined to produce the perception of dynamic stereoscopic detail, the scanner generates alternate lines with lateral offset corresponding to the physical separation between stereo photographic pairs to provide two rasters. Write: **PAT-APPL-6-361 016**, NTIS.

Sonic Flow Plate/323

Plaque débitmétrique acoustique/323

Filed April 8, 1982, by the Department of the Air Force. A sonic flow plate assembly for controlling the mass flow rate of gases by use of the sonic choking phenomenon. Identical gas flow control plate portions, each containing a plurality of nozzles formed by the smooth internal surface of vertical passageways in the plates, are connected end-to-end to form a unified gas flow control plate. Each of the nozzle passageways is in the shape of a hollow inverted truncated cone with bases in communication with hollow cylinders. Each plate portion, including the passageways therein, are molded from a fiberglass composite. The connected plate portions are secured in place by transversely positioned tension rods. Write: **PAT-APPL-6-366 743**, NTIS.

VHF Sensor In-Band Radio Relay/323

Relais de radiocommunications dans la bande pour détecteur VHF/323

Filed November 27, 1981, by the Department of the Army. Disclosed is an in-band, non-sampling, real time VHF radio relay or signal repeater for use in two-way, multi-hop remote sensor data links. Each signal repeater comprises a transceiver which includes interference cancellation circuits for preventing the high level signal produced by the radio repeater's transmitter section from desensitizing the low noise RF amplifier circuitry incorporated in the front end of the radio repeater's receiver section. Such apparatus is utilized to implement a remote sensor data collection network consisting of a plurality of subject radio repeaters and several sensors normally arranged in groups. The data which flows over the relay network can either originate at the sensors and flow to a read out station or it may originate at the read out station and flow to the sensors. Sensor originated information may be either digital or analog, or both, while read-out station originated information is digital only. Write: **PAT-APPL-6-325 162**, NTIS.

Method of Making Metallic Glass Metal Matrix Composites/323

Méthode de fabrication d'éléments de matrices en métal renforcées de verre métallique/323

Filed April 12, 1982, by the Department of the Army. A novel method is provided for producing metallic glass reinforced metal matrix composites possessing good interfacial bonding between the metallic glass and the metal matrix without gross degradation of the metallic glass or metal matrix. A layer of metallic glass in suitable form, e.g. ribbon, wire or flake, is placed between layers, e.g. sheets, of metal matrix material, which exhibits superplastic flow at a temperature below the crystallization temperature of the metallic glass material. The resulting structure is compressed at a temperature below the crystallization temperature of the metallic glass and sufficient to produce extensive superplastic flow of the metal matrix material. Write: **PAT-APPL-6-367 693**, NTIS.

Heat-Pipe-Diode-Charged Thermal Reservoir/323

Réservoir thermique chargé par diodes de caloduc/323

Filed April 16, 1982, by the Department of the Army. Heat-pipe-diodes are used to charge a thermally-stratified heat reservoir to permit enhanced preheating of feed water. Maximum available energy is automatically extracted from waste and feed streams having intermittent flow and variable temperature. The thermal reservoir comprises a plurality of thermosyphons operatively disposed in a condenser unit through which the feed water passes, and a plurality of fluidically connected heat-receiving diodes operatively disposed in an evaporator unit through which the waste stream flows. Write: **PAT-APPL-6-369 314**, NTIS.

Apparatus and Method for Generating Single Droplets/323

Appareil et méthode de production de gouttelettes distinctes/323

Filed May 3, 1982, by the Department of the Army. Apparatus and method are described for generating single droplets of fluid material in the 40 to 1100 micrometer range. A generator needle assembly is provided having a wire selected for inser-

tion in the needle with critical push-fit clearance and a tapered ground pointed end having an acute included angle of less than 15 degrees. The plunger of the syringe is mechanically advanced while telescopically observing the droplet size. A pneumatic collet is used which air strips the droplet without turbulence to produce uniform sized single droplets without the inclusion of satellite droplets. Write: **PAT-APPL-6-373 939**, NTIS.

Method and Apparatus for Dispersive Signal Processing/323

Méthode et dispositif de traitement des signaux dispersés/323

Filed May 7, 1982, by the Department of the Army. The invention is an improved manufacturing technique for producing a certain class of Surface Acoustic Wave (SAW) devices, namely those having input and output transducers in close proximity. A much higher manufacturing yield results from eliminating the cutting of a slot in the substrate between input and output transducers as formerly done. This frequently destructive step is replaced by ion-milling of a deep groove between the ports and backfilling with a metal of proper configuration to provide electromagnetic shielding. The technique produces a new device that is at least equal to the prior art in rejection of unwanted couplings between input and output. Write: **PAT-APPL-6-375 895**, NTIS.

Broadband Slow Wave Structure Attenuator/323

Atténuateur large bande de structure à ondes lentes/323

Filed May 10, 1982, by the Department of the Army. A broadband attenuator section in a meander line slow wave structure is disclosed for attenuating signals reflected between the output and input of the slow wave structure. The attenuator section comprises a multi-element ceramic support structure intermediate the meander line conductor pattern and the substrate wherein the support elements are comprised of a beryllium oxide-silicon carbide ceramic composition with a taper in the percentage of silicon carbide being provided in the transition region from a loss free section of the slow wave structure to a lossy attenuator section. The taper in percentage involves the use of ceramic support elements arranged in a sequence of 1%, 2% and 5% silicon carbide composition prior to the main attenuator section which is comprised of 10% silicon carbide — 90% beryllium oxide support elements. Write: **PAT-APPL-6-376 314**, NTIS.

Frequency Selective Side Absorber for a Meander Line/323

Amortisseur latéral sélectif en fréquence pour ligne en grecque/323

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed May 16, 1982, by the Department of the Army. A meander line slow wave structure mounted on ceramic bars for a microwave device such as an injected beam crossed-field amplifier includes frequency selective attenuator means which will preferentially attenuate waves at frequencies near and within the stopband of the slow wave structure by the placement of side absorber bars of attenuating material adjacent to the outer side surfaces of a plurality of meander line finger segments. The frequency selective absorber material, in its preferred form, comprises a beryllia and silicon carbide ceramic composition which is additionally adapted to accommodate metallic absorber top plates, nichrome films, and slotted side ring configurations. Write: **PAT-APPL-6-376 315**, NTIS.

Programmable Scanner/Tracker/323

Dispositif programmable de balayage et de poursuite/323

Filed May 13, 1982, by the Department of the Army. The patent application describes a scanning and/or tracking mechanism for use in airborne obstacle avoidance optical radars operating in the infrared region. The radar beam is scanned by passing it through a pair of in-line rotating optical wedges which rotate around the boresight axis and which are transparent to the infrared radiation. The wedges are separately driven by servo systems including hollow shaft torque motors with the wedges mounted in the hollow shafts thereof. A high resolution and low backlash shaft position encoder is utilized comprising encoding discs directly driven by the optical wedges and including a novel decoding system. Write: **PAT-APPL-6-377 727**, NTIS.

Downhole Steam Generator Having a Downhole Oxidant Compressor/323

Générateur de vapeur de fond avec un compresseur d'oxydant de puits/323

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed January 7, 1981, by the Department of Energy. An improved apparatus is described for the downhole injection of steam into boreholes, for tertiary oil recovery. It includes an oxidant supply, a fuel supply, an igniter, a water supply, an oxidant compressor, and a combustor assembly. The apparatus is designed for efficiency, preheating of the water, and cooling of the combustion chamber walls. The steam outlet to the borehole is provided with pressure-responsive doors for closing the outlet in response to flameout. Write: **PAT-APPL-6-222 854**, DOE.

Downhole Steam Generator with Improved Preheating, Combustion, and Protection Features/323

Générateur de vapeur de fond avec préchauffage, combustion et protection améliorés/323

Filed January 7, 1981, by the Department of Energy. For tertiary oil recovery, a downhole steam generator is designed which provides for efficient counterflow cooling of the combustion chamber walls and preheating of the fuel and water. Pressure-responsive doors are provided for closing and opening the outlet in response to flameout, thereby preventing flooding of the combustion chamber. Write: **PAT-APPL-6-222 855**, DOE.

Downhole Steam Generator Using Low-Pressure Fuel and Air Supply/323

Générateur de vapeur de fond utilisant du carburant et de l'air à basse pression/323

Filed January 7, 1981, by the Department of Energy. For tertiary oil recovery, an apparatus for downhole steam generation is designed in which water is not injected directly onto the flame to the combustor, the combustion process is isolated from the reservoir pressure, the fuel and oxidant are supplied to the combustor at relatively low pressures, and the hot exhaust gases is prevented from entering the earth formation but is used to preheat the fuel and oxidant and water. The combustion process is isolated from the steam generation process. Write: **PAT-APPL-6-222 863**, DOE.

Electric Power Generating Plant Having Direct-Coupled Steam and Compressed-Air Cycles/323

Groupe électrogène avec couplage direct des cycles vapeur et air comprimé/323

Filed January 7, 1981, by the Department of Energy. An electric power generating plant is provided with a Compressed Air Energy Storage (CAES) system which is directly coupled to the steam cycle of the generating plant. The CAES system is charged by the steam boiler during off peak hours, and drives a separate generator during peak load hours. The steam boiler load is thereby leveled throughout an operating day. Write: **PAT-APPL-6-222 864**, DOE.

Method for Providing Uranium Articles with a Corrosion-Resistant Anodized Coating/323

Revêtement anodisé anti-corrosion pour morceaux d'uranium/323

Filed January 7, 1981, by the Department of Energy. Uranium articles are provided with anodized oxide coatings in an aqueous solution of an electrolyte selected from the group consisting of potassium phosphate, potassium hydroxide, ammonium hydroxide, and a mixture of potassium tetraborate and boric acid. The uranium articles are anodized at a temperature greater than about 75 exp 0 C with a current flow of less than about 0.036 A/cm exp 2 of surface area while the pH of the solution is maintained in a range of about 2 to 11.5. The pH values of the aqueous solution and the low current density utilized during the electrolysis prevent excessive dissolution of the uranium and porosity in the film or watering. The relatively high temperature of the electrolyte bath inhibits hydration and the attendant deleterious pitting so as to enhance corrosion resistance of the anodized coating. Write: **PAT-APPL-6-222 865**, DOE.

Solid-State Optical Microscope/323

Microscope optique à l'état solide/323

Filed January 7, 1981, by the Department of Energy. A solid state optical microscope is described wherein wide-field and high-resolution images of an object are produced at a rapid rate by utilizing conventional optics with a charge-coupled photodiode array. Means for scanning in one of two orthogonal directions are provided, while the charge-coupled photodiode array scans in the other orthogonal direction. Illumination light from the object is incident upon the photodiodes, creating packets of electrons (signals) which are representative of the illuminated object. The signals are then processed, stored in a memory, and finally displayed as a video signal. Write: **PAT-APPL-6-222 866**, DOE.

Dose-Equivalent Neutron Dosimeter/323

Dosimètre permettant d'évaluer l'équivalent de dose en cas d'exposition aux neutrons/323

Filed January 7, 1981, by the Department of Energy. A neutron dosimeter is disclosed which provides a single measurement indicating the amount of potential biological damage resulting from the neutron exposure of the wearer, for a wide range of neutron energies. The dosimeter includes a detecting sheet of track etch detecting material such as a carbonate plastic, for detecting higher energy neutrons, and a radiator layer containing conversion material such as exp 6 Li and exp 10 B lying adjacent to the detecting sheet for converting moderate energy neutrons to alpha particles that produce tracks in the adjacent detecting sheet. Write: **PAT-APPL-6-222 867**, DOE.

Automatic Grinding Apparatus to Control Uniform Specimen Thicknesses/323

Dispositif de meulage automatique pour assurer une épaisseur uniforme/323

Filed January 7, 1981, by the Department of Energy. This invention is directed to a new and improved grinding apparatus comprising: (1) a movable grinding surface; (2) a specimen holder; (3) a displacing means for moving the holder and/or grinding surface toward one another; and (4) at least three means for limiting displacement of the holder to the grinding surface. Write: **PAT-APPL-6-222 868**, DOE.

