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