Coprocessed Nuclear Fuels Containing (U, Pu) Values as Oxides, Carbides or Carbonitrides/323

Co-traitement de combustibles nucléaires contenant certains oxydes, carbures ou carbonitrides d'uranium et de plutonium/323

Filed January 9, 1981, by the Department of Energy. Method for direct coprocessing of nuclear fuels derived from a product stream of fuels reprocessing facility containing uranium, plutonium, and fission product values comprising nitrate stabilization of said stream vacuum concentration to remove water and nitrates, neutralization to form an acid deficient feed solution for the internal gelation mode of sol-gel technology, green spherule formation, recovery and treatment for loading into a fuel element by vibra packed or pellet formation technologies. Write: **PAT-APPL-6-223 547**, DOE.

Josephson Junctions in High-T/sub C/ Superconductors/323

Fonctions Josephson dans les supraconducteurs en hautes températures et sub-C/323

Filed January 14, 1981, by the Department of Energy. The invention includes a high T/sub c/Josephson superconducting junction as well as the method and apparatus which provides the junction by application of a closely controlled and monitored electrical discharge to a microbridge region connecting two portions of a superconducting film. Write: **PAT-APPL-6-224 994**, DOE.

Use of Tertiary Nitrogen Heterocyclic Material to Reduce Moisture-Induced Damage in Asphalt-Aggregate Mixtures/323

Emploi de composés hétérocycliques à azote tertiaire pour réduire les dommages causés par l'humidité aux mélanges asphalte-agrégats/323

Filed January 15, 1981, by the Department of Energy. Asphalt-aggregate roads crack when subjected to freezing and thawing cycles. Herein, the useful life of asphalts are substantially improved by a minor amount of a moisture damage inhibiting agent selected from compounds having a pyridine moiety, including acid salts of such compounds. A shale oil fraction may serve as the source of the improving agent and may simply be blended with conventional petroleum asphalts. Write: **PAT-APPL-6-225 219**, DOE.

New and Improved Apparatus and Method for Monitoring the Intensities of Charged-Particle Beams/323

Appareil et méthode améliorés de contrôle de l'intensité des faisceaux de particules chargées/323

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed January 16, 1981, by the Department of Energy. Charged particle beam monitoring means are disposed in the path of a charged particle beam in an experimental device. The monitoring means comprise a beam monitoring component which is operable to prevent passage of a portion of beam, while concomitantly permitting passage of another portion thereof for incidence in an experimental chamber, and providing a signal ($I/\text{sub } m$) indicative of the intensity of the beam portion which is not passed. Calibration means are disposed in the experimental chamber in the path of the said another beam portion and are operable to provide a signal ($I/\text{sub } f$) indicative of the intensity thereof. Means are provided to determine the ratio (R) between said signals whereby, after suitable calibration, the calibration means may be removed from the experimental chamber and the intensity of the said another beam portion determined by monitoring of the monitoring means signal, per se. Write: **PAT-APPL-6-225 492**, DOE.

Segmented Pyrojector Detector/323

Détecteur pyroélectrique à segments/323

Filed January 21, 1981, by the Department of Energy. A pyroelectric detector is described which has increased voltage output and improved responsivity over equivalent size detectors. The device comprises a plurality of edge-type pyroelectric detectors which have a length which is much greater than the width of the segments between the edge-type electrodes. External circuitry connects the pyroelectric detector segments in parallel to provide a single output which maintains 50 ohm impedance characteristics. Write: **PAT-APPL-6-226 575**, DOE.

Magnetic-Field-Dosimetry System/323

Dosimètre destiné à la mesure de l'exposition à un champ magnétique/323

Filed January 21, 1981, by the Department of Energy. A device is provided for measuring the magnetic field dose and peak field exposure. The device includes three Hall-effect sensors all perpendicular to each other, sensing the three dimensional magnetic field and associated electronics for data storage, calculating, retrieving and display. Write: **PAT-APPL-6-226 577**, DOE.

Low-Drag Electrical-Contact Arrangement for Maintaining Continuity Between Horizontally Movable Members/323

Contact électrique à faible résistance mécanique pour maintenir la continuité entre des éléments horizontaux mobiles/323

Filed January 23, 1981, by the Department of Energy. This invention is a low-drag electrical contact arrangement for establishing continuity between upper and lower spaced members which are subject to relative horizontal movement. In one aspect, the invention comprises an electrical commutating arrangement which includes a horizontally disposed linear electrical commutator. A horizontally movable electrically conductive pedestal is positioned below the commutator and defines a clearance therewith. The pedestal is formed with a cavity confronting the commutator. In the cavity is a bead of electrical conductive liquid, the bead being characterized by an upwardly convex meniscus portion which extends across the clearance and contacts the commutator. The surface tension of the bead is sufficient to maintain the bead intact when the commutator and pedestal are displaced horizontally. Write: **PAT-APPL-6-228 035**, DOE.

Active Magnetic Regenerator/323

Régénérateur magnétique actif/323

Filed January 27, 1981, by the Department of Energy. An apparatus and method for refrigeration are disclosed which provides efficient refrigeration over temperature ranges in excess of 20 exp 0 C and which requires no maintenance and is, therefore, usable on an unmanned satellite. The apparatus comprises a superconducting magnet which may be solenoidal. A piston comprising a substance such as a rare earth substance which is maintained near its Curie temperature reciprocates through the bore of the solenoidal magnet. A magnetic drive rod is connected to the piston and appropriate heat sinks are connected thereto. The piston is driven by a suitable mechanical drive such as an electric motor and cam. In practicing the invention, the body of the piston is magnetized and demagnetized as it moves through the magnetic field of the solenoid to approximate any of the following cycles or a condition thereof as well as, potentially, other cycles: Brayton, Carnot, Ericsson, and Stirling. Advantages of the present invention include: that refrigeration can be accomplished over at least a 20 exp 0 C scale at superconducting temperatures as well as at more conventional temperatures; very high efficiency, high reliability, and small size. Write: **PAT-APPL-6-228 836**, DOE.

Method of Bonding Diamonds in a Matrix and Articles Thus Produced/323

Méthode pour fixer des diamants dans une matrice et articles produits ainsi/323

Filed January 27, 1981, by the Department of Energy. By fluorinating diamond grit, the grit may be readily bonded into a fluorocarbon resin matrix. The matrix is formed by simple hot pressing techniques. Diamond grinding wheels may advantageously be manufactured using such a matrix. Teflon fluorocarbon resins are particularly well suited for using in forming the matrix. Write: **PAT-APPL-6-228 837**, DOE.

Apparatus for Monitoring Tritium in Tritium-Contaminating Environments Using a Modified Kanne Chamber/323

Appareil de contrôle du tritium dans un environnement contaminant, basé sur une chambre de Kanne modifiée/323

Filed January 27, 1981, by the Department of Energy. A conventional Kanne tritium monitor has been redesigned to reduce its sensitivity to such contaminants as tritiated water vapor and tritiated oil. The high voltage electrode has been replaced by a wire cylinder and the collector electrode has been reduced in diameter. The area sensitive to contamination has thereby been reduced by about a factor of forty while the overall apparatus sensitivity and operation has not been affected. The design allows for in situ decontamination of the chambers, if necessary. Write: **PAT-APPL-6-229 024**, DOE.

High-Temperature Sensor/323

Capteur de hautes températures/323

Filed January 29, 1981, by the Department of Energy. A high temperature sensor is described which includes a pair of electrical conductors separated by a mass of electrical insulating material. The insulating material has a measurable resistivity within the sensor that changes in relation to the temperature of the insulating material within a high temperature range (1000 to 2000 exp 0 K). When required, the sensor can be encased within a ceramic protective coating. Write: **PAT-APPL-6-229 421**, DOE.

Liquid-Level Detector/323**Détecteur du niveau d'un liquide/323**

Filed January 29, 1981, by the Department of Energy. A liquid level sensor is described which has a pair of upright conductors spaced by an insulator defining a first high resistance path between the conductors. An electrically conductive path is interposed between the upright conductors at a discrete location at which liquid level is to be measured. It includes a liquid accessible gap of a dimension such that the electrical resistance across the conductor when the gap is filled with the liquid is detectably less than when the gap is emptied. The conductor might also be physically altered by temperature changes to serve also as an indicator of elevated temperature. Write: **PAT-APPL-6-229 422**, DOE.

Water-Level Sensor and Temperature-Profile Detector/323**Détecteur du profil de température et capteur du niveau de l'eau/323**

Filed January 29, 1981, by the Department of Energy. A temperature profile detector is described which comprises a surrounding length of metal tubing and an interior electrical conductor both constructed of high temperature high electrical resistance materials. A plurality of gas-filled expandable bellows made of electrically conductive material are positioned at spaced locations along a length of the conductors. The bellows are sealed and contain a predetermined volume of a gas designed to effect movement of the bellows from an open circuit condition to a closed circuit condition in response to monitored temperature changes sensed by each bellows. Write: **PAT-APPL-6-229 423**, DOE.

High-Temperature Liquid-Level Sensor/323**Capteur du niveau d'un liquide pour hautes températures/323**

Filed January 29, 1981, by the Department of Energy. A length of metal sheathed metal oxide cable is perforated to permit liquid access to the insulation about a pair of conductors spaced close to one another. Changes in resistance across the conductors will be a function of liquid level, since the wetted insulation will have greater electrical conductivity than that of the dry insulation above the liquid elevation. Write: **PAT-APPL-6-229 498**, DOE.

Novel Hard Compositions and Methods of Preparation/323**Méthodes de préparation de nouvelles compositions présentant une dureté élevée/323**

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed February 3, 1981, by the Department of Energy. Novel very hard compositions of matter are prepared by using in all embodiments only a minor amount of a particular carbide (or materials which can form the carbide in situ when subjected to heat and pressure); and no strategic cobalt is needed. Under a particular range of conditions, densified compositions of matter of the invention are prepared having hardnesses on the Rockwell A test substantially equal to the hardness of pure tungsten carbide and to two of the hardest commercial cobalt-bonded tungsten carbides. Alternately, other compositions of the invention which have slightly lower hardnesses than those described above in one embodiment also possess the advantage of requiring no tungsten and in another embodiment possess the advantage of having a good fracture toughness value. Write: **PAT-APPL-6-231 085**, DOE.

Method of Forming Cavitated Objects of Controlled Dimension/323**Méthode de fabrication d'objets creux de dimensions déterminées/323**

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed February 11, 1981, by the Department of Energy. A method is disclosed of controllably varying the dimensions of cavitated objects such as hollow spherical shells wherein a precursor shell is heated to a temperature above the shell softening temperature in an ambient atmosphere wherein the ratio of gases which are permeable through the shell wall at that temperature to gases which are impermeable through the shell wall is substantially greater than the corresponding ratio for gases contained within the precursor shell. As the shell expands, the partial pressures of permeable gases internally and externally of the shell approach and achieve equilibrium, so that the final shell size depends solely upon the difference in impermeable gas partial pressures and shell surface tension. Write: **PAT-APPL-6-233 341**, DOE.

High-Temperature Pressure-Coupled Ultrasonic Waveguide/323**Guide d'ondes ultrasonore à couplage par pressurisation pour hautes températures/323**

Filed February 11, 1981, by the Department of Energy. A pressure coupled ultrasonic waveguide is provided to which one end may be attached a transducer and at the other end a high temperature material for continuous ultrasonic testing of the material. The ultrasonic signal is coupled from the waveguide into the material through a thin, dry copper foil. Write: **PAT-APPL-6-233 354**, DOE.

Entirely Passive Heat-Pipe Apparatus Capable of Operating Against Gravity/323

Caloduc entièrement passif capable de fonctionner contre la pesanteur/323

Filed February 11, 1981, by the Department of Energy. The disclosure is directed to an entirely passive heat pipe apparatus capable of operating against gravity for vertical distances in the order of 3 to 7 and more. A return conduit into which an inert gas is introduced is used to lower the specific density of the working fluid so that it may be returned a greater vertical distance from condenser to evaporator. Write: **PAT-APPL-6-233 365**, DOE.

Single Electron Beam RF Feedback Free Electron Laser/323

Laser à électrons libres à réaction RF et faisceau d'électrons unique/323

Filed February 11, 1981, by the Department of Energy. A free electron laser system and electron beam system for a free electron laser which uses rf feedback to enhance efficiency are described. Rf energy is extracted from a single electron beam by decelerating cavities and energy is returned to accelerating cavities using rf returns, such as rf waveguides, rf feedthroughs, resonant feedthroughs, etc. This rf energy is added to rf klystron energy to reduce the required input energy and thereby enhance energy efficiency of the system. Write: **PAT-APPL-6-233 530**, DOE.

Method for Enhancing Signals Transmitted over Optical Fibers/323

Méthode de renforcement des signaux transmis par fibres optiques/323

Filed February 11, 1981, by the Department of Energy. A method for spectral equalization of high frequency spectrally broadband signals transmitted through an optical fiber is disclosed. The broadband signal input is first dispersed by a grating. Narrow spectral components are collected into an array of equalizing fibers. The fibers serve as optical delay lines compensating for material dispersion of each spectral component during transmission. The relative lengths of the individual equalizing fibers are selected to compensate for such prior dispersion. The output of the equalizing fibers couple the spectrally equalized light onto a suitable detector for subsequent electronic processing of the enhanced broadband signal. Write: **PAT-APPL-6-233 532**, DOE.

Reduction in Maximum Time Uncertainty of Paired Time Signals/323

Réduction de l'incertitude temporelle maximale de paires de signaux horaires/323

Filed February 11, 1981, by the Department of Energy. Reduction in the maximum time uncertainty ($t_{\text{sub max}} - t_{\text{sub min}}$) of a series of paired time signals $t_{\text{sub 1}}$ and $t_{\text{sub 2}}$ varying between two input terminals and representative of a series of single events where $t_{\text{sub 1}} \leq t_{\text{sub 2}}$ and $t_{\text{sub 1}} + t_{\text{sub 2}}$ equals a constant, is carried out with a circuit utilizing a combination of OR and AND gates as signal selecting means and one or more time delays to increase the minimum value ($t_{\text{sub min}}$) of the first signal $t_{\text{sub 1}}$ closer to $t_{\text{sub max}}$ and thereby reduce the difference. The circuit may utilize a plurality of stages to reduce the uncertainty by factors of 20 to 800. Write: **PAT-APPL-6-233 533**, DOE.

Substantially Self-Powered Method and Apparatus for Recovering Hydrocarbons from Hydrocarbon-Containing Solid Hydrates/323

Méthode et appareillage en grande partie autonome pour l'extraction des hydrocarbures des hydrates solides qui les contiennent/323

Filed February 19, 1981, by the Department of Energy. A method and apparatus are provided for producing gaseous hydrocarbons from formations comprising solid hydrocarbon hydrates located under either a body of land or a body of water. The vast natural resources of such hydrocarbon hydrates can thus now be economically mined. Relatively warm brine or water is brought down from an elevation above that of the hydrates through a portion of the apparatus, and passes in contact with the hydrates, thus melting them. The liquid then continues up another portion of the apparatus carrying entrained hydrocarbon vapors in the form of bubbles, which can easily be separated from the liquid. After a short startup procedure, the process and apparatus are substantially self-powered. Write: **PAT-APPL-6-235 775**, DOE.

Method and Apparatus for Melt Growth of Crystalline Semiconductor Sheets/323

Méthode et appareil de croissance par fusion de couches de cristaux semiconducteurs/323

Filed February 25, 1981, by the Department of Energy. An economical method is presented for forming thin sheets of crystalline silicon suitable for use in a photovoltaic conversion cell by solidification from the liquid phase. Two spatially separated, generally coplanar filaments wettable by liquid silicon and joined together at the end by a bridge member are immersed in a silicon melt and then slowly withdrawn from the melt so that a silicon crystal is grown between the edge of the bridge and the filaments. Write: **PAT-APPL-6-238 234**, DOE.

Method for Making Block Siloxane Copolymers/323**Méthode de fabrication de copolymères de siloxane à motifs monomères alternés/323**

Filed February 25, 1981, by the Department of Energy. A method for synthesizing block polysiloxane copolymers is disclosed. Diorganosilyloxanes and an end-blocking compound are interacted in the presence of a ring opening polymerization catalyst, producing a blocked prepolymer. The prepolymer is then interacted with a silanediol, resulting in condensation polymerization of the prepolymers. A second end-blocking compound is subsequently introduced to end-cap the polymers and copolymers formed from the condensation polymerization. Write: **PAT-APPL-6-238 235**, DOE

Optogalvanic Intracavity Quantitative Detector and Method for Its Use/323**Détecteur optogalvanique quantitatif pour cavités laser et méthode d'utilisation du détecteur/323**

Filed February 25, 1981, by the Department of Energy. The disclosure relates to an optogalvanic intracavity detector and method for its use. Measurement is made of the amount of light absorbed by atoms, small molecules and ions in a laser cavity utilizing laser-produced changes in plasmas containing the same atoms, molecules or ions. Write: **PAT-APPL-6-238 236**, DOE.

Process for Preparing a Chemical Compound Enriched in Isotope Content/323**Procédé de préparation d'un composé chimique enrichi en isotopes lourds/323**

Filed February 25, 1981, by the Department of Energy. A process to prepare a chemical enriched in isotope content includes: a chemical exchange reaction between a first and second compound which yields an isotopically enriched first compound and an isotopically depleted second compound: the removal of a portion of the first compound as product and the removal of a portion of the second compound as spent material; the conversion of the remainder of the first compound to the second compound for reflux at the product end of the chemical exchange reaction region; the conversion of the remainder of the second compound to the first compound for reflux at the spent material end of the chemical exchange region; and the cycling of the additional chemicals produced by one conversion reaction to the other conversion reaction, for consumption therein. One of the conversion reactions is an oxidation reaction, and the energy that it yields is used to drive the other conversion reaction, a reduction. The reduction reaction is carried out in a solid polymer electrolyte electrolytic reactor. The overall process is energy efficient and yields no waste by-products. A particular embodiment of the process in the production of nitrogen-15-enriched nitric acid. Write: **PAT-APPL-6-238 711**, DOE.

Tubing Crimping Pliers/323**Pince à sertir les tubes/323**

Filed February 27, 1981, by the Department of Energy. The disclosure relates to pliers and more particularly to pliers for crimping two or more pieces of copper tubing together prior to their being permanently joined by brazing, soldering or the like. A die containing spring-loaded pins rotates within a cammed ring in the head of the pliers. As the die rotates, the pins force a crimp on tubing held within the pliers. Write: **PAT-APPL-6-238 908**, DOE.

Detection Device/323**Détecteur/323**

Filed February 27, 1981, by the Department of Energy. The present invention is directed to a detection device comprising: (1) an entrance chamber; (2) a central chamber, and (3) an exit chamber. The central chamber includes an ionizing gas, anode, and means for connecting the anode with an external power supply and pulse counter. Write: **PAT-APPL-6-239 227**, DOE.

Cleaning Method and Apparatus/323**Méthode et équipement de nettoyage/323**

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed February 27, 1981, by the Department of Energy. A method of very thoroughly and quickly cleaning a gauze electrode used in chemical analyses is given, as well as an automobile cleaning apparatus which makes use of the method. The method generates very little waste solution, and this is very important in analyzing radioactive materials, especially in aqueous solutions. The cleaning apparatus can be used in a larger, fully automated controlled potential coulometric apparatus. About 99.98% of a 5 mg plutonium sample was removed in less than 3 minutes, using only about 60 ml of rinse solution and two main rinse steps. Write: **PAT-APPL-6-239 228**, DOE.

Cementitious Dental Compositions Which Do Not Inhibit Polymerization/323**Préparations pour cimentation dentaire, n'inhibant pas la polymérisation/323**

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed December 10, 1981, by the Department of Health and Human Services. The invention relates to cementitious materials suitable for use as luting agents, sedative and insulating bases,

temporary and long term restoratives, endodontic sealants, pulp capping materials, tissue packs, impression pastes and adhesives for dental composites and hard tissues. Specifically, the present invention relates to high strength, low solubility adhesives and restoratives containing vanillic acid esters and metal oxides which do not inhibit polymerization. Write: **PAT-APPL-6-329 590**, NTIS.

Mhd Electrical Generator/323

Génératrice d'électricité MHD/323

Filed February 14, 1982, by NASA. An MHD (magnetohydrodynamic) electric generator is provided which is of high efficiency and which can operate in a closed cycle with minimal moving parts for unattended applications. The generator includes a porous tungsten element heated by a heat source and a system for passing primarily pure cesium vapor into the porous element, to produce contact ionization of the cesium with a higher percentage of ions than can be sustained. The highly ionized cesium vapor, and corresponding numbers of electrons from the tungsten element, recombine to produce a much higher temperature as the cesium flows through a tube past an MHD converter that generates electricity, and into a cool end of the tube where the cesium is cooled to a liquid temperature. The liquid can be recirculated by passing it through capillary passages extending towards the location where cesium vapor enters the porous tungsten element. Write: **PAT-APPL-6-330 612**, 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 90014-1377, U.S.A.

Acoustic Bubble Removal/323

Élimination acoustique de bulles/323

Filed January 21, 1982, by NASA. A method in described for removing bubbles from a liquid bath, such as a bath of molten glass to be used for optical elements. Larger bubbles are first removed by applying acoustic energy resonant to a bath dimension to drive the larger bubbles toward a pressure well where the bubbles can coalesce and then be more easily removed. Next, submillimeter bubbles are removed by applying acoustic energy of frequencies resonant to the small bubbles to oscillate them and thereby stir liquid immediately about the bubbles to facilitate their backup and absorption into the liquid. Write: **PAT-APPL-6-341 406**, 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 90014-1377, U.S.A.

Glass Heating Panels and Method for Preparing the Same from Architectural Reflective Glass/323

Panneaux chauffants en verre et leur préparation à partir de verre réfléchissant/323

Price per copy from NTIS: PC U.S. \$7.50/MF U.S. \$4.00, filed January 26, 1982, by NASA. A method for producing glass supported resistive heating elements is described. Electrodes are positioned in intimate contact with an outer surface of a thin electrically insulating protecting layer of architectural reflective glass. Application of a voltage of sufficient magnitude substantially destroys the insulating layer located beneath the electrodes. A subsequent application of voltage results in a passage of current through the underlying thin, light-reflective metal or metal oxide layer and in concomitant output of heat. In addition techniques are suggested for producing panels wherein the electrically heated area is readily preselected in any desired configuration. Write: **PAT-APPL-6-342 871**, 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 90014-1377, U.S.A.

Interferometrically Tuned Laser Resonator/323

Résonateur laser accordé par interférométrie/323

Filed November 28, 1980, by the Department of the Navy. The object of the present invention is to provide a laser resonator which can use reflectors with readily available dichroic coatings to maximize the laser cavity gain at one fluorescent line over adjacent lines. Another object for the invention is to provide a simple and inexpensive means for altering the reflectance characteristics of commercially available dielectric coatings and optimize cavity resonance. Still another object of the invention is to provide means for relaxing the exactitude of reflectance characteristics of dielectric coatings and allow more freedom in maximizing the laser output. Write: **PAT-APPL-6-210 902**, NAVY.

Method of Bonding Materials to Cured Silicone Rubber Insulation/323

Méthode de fixation de matériaux à un isolant constitué de caoutchouc au silicone durci/323

Filed October 9, 1981, by the Department of the Navy. Applying various functional trialkoxysilane coupling agents to primed cured silicone rubber provides a substrate to which other materials may be bonded. Write: **PAT-APPL-6-310 193**, NAVY.

Electrically Poled Gamma-Phase Nylon 11/323**Nylon 11 (phase gamma) polarisé
électriquement/323**

Filed March 24, 1982, by the Department of the Navy. Nylon 11 (gamme-phase) is electrically poled after it is crystallized from commercially available nylon 11 by rapidly crystallizing it from the molten state. The gamma-phase nylon 11 so obtained exhibits high piezoelectric properties when poled under different poling conditions at different temperatures. The electrically poled gamma-phase nylon 11 is used in a transducer. Write: **PAT-APPL-6-315 327**, NAVY.

Heat Measuring Device/323**Appareil de mesure de la chaleur/323**

Filed November 18, 1981, by the Department of the Navy. A heat measuring device is provided for remotely measuring temperature of the surface of a body and is readily adaptable for measuring skin friction due to fluid flow over a body. A surface of a body is coated with cholesteric liquid crystals which change color with temperature and a spot on the coated surface is heated by a laser beam. Surface temperature is monitored by illuminating the heated spot by light and directing the light reflected from the liquid crystals to a photo-multiplier tube. Laser power at the surface is indirectly measured by a beam splitter and a photodetector. Write: **PAT-APPL-6-322 328**, NAVY.

A Tangential Drag Enhancing Yarn/323**Fil tangentiel pour l'accroissement de la
traînée/323**

Filed December 24, 1981, by the Department of the Navy. The present invention relates to means for reducing resonance oscillation in long tension members, and more particularly to a tangential drag enhancing yarn to increase the vertical mass of the oscillatory spring mass system. Accordingly, the present invention produces a tangential drag enhancing yarn for use in lines and cables to increase the vertical mass of the spring mass system. A plurality of yarn loops are attached to the outer cover of the line or cable. Write: **PAT-APPL-6-334 101**, NAVY.

**Composition for Removing Metal Oxides from
Surfaces/323****Mélange servant à éliminer les oxydes métalliques
de surfaces/323**

Filed January 20, 1982, by the Department of the Navy. A liquid composition for removing deposits containing metal oxide from surfaces comprises a water-soluble polymer selected from the class consisting of unsubstituted and substituted polyvinylpyrrolidone and copolymers of vinylpyrrolidone and dimethylamine-ethylacrylate and mixtures thereof; a solvent selected from the class consisting of water and aqueous solutions of mono- and polyhydric alcohol; a chelating agent from 0 to about 40 weight percent; a surfactant from 0 to about 10 weight percent; and a pH-adjusting agent if needed. Write: **PAT-APPL-6-340 944**, NAVY.

**Isolation Steam Valve with Atmospheric Vent and
Relief Capability/323****Soupape d'isolation de la vapeur avec mise à l'air
libre et détente/323**

Filed February 22, 1982, by the Department of the Navy. An isolation steam valve arrangement is described for use on the exhaust side of steam turbine for directing exhaust steam therefrom to steam operated auxiliary equipment and for relieving or venting steam to the atmosphere. The valve arrangement includes a casing, or body provided with a single inlet and plural outlets. A main valve between the inlet and one of the outlets is selectively positionable from fully open to fully closed for controlling steam flow through one outlet for operating auxiliary equipment. A normally closed vent valve between the inlet and other outlet is adapted to open upon closure of the main valve to establish open communication between the inlet and other outlet in order to continuously vent to the atmosphere a low volume of steam from upstream of the main valve. A normally closed pressure operable relief valve is adapted to relieve to the atmosphere a high volume of pressurized steam from upstream of the main valve. Write: **PAT-APPL-6-350 919**, NAVY.

Repellent Coatings for Optical Surfaces/323**Revêtements hydrofuges pour surfaces
optiques/323**

Filed February 22, 1982, by the Department of the Navy. Water repellent coatings for optical elements such as lenses and windshields. Coatings for uncoated glass, glass having a magnesium fluoride antireflective coating, and glass having an electrically conductive coating of a mixture of indium oxides and tin oxides are applied by applying compositions containing chloromethylsilanes, Dow Corning 531 and 536 fluids, or N, beta-aminoethyl-gamma-aminopropyltrimethylsilane and a perfluorocarboxylic acid to the surface where water repellent coatings are desired. Dow Corning 531 and 536 fluids are described as aminofunctional polydimethylsiloxane copolymers. Hydrolysis and condensation reactions in the presence of water at the surface to be coated result in a durable polymeric coating bonded to the surface. Write: **PAT-APPL-6-351 059**, NAVY.

Water Jet Sediment Probe/323**Sonde de sédiments à injection d'eau/323**

Filed March 25, 1982, by the Department of the Navy. It is an object of the invention, to provide a water jet sediment probe system whereby one person can bore deep holes exceeding ten feet in depth. The sediment probe of this invention provides means for making a flexible hose rigid, one portion at a time, so that it can be spudded into the sediment without the need to start with one rigid piece of pipe that is as long as the desired hole depth. A flexible hose is attached to an initial length of pipe which includes the probe tip and a pumping means is provided to pump water under pressure through the flexible hose and out through the probe tip. A series of short rigid rod or pipe sections are attached adjacent to or about the flexible hose at regular intervals as it is spudded into the sediment to provide the required rigidity along the entire length of the probe until the desired hole depth is reached. This system permits one person handling only short sections of rod, pipe, or split pipe to probe or jet-in a hole of indefinite depth without having to raise and use a rigid pipe as long as the desired depth of the hole. The system is operable for use on land or by divers underwater. Write: **PAT-APPL-6-361 713**, NAVY.

Field of View Test Apparatus/323**Matériel d'essais relatifs au champ visuel/323**

Filed March 29, 1982, by the Department of the Navy. A field of view test apparatus utilizes a plurality of interchangeable acrylic masks to vary the resolution characteristics of a projected field of view. An eye or head tracker provides line of sight direction signals to a servo which positions the mask with the optical path of the projection to correlate the area of high resolution with the direction of the line of sight. Write: **PAT-APPL-6-362 829**, NAVY.

**High Density, Low Viscosity Airbreather Fuel
(RJ-4-1)/323****Carburant à grande densité et à basse viscosité
pour combustion à l'air (RJ-4-1)/323**

Filed April 26, 1982, by the Department of the Navy. A method for preparation of high density, high energy, low viscosity liquid hydrocarbon fuel by catalytic treatment of tetrahydrodi-methyldicyclopentadiene (RJ-4) synthetic fuel. Endo-isomers within the fuel stock are isomerized to exoisomers by treatment of the fuel stock with catalysts such as aluminum chloride, nickel, or pulverized, acid treated firebrick resulting in a fuel having a lower viscosity than the original RJ-4. Write: **PAT-APPL-6-371 869**, NAVY.

Licensing Opportunities Through The University of Virginia Alumni Patents Foundation, U.S.

The following patented technologies are available for commercialization under licensing arrangements. Interested Canadian manufacturers wishing to ascertain the stage of development, terms of the agreement, marketing rights and assistance available, should write to: Mr. Ralph D. Pinto, Executive Director, The University of Virginia Alumni Patents Foundation, Towers Office Building, Suite 6-200, 1224 West Main Street, Charlottesville, Virginia 22903 and send a copy of your initial correspondence to Ms. Carol Klein, Commercial Officer, Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, PA 19102.

MATERIALS SCIENCE

Whisker Heat Exchanger/323

This invention has made possible the production of compact heat exchangers which enable such liquids as petrol and fuel oils to be heated and atomized extremely rapidly and efficiently to a fine mist by a simple once-through process. Quote: HS06 - H. Schladitz.

ELECTRICAL ENGINEERING

Miniature Electromagnetic Field Measurement Probe/323

A sub-miniature microwave electric-field measurement probe (1 mm. diameter) has been developed which is linear over a large range of powers. This probe can be implanted in animals for research measurements, used during diathermy treatments and can be used for electromagnetic interference measurements. Quote: TB02 - Batchman/Gimpelson.

INTERNAL MEDICINE

Formal Sucrose/Gum Sucrose Paraffin Techniques of Processing Tissue/323

This technique clearly offers significant advantages to frozen preparations for immunofluorescence, especially for referral laboratories. Stored and processed with a standard refrigerator, tissue can be transported using regular ice and does not require flammable storage media. Quote: KB01 - K. Bolton.

Possibilités d'acquisition de licences par l'intermédiaire de la "University of Virginia Alumni Patents Foundation", É.-U.

Les techniques brevetées qui suivent peuvent être commercialisées en vertu d'ententes en matière de licences. Les fabricants canadiens intéressés à connaître le niveau de mise au point, les dispositions de l'entente, les droits de commercialisation et l'aide qui leur est offerte devraient s'adresser à: M. Ralph D. Pinto, Directeur exécutif, The University of Virginia Alumni Patents Foundation, Towers Office Building, Suite 6-200, 1224 West Main Street, Charlottesville (Virginie) 22903 et faire parvenir une copie de votre correspondance initiale à Mad. Carol Klein, délégué commercial, Consulat général du Canada, 3 Parkway Building, Suite 1310, Philadelphie (Pennsylvanie) 19102.

SCIENCE DES MATÉRIAUX

Échangeur de chaleur rapide/323

Cette invention permet de réaliser des échangeurs de chaleur compacts qui, en un seul passage extrêmement rapide et d'une façon très efficace, chauffent des liquides, comme du pétrole et du mazout, et les réduisent en un embrun de gouttelettes très fines. Référence: HS06 - H. Schladitz.

ÉLECTROTECHNIQUE

Sonde sub-miniature de mesureur du champ électromagnétique/323

Une sonde sub-miniature (diamètre: 1 mm) de mesureur de champ électrique micro-ondes a été mise au point. Linéaire sur une grande gamme de puissance, elle peut être implantée dans les animaux utilisés pour la recherche en diathermie. Elle peut aussi servir d'instrument de mesure des parasites électromagnétiques. Référence: TB02 - Batchman/Gimpelson.

MÉDECINE INTERNE

Technique de traitement des tissus à la paraffine — formal saccharose/résine saccharose/323

Cette technique présente des avantages importants par rapport aux préparations congelées à analyser par immunofluorescence, surtout dans le cas des laboratoires consultants. Elle permet l'utilisation d'un simple réfrigérateur pour l'entreposage et le traitement; le tissu peut être transporté dans un bain de glace ordinaire sans qu'il soit nécessaire de recourir à un milieu d'entreposage inflammable. Référence: KB01 - K. Bolton.

MEDICAL ARCHITECTURE

Critical Care Patient Island/323

A configurational concept that addresses the overall issues of flexibility capacity, and adaptability for equipment placement. Quote: RN01 – Nashed/Fuller/Hughes et al.

REHABILITATION ENGINEERING CENTER

External Long Bone Fixation Device/323

This is a device for holding in a fixed position the long bones of a leg or arm following fracture. Quote: CM02 – C. McLaurin.

A Grooved Caster Wheel Tire to Suppress Shimmy/323

This invention produces shimmy-free operation of caster wheels. Quote: KM01 – Kauzlarich/McLaurin.

BIOLOGY

Sonic Level/323

A device for truing surfaces to the horizontal (level mode) or vertical (plumb mode) through the use of an audible signal whose frequency is proportional to the angular deviation from the horizontal or vertical. Quote: BF02 – Block/Freisen.

Orthopedic Traction Plinth/323

A portable traction plinth with adjustable torsion spring tension to apply halofemoral traction in thoraco-lumbar spinal fractures. Quote: SR01 – S. Reger.

PHARMACOLOGY

Automated Radioimmunoassay/323

This automated radioimmunoassay apparatus measures antigen concentration and makes results of analyses available in minutes in comparison to the hours or days required under current conventional manual techniques. Quote: GB01 – Brooker/Price/Terasaki.

ARCHITECTURE MÉDICALE

Îlot pour malades nécessitant des soins intensifs/323

Concept d'aménagement qui répond aux impératifs de souplesse, de capacité et d'adaptabilité pour l'installation de l'équipement. Référence: RN01 – Nashed/Fuller/Hughes et al.

CENTRE DE GÉNIE BIOMÉDICAL POUR LA RÉADAPTATION

Dispositif externe de fixation des os longs/323

Dispositif permettant d'immobiliser les os longs du bras et de la jambe dans une position déterminée après une fracture. Référence: CM02 – C. McLaurin.

Pneu rainuré pour supprimer le flottement des roulettes/323

Cette invention assure le fonctionnement sans flottement des roulettes. Référence: KM01 – Kauzlarich/McLaurin.

BIOLOGIE

Dispositif sonore de mise au niveau/323

Dispositif de mise à l'horizontale (mode "niveau") ou à la verticale (mode "fil à plomb") de surface planes, au moyen d'un signal sonore audible dont la fréquence est proportionnelle à la déviation angulaire par rapport à l'horizontale ou à la verticale. Référence: BF02 – Block/Freisen

Dispositif de traction orthopédique/323

Dispositif de traction mobile muni d'un ressort de torsion à tension ajustable pour appliquer une traction halofémorale dans le cas des fractures touchant le segment thoracolumbaire de la colonne vertébrale. Référence: SR01 – S. Reger.

PHARMACOLOGIE

Épreuve de radio-immunité automatisée/323

Cet appareil qui permet d'automatiser l'épreuve de radio-immunité mesure la concentration d'antigène. Le délai pour obtenir les résultats analytiques se calcule en minutes et non plus en heures ou en jours, comme c'est le cas avec les techniques manuelles actuelles. Référence: GB01 – Brooker/Price/Terasaki.

RADIOLOGICAL PHYSICS

Radiation Scanning Unit/323

This invention is an isodose scanner which detects radiation fields. It may be operated manually or controlled by a PDP-11/40 computer equipped with digital to analog converters and analog to digital converters. Cost is estimated at 20 to 40 percent of existing commercially available systems. Quote: AC02 - Cole/Dickens/Landes/Agarwal.

PHYSIQUE RADIOLOGUE

Détecteur de radiations/323

Il s'agit d'un appareil à balayage isodose qui détecte les champs de radiation. Il peut fonctionner manuellement ou être relié à un ordinateur PDP-11/40 muni de convertisseurs analogique/numérique et numérique/analogique. On estime qu'il coûte entre 20 et 40 p. cent du prix des systèmes actuellement offerts sur le marché. Référence: AC02 - Cole/Dickens/Landes/Agarwal.

CHEMISTRY

Visual Luminescence Oxygen Concentration Monitor/323

This inexpensive device estimates the amount of oxygen in gaseous or fluid samples with the human eye serving as the detector. Quote: DB02 - Demas/Bacon.

CHIMIE

Doseur d'oxygène utilisant la luminescence visuelle/323

Ce dispositif peu coûteux, qui utilise l'oeil humain comme détecteur, permet d'évaluer la quantité d'oxygène dans des échantillons gazeux et liquides. Référence: DB02 - Demas/Bacon.

Protein for Electrophoresis/323

This invention provides a method of preparing a photometric cell for use in protein analysis, particularly those analyses which use a very small volume of liquid. Quote: JC05A - J. Charlton.

Protéines pour électrophorèse/323

Cette invention fournit une méthode de préparation d'une cellule photométrique pour l'analyse des protéines, surtout utile pour les analyses portant sur une très petite quantité de liquide. Référence: JC05A - J. Charlton.

Licences from Japan

Know-how licensing rights are offered by four Japanese companies. Interested manufacturers may obtain additional information or initiate negotiations by contacting (quoting title and reference number): International Department, The Foundation of Osaka Science and Technology Center, 1-8-4, Utsubo Hommachi, Nishi-ku, Osaka, Japan. Please send a copy of your initial correspondence to the Commercial Division, Canadian Embassy, 3-38 Akasaka 7-Chome, Minato-ku, Tokyo 107, Japan.

Extrusion Process for High-Expansion Polyolefin Insulated Pipes/323

Sumitomo Electric Industries, Ltd. offers know-how licensing for new foam-extrusion technologies to direct foam onto inner pipes where it adheres tightly without any seams or air gaps. The expansion degree, forming materials and foaming methods are: 20X-expanded polypropylene by the physical foaming method; 10X-expanded polyethylene by the physical foaming method; 5X-expanded polyethylene even by the chemical foaming method. Once applied the foams have high heat-deformation temperature; heat deformation temperature of polypropylene foam is about 160°C; high mechanical strength. Sumitomo's 3X-expanded polyethylene is stronger than ordinary 2X-expanded polyethylene and has superior waterproof and heat-insulation properties. Applications: central, floor, road and roof heating; heating/air-conditioning for buildings and vehicles; refrigerators, room coolers, hot springs, water works, chemical plants, etc. Foreign patents are pending. Reference Number SU1-23 (7-1).

Engineering and Manufacturing of Pneumatic Conveyor Systems/323

Sanko Air Plant, Ltd. offers know-how licensing for a complete line of equipment and full consulting and engineering services for its pneumatic conveyor systems designed to convey powders, granules, lumpy materials, soil, as well as equipment in the fields of rotary feeders, diverter cocks, silo blenders, level sensors, etc. Advantages: easy handling and maintenance; no damage or stain to transported materials; and, small overall space required for installation. Reference Number SA3-7 (14-43).

Produits nouveaux du Japon

Quatre compagnies japonaises offrent les droits d'exploitation sous licence de nouveaux produits et de nouveaux procédés. Les fabricants intéressés peuvent obtenir de plus amples renseignements en écrivant à l'adresse suivante (en citant le titre et le numéro de référence): International Department, The Foundation of Osaka Science and Technology Center, 1-8-4, Utsubo Hommachi, Nishi-ku, Osaka (Japon). Prière d'envoyer une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 3-38 Akasaka 7-Chome, Minato-ku, Tokyo 107 (Japon).

Procédé de moulage par extrusion des tuyaux isolés en polyoléfine à haute expansion/323

La société Sumitomo Electric Industries, Ltd. offre le savoir-faire sous licence de nouvelles techniques d'extrusion de mousse permettant d'appliquer celle-ci fermement à l'intérieur des tuyaux sans soudure ni espace d'air. Le degré d'expansion, les produits constitutifs et les méthodes de moussage sont les suivants: le polypropylène expansé 20X par moussage physique; le polyéthylène expansé 10X par moussage physique; le polyéthylène expansé 5X même par moussage chimique. Une fois appliquées, les mousses ont une température élevée de déformation par la chaleur (la température de déformation de la mousse de polypropylène est de 160°C) et une grande résistance mécanique. Le polyéthylène expansé 3X de Sumitomo est plus résistant que le polyéthylène expansé 2X ordinaire et offre des propriétés d'imperméabilisation et d'isolation thermique supérieures. Applications: chauffage central, de plancher, de route et de toit; chauffage et conditionnement d'air pour habitations et véhicules; réfrigérateurs, refroidisseurs d'air d'ambiance, sources d'eau chaude, adduction d'eau, usines de produits chimiques, etc. Brevets en instance d'acceptation à l'étranger. Numéro de référence SU1-23 (7-1).

Technique et fabrication de convoyeurs pneumatiques/323

La société Sanko Air Plant, Ltd offre sous licence le savoir-faire concernant une gamme complète de matériel et l'ensemble des services consultatifs et techniques touchant ses installations de convoyeurs pneumatiques pour le transport de poudres, de matériaux en granulats ou en grumeaux, de terre, ainsi que du matériel dans le domaine des distributeurs rotatifs, des vannes de dérivation, des mélangeurs pour silos, des indicateurs de niveau, etc. Avantages: facilité de manutention et d'entretien; ni dommages ni souillures aux matériaux transportés; encombrement réduit à l'installation. Numéro de référence SA3-7 (14-43).

Engineering and Manufacturing of Industrial Unique Air-Conditioning/323

Sanko Air Plant, Ltd. offers patent and know-how licensing for an air-conditioning system for factories in various industries, shopping centers, computer rooms, etc. Effective energy within the reach of extending, concentrated pushing air (blow-out air flow) is overwhelmingly greater than that of retracting pulling air (draw-in air flow). Based on this principle, their unique air-conditioning (push and pull system) washes away dust, gas and fumes adjacent to the inlet for drawing and exhausting them, and is possible to achieve drawing off and ventilation effect. Additionally, this system allows a substantial refreshing or cleaning effect. The company is also interested in offering engineering services and manufacturing technology for air replacement systems, scrubbers, drying equipment, etc. Reference Number: SA3-8 (14-44).

Centralized Control System for Knitting Machines/323

Gunze Limited offers joint venture, know-how licensing and cross licensing for a system in which the cause of the stoppage of knitting machines can be monitored automatically, and operation efficiency per machine and worker can be summed up automatically by: operation efficiency control of the knitting machines; detecting and aggregating of the defects of knitted fabrics; grasp of workers' efficiency; advice of optimum allocation and supplying data required for maintenance of the knitting machines. Reference Number GU1-7 (17-18).

Technique et fabrication d'un dispositif unique de conditionnement d'air/323

La société Sanko Air Plant, Ltd. offre, sous licence, le brevet et le savoir-faire concernant un dispositif de conditionnement d'air destiné à divers genres d'usines, de centres commerciaux, de salles d'ordinateurs, etc. La circulation de l'air par soufflage concentré offre un rendement énergétique nettement très supérieur à la circulation par aspiration. Basé sur ce principe, ce système de conditionnement d'air unique (soufflage et aspiration) capte les poussières, gaz et fumées à proximité de l'orifice d'admission pour ensuite les aspirer et les évacuer assurant ainsi l'extraction et la ventilation. De plus, ce système épure et rafraîchit l'air très efficacement. La société est également intéressée à offrir des services d'ingénierie et la technologie de fabrication d'installations de renouvellement d'air, d'épurateur-laveurs, de matériel de séchage, etc. Numéro de référence: SA3-8 (14-44).

Mécanisme de contrôle centralisé pour machines à tricoter/323

La société Gunze Limited offre l'entreprise conjointe, le savoir-faire sous licence et les licences réciproques à l'égard d'un mécanisme permettant de contrôler automatiquement la cause de l'arrêt des machines à tricoter et de déterminer automatiquement le rendement d'exploitation par machine et par ouvrier: en contrôlant le rendement des machines; en localisant et en regroupant les genres de défauts des tricots; en prenant connaissance du rendement des ouvriers; en fournissant les données exigées pour l'entretien des machines à tricoter. Numéro de référence GU1-7 (17-18).

Bibliography

Small Business Assistance — Government of Newfoundland and Labrador/323

The Government of Newfoundland and Labrador will provide financial assistance to business and industry. Additional information can be obtained on the following programs/ services from: The Department of Development, Government of Newfoundland and Labrador, St. John's, Newfoundland A1C 5T7.

Newfoundland and Labrador Development Corporation (N.L.D.C.)/323

The Corporation will provide assistance to a maximum of \$2.5 million for small/medium sized businesses to locate in Newfoundland, modernize and/or expand operations in manufacturing or processing. The maximum value per project \$2.5 million by loans; N.L.D.C. can hold equity up to 49 percent.

Rural Development Authority/323

The Authority will provide assistance mainly for small industry development in national resources: manufacturing, service and tourism. Grants and low interest loans, maximum loan value \$30,000. Grants up to 50 percent of this total maximum.

Department of Development/323

The Department offers a market and product development program to provide assistance to companies planning to market goods or services within or outside the province in order to substitute for imported goods or services. Grants are non-repayable up to 50 percent of the project total cost (maximum grant \$50,000). Other than the N.L.D.C. and the Rural Development Authority loans, no formal assistance program has been established. The Department, however, has the authority to request special assistance in the form of loan guarantees, grants, and other services where deemed appropriate for special projects. It generally provides assistance for "special cases" or in the case of true last resort.

Regional Economic Expansion Regional Development Incentive Program (RDIA)/323

The program provides financial inducement to manufacturing and processing firms establishing, expanding or modernizing facilities in designated regions. Grants and assistance based on approved project costs, wages and

Bibliographie

Small Business Assistance — Government of Newfoundland and Labrador/323

Le Gouvernement de Terre-Neuve et du Labrador fournira une aide financière aux entreprises et à l'industrie. On peut obtenir des renseignements supplémentaires sur les programmes suivants en s'adressant au ministère responsable du développement du Gouvernement de Terre-Neuve et du Labrador, St-Jean, Terre-Neuve A1C 5T7.

Newfoundland and Labrador Development Corporation (N.L.D.C.)/323

La corporation fournira aux petites et moyennes entreprises désirant s'établir à Terre-Neuve ou y accroître et y moderniser leurs activités de fabrication et de traitement une aide pouvant atteindre jusqu'à \$2.5 millions. La valeur maximale de l'aide par projet est de \$2.5 millions sous forme de prêts; la N.L.D.C. peut acquérir jusqu'à 49% des actions des entreprises.

Rural Development Authority/323

L'organisme fournira, principalement aux petites entreprises de mise en valeur des ressources nationales dans les domaines de la fabrication, des services et du tourisme, de l'aide sous forme de subventions et de prêts à faibles taux d'intérêt. La valeur maximale des prêts sera de \$30,000 et la valeur maximale des subventions pourra atteindre jusqu'à 50% de la valeur maximale des prêts.

Department of Development/323

Le ministère offre un programme de développement des marchés et de mise au point des produits afin d'aider les compagnies prévoyant mettre en marché à l'intérieur ou à l'extérieur de la province des biens ou des services se substituant à des biens ou services importés. Des subventions non remboursables dont la valeur peut atteindre jusqu'à 50% du coût total d'un projet (valeur maximale de la subvention \$50 000) sont offertes. Les prêts de la N.L.D.C. et de la Rural Development Authority exceptés, aucun programme formel d'aide n'a été créé. Le ministère est toutefois autorisé à demander une aide spéciale sous forme de prêts garantis, de subventions et d'autres services jugés nécessaires pour des projets spéciaux. Il fournit généralement une aide dans les "cas spéciaux" ou en tout dernier recours.

Regional Economic Expansion Regional Development Incentive Program (RDIA)/323

Le programme fournit une incitation financière à l'expansion ou à la modernisation des entreprises de fabrication ou de traitement dans les régions désignées. Les subventions et l'aide, fournies en fonction des coûts approuvés des

salaries vary by region, type of project need and value to economy. These loan guarantees are for commercial facilities. The standard formula is 25 percent of the cost of eligible assets plus 30 percent of one year's wages and salaries averaged over the second and third years of operation.

Small Business Assistance — Province of British Columbia/323

The British Columbia Ministry of Industry and Small Business Development has implemented and is committed to providing assistance to small businesses in the form of business information, counselling, financial programs and practical publications. The British Columbia Development Corporation also administers two programs aimed at enhancing the economic base of the Province through low interest loans and fixed interest loans to businesses in key economic sectors that wish to modernize, expand, establish new facilities or improve their working capital positions to meet the challenge of the market place. Additional information on the following programs may be obtained by contacting the Manager, Business Assistance Division, The British Columbia Development Corporation, 272 Granville Square, 200 Granville Street, Vancouver, B.C. V6C 1S4, tel: (604) 689-8411 or the Ministry of Industry and Small Business Development, Suite 315, Robson Square, 800 Hornby Street, Vancouver, B.C. V6Z 2C5, tel: (604) 689-4411. (The appropriate office is indicated.)

Small Manufacturers' Development Assistance — \$10 Million/323

To encourage and assist the modernization, expansion, and establishment of small manufacturing and processing and high technology enterprises throughout British Columbia. To be eligible for this program, the proposed project must — involve manufacturing, processing or high technology, or a maintenance or repair facility directly relating to the manufacturing, processing or high technology sectors; indicate commercial viability; provide socio-economic benefits to the Province. In the case of an existing business, average sales for the two most recent years of operation should not exceed \$500,000 per year. Eligible capital cost may not exceed \$100,000 and for new manufacturing, processing, or high technology facilities — 50 percent of eligible capital cost or \$30,000 is allowed whichever is less. In maintenance and repair facilities directly relating to the manufacturing, processing or high technology sectors — 30 percent of eligible capital cost or \$18,000, whichever is less is permitted and in existing manufacturing, processing and high technology facilities, or existing maintenance and repair facilities directly relating to the manufacturing, processing or high technology sectors — 30 percent of eligible capital cost or \$18,000, whichever is less, is available. Fifty percent of the loan will be forgivable one year after operation has commenced and the balance one year thereafter provided that required terms and conditions under which the loan was granted have been met. For further information contact the Ministry of Industry and Small Business Development.

projets, des traitements et des salaires, varient selon les régions, les besoins des projets et leur valeur dans l'économie. Ces garanties de prêts s'appliquent aux installations commerciales. La formule modèle est la suivante: 25% du coût des avoirs admissibles plus 30% d'un an de salaires et traitements échelonné pendant les deuxième et troisième années d'exploitation.

Small Business Assistance — Province of British Columbia/323

Le ministère du Développement de l'industrie et des petites et moyennes entreprises de la Colombie-Britannique a mis sur pied et administre un programme d'aide aux P.M.E. (information sur les entreprises, conseils, programmes financiers et publications pratiques). La Société de développement de la Colombie-Britannique administre aussi deux programmes visant à améliorer l'économie de la province en consentant des prêts à faible taux d'intérêt et des prêts à taux fixe aux entreprises des secteurs clés de l'économie qui cherchent à se moderniser, à se développer, à renouveler leurs installations ou à améliorer leur situation financière à court terme pour faire face à la concurrence. Pour de plus amples renseignements sur ces programmes, communiquer avec le Directeur, Division de l'aide à l'entreprise, Société de développement de la Colombie-Britannique, 272 Granville Square, 200 Granville Street, Vancouver (C.-B.) V6C 1S4, tél.: (604) 689-8411 ou avec le ministère du Développement de l'industrie et des petites et moyennes entreprises, suite 315, Robson Square, 800 Hornby Street, Vancouver (C.-B.) V6Z 2C5, tél.: (604) 689-4411. (Le bureau concerné est bien indiqué.)

Small Manufacturers' Development Assistance — \$10 Million/323

Ce programme vise à favoriser la modernisation, le développement et la création de petites entreprises de fabrication, de transformation et de haute technologie en Colombie-Britannique. Pour être admissible à ce programme, le projet doit: porter sur le secteur de la fabrication, de la transformation ou de la haute technologie, ou encore sur une installation d'entretien, ou de réparation directement liée à un de ces secteurs; faire la preuve de leur viabilité commerciale; présenter des avantages socio-économiques pour la province. Dans le cas d'une entreprise existante, le chiffre d'affaire moyen pour les deux dernières années ne devrait pas dépasser 500 000 \$ par an. Le capital investi ne doit pas dépasser 100 000 \$. Le coût d'immobilisation de nouvelles installations de fabrication, de transformation ou de haute technologie ne doit pas dépasser 50% du capital investi admissible, jusqu'à concurrence de 30 000 \$. Le coût d'immobilisation d'une installation d'entretien ou de réparation, nouvelle ou existante, directement liée à la fabrication, à la transformation ou à la haute technologie ne doit pas dépasser 30% du capital investi admissible, jusqu'à concurrence de 18,000 \$. Dans le cas existant de la fabrication, de la transformation ou de la haute technologie ou encore dans une installation d'entretien ou de réparation déjà existant, directement liés au secteurs de la fabrication, de la transformation ou de la haute technologie — 30% du capital investi admissible, jusqu'à concurrence de 18,000 \$, celui qui est le moindre, est disponible. Dans la mesure où les conditions du prêt sont respectées,

la créance est transformée en subvention à raison de 50% du montant à la fin de la première année d'exploitation, et l'autre moitié, à la fin de la deuxième année. Pour de plus amples renseignements, s'adresser au ministère du Développement de l'industrie et des petites et moyennes entreprises.

Low Interest Loan Assistance — \$20 Million/323

To enhance the economic base of the province of British Columbia through the provision of low interest loans to businesses in key economic sectors which wish to modernize, expand, or establish new facilities. The applicant's business must be engaged principally in either manufacturing, processing, high technology, or the provision of services to manufacturing, processing and high technology sectors. The L.I.L.A. loan must be used for plant modernization, expansion or the establishment of a new production facility which will create new economic activity and benefits for the Province of British Columbia. Businesses receiving assistance under this program must be economically viable in the opinion of the Development Corporation. The applicant applying for the loan must have, as a minimum, a total tangible equity to tangible asset ratio of not less than 15% on a pro forma balance sheet basis. The loan size is one-third (1/3) of the capital costs for fixed assets subject to a maximum of \$200,000 and a minimum of \$30,000. The rate of interest is The Development Corporation's normal rate of interest (currently 17.5%) divided by two. There shall be no interest accrued for a six month period commencing on the first day of the month during which the initial disbursement of the loan is made. The term shall be three (3) years. For further information contact: British Columbia Development Corporation.

British Columbia Small Business Development Fund — \$170 Million/323

To enhance the economic base of the Province of British Columbia through the provision of fixed interest loans at economically attractive rates to businesses in key economic sectors which wish to modernize, expand, establish new facilities, or improve their working capital positions to meet the challenge of the market place by providing affordable loans for eligible businesses. This is a new program which will be implemented at no cost to the B.C. taxpayer. The applicant's business must be engaged principally in either: manufacturing and processing; high technology; or, resource-related transportation. The proceeds of the loan must be used for plant modernization, expansion or the establishment of a new production facility which will create new economic activity and benefits for the Province of British Columbia and replenishment of working capital. Businesses requesting assistance under this program should be able to demonstrate a strong management, growth potential, job creation or preservation, financial need, that company resources have been depleted by current economic conditions, and that the enterprise has continuing viability in a more normal environment. Priority will be given to British Columbia-owned and operated firms which have at least 75 percent of their assets and employees in the province. If available, the security will consist of a mortgage of realty debenture secured by fixed assets owned by the company, and guarantees of principal shareholders. While the average loan is expected to be in the range of from \$100,000 to

Low Interest Loan Assistance — \$20 Million/323

Par ce programme de relance économique, la Société de développement de la Colombie-Britannique consent des prêts à faible taux d'intérêt aux entreprises des secteurs clés de l'économie qui cherchent à se moderniser, à se développer ou à se doter de nouvelles installations. Les entreprises visées doivent œuvrer principalement dans les domaines de la fabrication, de la transformation ou de la haute technologie, ou encore offrir des services dans ces domaines. Les prêts doivent servir à moderniser ou agrandir des usines où à les doter de nouvelles installations de production pour stimuler l'économie de la province. Pour être admissible à ce programme, une entreprise doit être jugée rentable par la Société de développement. Elle doit présenter un ratio de l'avoir corporel total à l'actif corporel d'au moins 15% dans son bilan officiel. Le montant du prêt est d'un tiers (1/3) des valeurs immobilisées et doit se situer dans la fourchette de 30 000 \$ à 200 000 \$. Le taux d'intérêt est de la moitié du taux normal (actuellement de 17,5%) de la Société. Aucun intérêt n'est chargé pendant six mois, à compter du premier du mois au cours duquel la première tranche du montant du prêt a été versée à l'entreprise. La durée du prêt est de 3 ans. Pour de plus amples renseignements, s'adresser à la Société de développement de la Colombie-Britannique.

British Columbia Small Business Development Fund — \$170 Million/323

Le programme vise à favoriser l'essor économique de la Colombie-Britannique par le consentement de prêts à des taux d'intérêt fixes, inférieurs à la normale, à des entreprises des secteurs clés désireuses de se moderniser, de se développer, de se doter de nouveaux équipements ou d'augmenter leur fonds de roulement dans le but de relever le défi de la concurrence. Ce nouveau programme ne coûtera rien au contribuable de la province. L'entreprise qui sollicite un de ces prêts doit être avant tout engagée dans l'une des activités suivantes: fabrication ou transformation, technologie de pointe ou transport de matières premières. L'argent prêté doit servir à la modernisation ou à l'agrandissement des usines, ou à l'installation de nouveaux équipements de production, en vue d'accroître le fonds de roulement et de stimuler l'économie de la province. Les critères d'octroi des prêts sont les suivants: gestion saine, potentiel de croissance, création ou préservation d'emplois, besoin d'une aide financière, baisse des ressources de l'entreprise en raison de la conjoncture économique, viabilité de l'entreprise dans des conditions normales. La priorité sera accordée à des entreprises dont les propriétaires résident en Colombie-Britannique et dont au moins 75% de l'actif et des effectifs se trouvent dans la province. Si disponible, l'emprunt sera garanti par une obligation hypothécaire sur l'actif immobilisé de l'entreprise et par les principaux actionnaires. Le prêt moyen se situera entre 100 000 \$ et 200 000 \$, mais pourra être porté jusqu'à un maximum de 1 million de dollars. La

\$200,000, provisions will exist for a maximum of up to \$1 million. The terms of the loan shall be three years, principal payments will be tailored to the needs of the company at an interest rate fixed for terms of loan at 13.5 percent per annum, payable monthly. For further information contact: British Columbia Development Corporation.

Market Development Program/323

The program is intended to generate a sustained expansion in the export of British Columbian manufactured/processed goods by assisting firms to assess potential export market opportunities; to establish appropriate marketing arrangements in markets outside British Columbia; and to make required follow-up calls on new accounts or representatives. Applications must be made in writing and received by the Industry Branch of the Ministry's Vancouver office at least two weeks prior to the commencement of the market investigation trip to be undertaken by a senior representative of the applying company. The Ministry will, on completion of the trip and receipt of required documentation, reimburse the company to a maximum of \$2,000 for the economy return airfare from British Columbia to the designated market for one representative of a company or an industry association undertaking one of the above activities. For further information contact: Ministry of Industry and Small Business Development.

Incoming Buyers' Program/323

The program is intended to generate a sustained expansion of the export of British Columbian manufactured/processed goods by assisting firms to attract potential buyers from outside the province. Applications must be made in writing and received by the Industry Branch in the Ministry's Vancouver office a minimum of two weeks prior to the applicant company extending an invitation to the potential buyer to visit British Columbia. The Ministry will, on receipt of appropriate documentation, reimburse the company for the buyers' economy airfare to a maximum of \$2,000. The responsible officer in the Industry Branch may, at his/her discretion, introduce the buyer to companies which are complementary but non-competitive to the host company. For further information contact: Ministry of Industry and Small Business Development.

Trade Show Program/323

The program is intended to generate a sustained expansion in the export of British Columbian manufactured/processed goods to the other provinces of Canada and to foreign markets through increased participation by companies in trade shows outside of the Province. Applications for support must be made in writing and received by the Industry Branch in the Ministry's Vancouver office a minimum of two weeks prior to departure for the event. The extent of financial support is a maximum of 50 percent of eligible costs with total assistance not to exceed \$2,500. Eligible costs for this program are restricted to: space rental at the trade show; design and construction of the display; shipment of display to and

durée du prêt sera de trois ans et les versements mensuels seront calculés suivant la capacité de payer de l'entreprise, à un taux d'intérêt fixe de 13,5% par an. Pour de plus amples renseignements, s'adresser à la Société de développement de la Colombie-Britannique.

Market Development Program/323

Le programme vise à favoriser une expansion continue des exportations de produits fabriqués et transformés en Colombie-Britannique en aidant les entreprises à évaluer les possibilités d'exportation, à procéder aux arrangements appropriés sur les marchés à l'extérieur de la Colombie-Britannique et à assurer le suivi nécessaire en ce qui concerne les nouveaux comptes ou les nouveaux représentants. Les demandes doivent parvenir, par écrit, à la Direction de l'industrie du Ministère, à Vancouver, au moins deux semaines avant le départ en voyage d'étude des marchés du représentant supérieur de l'entreprise sollicitée. Après le voyage et sur réception des documents requis, le Ministère remboursera à l'entreprise, jusqu'à un maximum de 2 000 \$, le prix du billet d'avion en classe économique, entre la Colombie-Britannique et le marché désigné, du représentant chargé de l'une ou l'autre des activités susmentionnées. Pour de plus amples informations, s'adresser au ministère du Développement de l'industrie et des petites et moyennes entreprises.

Incoming Buyers' Program/323

Le programme vise à favoriser une expansion soutenue des exportations de produits fabriqués et transformés en Colombie-Britannique en aidant les entreprises à attirer des acheteurs potentiels de l'extérieur. Les entreprises doivent faire parvenir leur demande, par écrit, au bureau de Vancouver de la Direction de l'industrie du ministère du Développement de l'industrie et des petites et moyennes entreprises au moins deux semaines avant d'inviter tout acheteur potentiel à visiter la Colombie-Britannique. Le ministère, sur réception des documents pertinents, remboursera aux entreprises, le prix du billet d'avion, en classe économique, des acheteurs potentiels, jusqu'à concurrence de 2000 \$. L'agent de la Direction de l'industrie chargé du programme peut, à sa discrétion, présenter tout acheteur à des représentants d'entreprises complémentaires mais non concurrentielles. Pour de plus amples renseignements, s'adresser au ministère du Développement de l'industrie et des petites et moyennes entreprises.

Trade Show Program/323

Le programme vise à favoriser une expansion soutenue des exportations de produits fabriqués et transformés en Colombie-Britannique en faisant participer davantage les companies aux foires commerciales tenues à l'extérieur de la province. Les entreprises doivent faire parvenir leur demande, par écrit, au bureau de Vancouver de la Direction de l'industrie du ministère du Développement de l'industrie et des petites et moyennes entreprises au moins deux semaines avant le départ de leurs représentants pour des foires. L'aide financière maximale est de 50% des frais admissibles jusqu'à concurrence de 2 500 \$. Les frais admissibles à ce programme sont limités à la location d'espace

from the trade show; and, rentals at the show — furniture/equipment. For further information contact: Ministry of Industry and Small Business Development.

Technical Assistance Program/323

The program aims to assist British Columbia companies engaged in manufacturing or processing activities to initiate actions that should result in an expansion of facilities, diversification of product line, job creation or the establishment of a new business. The program provides financial support to companies who find it necessary or advantageous to hire outside professionals to assist in developing corporate plans and operations. Both existing and proposed manufacturing and processing companies may qualify for assistance under this program. Clear potential for a successful operation must, however, be evident prior to the Ministry's involvement. Companies should submit the terms of reference for the work to be undertaken by the outside professional with their application for assistance and before proceeding to employ the professional. Companies can access this program in any of four ways: 1) Where an individual company must hire outside professionals, or otherwise pay for an eligible service rendered, the Ministry will pay 50 percent of the costs incurred, to a maximum contribution of \$5,000. The type of services are (but are not limited to): market studies, feasibility studies, testing to comply with regulatory standards, productivity improvement studies. This section of the program can also be accessed by communities or regional districts for studies providing there are no other possible sources of funding. 2) Where an industry association initiates activities that will be of benefit to a significant proportion of its membership, the Ministry can pay up to 50 percent of approved costs. There is no maximum. The types of projects covered are: market studies, preparation of briefs to government regulatory agencies, broad market development projects. 3) Assistance can be given under this program to cover some of the out-of-pocket costs involved in attending committee meetings outside British Columbia of Canadian Standards Association, Underwriters Laboratories, etc. Assistance available is 50 percent of travel costs to a maximum of \$1,000. 4) Frequently, the Ministry will fully sponsor a particular study or other activity that could be of broad value to the business community or particular geographic region. For further information contact: Ministry of Industry and Small Business Development.

Management Assistance Program/323

The objective is to encourage small business firms to undertake projects which will improve their stability and economic viability or their potential for significant expansion. MAP

dans les foires, à la conception et à la construction des kiosques, au transport des kiosques et à la location sur place de mobilier et d'équipement. Pour de plus amples renseignements, s'adresser au ministère du Développement de l'industrie et des petites et moyennes entreprises.

Technical Assistance Program/323

Le programme vise à fournir une aide aux compagnies de Colombie-Britannique engagées dans des activités de fabrication ou de transformation afin de leur permettre d'entreprendre des démarches qui devraient mener à l'agrandissement des installations, à la diversification des gammes de produits, à la création d'emplois ou de nouvelles entreprises. Le programme fournit une aide financière aux compagnies se trouvant dans l'obligation, ou pour lesquelles il est avantageux, de retenir les services de professionnels de l'extérieur pour aider à la réorganisation de l'entreprise. Les compagnies existantes de fabrication et de transformation comme les compagnies dont on prévoit la création peuvent se prévaloir de l'aide disponible dans le cadre de ce programme. Elles doivent toutefois présenter de manifestes possibilités de réussite pour que s'engage le ministère. Les compagnies devraient présenter les descriptions des tâches à faire exécuter par un professionnel de l'extérieur ainsi que leur demande d'aide avant de retenir les services dudit professionnel. Les compagnies peuvent profiter de ce programme de quatre manières: 1) lorsqu'une compagnie doit engager des professionnels de l'extérieur ou par ailleurs payer pour un service admissible rendu, le ministère paiera 50% des coûts jusqu'à concurrence de 5000 \$. Les types de services admissibles sont (non exclusivement) les études de marchés, les études de faisabilité, les contrôles de conformité aux normes et les études d'amélioration de la productivité. Les communautés ou districts régionaux peuvent également se prévaloir de cette partie du programme pour faire effectuer des études lorsqu'il n'existe aucune autre source possible de financement. 2) Lorsqu'une association industrielle entreprend des activités qui profiteront à une proportion importante des entreprises qu'elle regroupe, le ministère peut payer jusqu'à 50% des coûts approuvés. Il n'y a pas de maximum. Les types de projets acceptés sont: les études de marchés, la préparation de résumés destinés aux organismes du gouvernement investis d'un pouvoir de réglementation et les grands projets de développement de marchés. 3) Dans le cadre de ce programme une aide peut être fournie pour défrayer certains frais personnels encourus pour assister aux réunions de comités de l'Association canadienne des normes, des Laboratoires d'assurances du Canada, etc., qui sont tenues à l'extérieur de la Colombie-Britannique. L'aide disponible couvre 50% des frais de déplacement jusqu'à concurrence de 1000 \$. 4) Le ministère commanditera souvent en entier une étude ou autre activité qui pourrait être d'une grande valeur pour le monde des affaires ou pour une région géographique particulière. Pour de plus amples renseignements, communiquer avec le ministère du Développement de l'industrie et des petites et moyennes entreprises.

Management Assistance Program/323

Le programme vise à encourager les petites et moyennes entreprises à entreprendre des projets leur permettant d'améliorer leur stabilité et leur rentabilité ou leurs possi-

will provide financial support for the hiring of outside consultants to assist in formal, in depth studies of a specific management or planning aspect of a firm's operations. The Ministry will reimburse the company for 50 percent of the costs incurred, to a maximum contribution of \$5,000. Approval must be received prior to engaging a consultant. Projects already committed are ineligible. Proposed and existing businesses as well as business associations or groups may qualify. The Ministry may, when requested, assist companies to identify appropriate consultants. For further information contact: Ministry of Industry and Small Business Development.

bilités d'expansion. Le PAG fournira une aide financière pour l'embauche de consultants de l'extérieur afin de faciliter des études formelles et approfondies d'un aspect précis de la gestion ou de la planification des activités d'une entreprise. Le ministère remboursera à la compagnie 50% des frais encourus jusqu'à concurrence de 5000 \$. L'entreprise doit faire approuver son projet avant de retenir les services d'un consultant. Les projets déjà en cours ne sont pas admissibles. Les entreprises existantes et en voie de création, ainsi que les associations ou groupes d'entreprises peuvent se prévaloir de ce programme. Le ministère peut, sur demande, aider les entreprises à identifier les consultants qui conviennent. Pour de plus amples renseignements, communiquer avec le ministère du Développement de l'industrie et des petites et moyennes entreprises.

International Invention and Technology Licensing Exhibitions 1983/84

Technology transfer, invention and new product shows are ideal meeting places for businessmen interested in selling technology and know-how or in looking for inventions and new products to manufacture. Parties interested in investigating participation or attendance at any current or future fair should obtain additional information from the exhibition sponsor. Dates are not available for shows held in alternating years. The Regional Office of the Department of Industry, Trade and Commerce located in your area can provide guidance, explain the advantages of attending trade fairs and the possibility of financial assistance through the PEMD program.

**11TH ANNUAL WORLD FAIR
FOR TECHNOLOGY EXCHANGE
TECHEX '83 AMERICAS**
Orange County Convention
Civic Center
Ormond Beach, Florida
March 22-25, 1983

**11TH ANNUAL WORLD FAIR
FOR TECHNOLOGY EXCHANGE
TECHEX' 83 EUROPA**
Fore Internationale de Lyon
Lyon, France
April 26-29, 1982
INOVA 83
6th INTERNATIONAL INNOVATION WEEK
Palais des Congrès
Porte Maillot
Paris, France
April 11-16, 1983

CAN-TEC SPACE '83
Port-of-Spain, Trinidad
April 19-21, 1983

(This is a transfer of Canadian technology exhibition, one of a series of such exhibitions sponsored by the Canadian International Development Agency.)

TECHNOLOGY/INVENTION NEW PRODUCT EXPO
Greater Pittsburgh Expo Mart
Pittsburgh, Pennsylvania
May 17-20, 1983

Expositions internationales sur la réglementation des inventions et des techniques, 1983/84

Les expositions sur le transfert technologique, les inventions et les nouveaux produits sont des lieux de rencontre idéale pour les hommes d'affaires intéressés à vendre des techniques et du know-how ou à la recherche d'inventions et de nouveaux produits à fabriquer. Ceux qui sont intéressés à participer ou à assister à une foire, actuelle ou future, peuvent obtenir des renseignements supplémentaires auprès de l'organisme parrain de l'exposition. Il est à noter que les dates des expositions biennales ne sont pas disponibles. Le Bureau Régional du Ministère de l'Industrie et du Commerce de votre région peut vous fournir des conseils ainsi que des renseignements concernant les possibilités d'aide financière par l'entremise du programme PEMD dans le cadre de participation à ces foires.

Canadian Agent
Mr. J.L. Eckebrecht
Lomar Trading Company Ltd.
1384 Tyandaga Park Drive
Burlington, Ontario, Canada L7P 1N3
Telephone: (416) 632-3863
Telex: LOM 061-8673
for
Dr. Dvorkovitz & Associates
P.O. Box 1748
Ormond Beach, Florida 32074, U.S.A.
Telephone: (904) 677-7033
Telex: 810-832-6299

TECHNOEXPO
8, rue de la Michodière
75002 Paris, France
Tel.: (1) 742.92.56
Telex: 211897 F. TECEXPO

CIDA
Industrial Cooperation Division
Bureau for Americas
Place du Centre
200 Promenade du Portage
Hull, Québec
K1A 0G4
Telephone: (819) 997-7901

Gary F. Brown
Director, TECHNOLOGY/INPEX
701 Smithfield Street
Suite 400
Pittsburgh, Pennsylvania 15222
Telephone: (412) 288-1344

The International Technology Transfer Exposition
PROMOTECH '83
Montreal's New Convention Center
Montreal, Quebec, Canada
September 13-17, 1983

IETT '83
INTERNATIONAL EXPOSITION FOR TECHNOLOGY
TRANSFER '83
Market Hall
Dallas, Texas
October 11-13, 1983

IETT '84
New York Convention Center
New York, New York
October 2-4, 1984

S.I.T.E.F. (Salon International des technologies
et Énergies du futur)
(Incorporating F.I.T.T. '83 — Forum International du
Transfert de Technologies)
Palais des Congrès
Parc des Expositions de Toulouse
Toulouse, France
October 18-23, 1983

IENA '83
Nuernberg Fairground
Messezentrum Nuernberg
Federal Republic of Germany
November 2-6, 1982

TECHNO '83
6TH INTERNATIONAL LICENSING &
JOINT VENTURE EXPO
Science and Technology Centre
Chiyoda-ku, Tokyo, Japan
November 8-12, 1983

EUREKA 32ND WORLD INVENTIONS EXHIBITION
Rogier Expo Centre
Brussels, Belgium
December 1983

SPEMAC
12TH INTERNATIONAL EXHIBITION OF INVENTIONS
AND NEW TECHNIQUES OF GENEVA
Palais des Expositions
Genève, Suisse
March 23 - April 1, 1984

INVEX '84
8TH INTERNATIONAL EXHIBITION OF INVENTIONS
AND NOVEL FEATURES
Fair Grounds
Brno, Czechoslovakia
October 1984

Bureau for Technology Transfer
Trans-Technic International Inc.
33, Place de Boheme
Candiac, P. Quebec
Canada
J5R 3N2
Tel.: 514/659-4844
Telex: 05-25134 MTL

R.J. Manders
Control Data
P.O. Box 0 — HQV005
Minneapolis, MN 55440
Phone: (612) 853-5643

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Commissariat général du SITEF
Chambre de Commerce et d'Industrie de Toulouse
2, rue Alsace-Lorraine, B.P. 1506
31002 Toulouse Cedex, France
Tél.: (61) 25.21.00
Telex: Chamcom 5318 77 F

Frau Zetel
AFAG-Ausstellungsleitung
Messezentrum Nuernberg
D 8500 Nuernberg, Germany

Techno Tokyo EXECUTIVE OFFICE
The Nihon Kogyo Shimbun
(The Japan Industrial Daily News)
Sankei Bldg., 7-2, Ohtemachi 1-chome,
Chiyoda-ku, Tokyo 100, Japan.
Telephone: (03) 231-7111 Telex: J22235

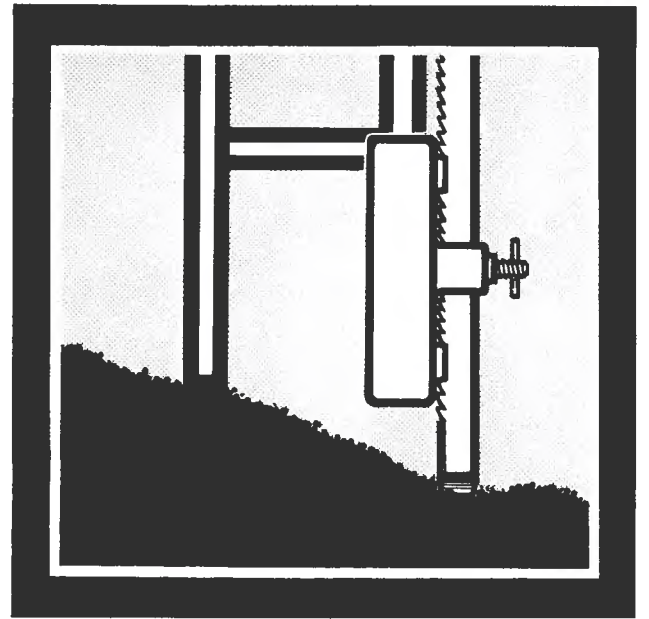
Secretariat
Sogestor
Rue Duquesnoy 14
1000 Brussels, Belgium
Tel.: 02/512.21.87 - 513.16.07
Telex: 62052 sofair

Secrétariat, Salon International des inventions
8, rue du 31-Décembre
CH-1207, Genève, Suisse
Téléphone: (022) 36 59 49 Télex 28 808

Mr. Zdenek Pich
Manager
Brno Trade Fairs and Exhibitions
Vystaviste
602 00 Brno, Czechoslovakia
Telephone: 314 2942
Telex: 062 294



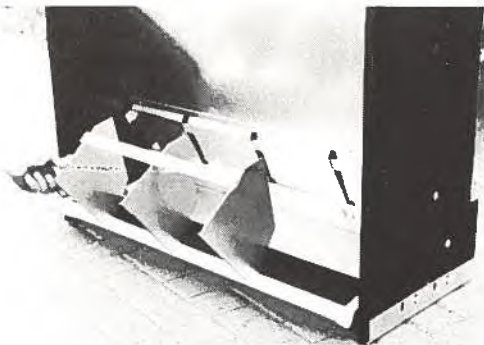
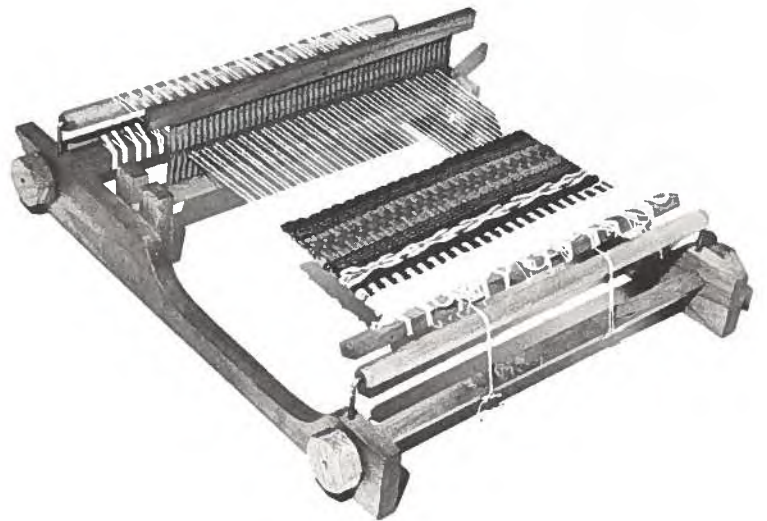
Automatic Life Saving Device ▲
 (See page 1)
 Dispositif de sauvetage automatique ▼
 (Voir page 1)



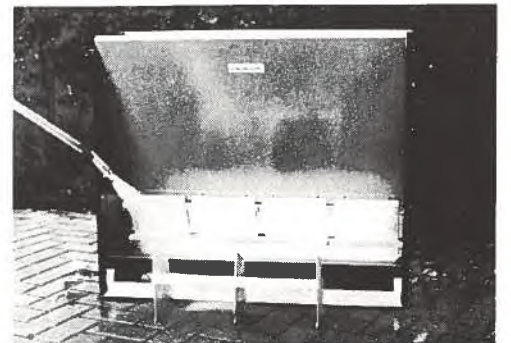
Ladder Adjustment Device (See page 2) ▲
 Dispositif de réglage pour échelles
 (Voir page 2)



▼ Looms (See page 3)
 Métiers à tisser (Voir page 3)

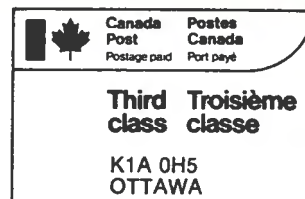


Hog Dry Feeder (See page 2)
 Auge de porcherie
 (nourriture sèche)
 (Voir page 2)



IF UNDELIVERED RETURN TO:
Licensing Opportunities Section (34/3)
Business Centre
Dept. Industry, Trade and Commerce
Ottawa, Canada K1A 0H5

EN CAS DE NON-LIVRAISON RENVoyer À:
Section des possibilités de licences (34/3)
Centre des entreprises
Ministère de l'Industrie et du Commerce
Ottawa, Canada K1A 0H5



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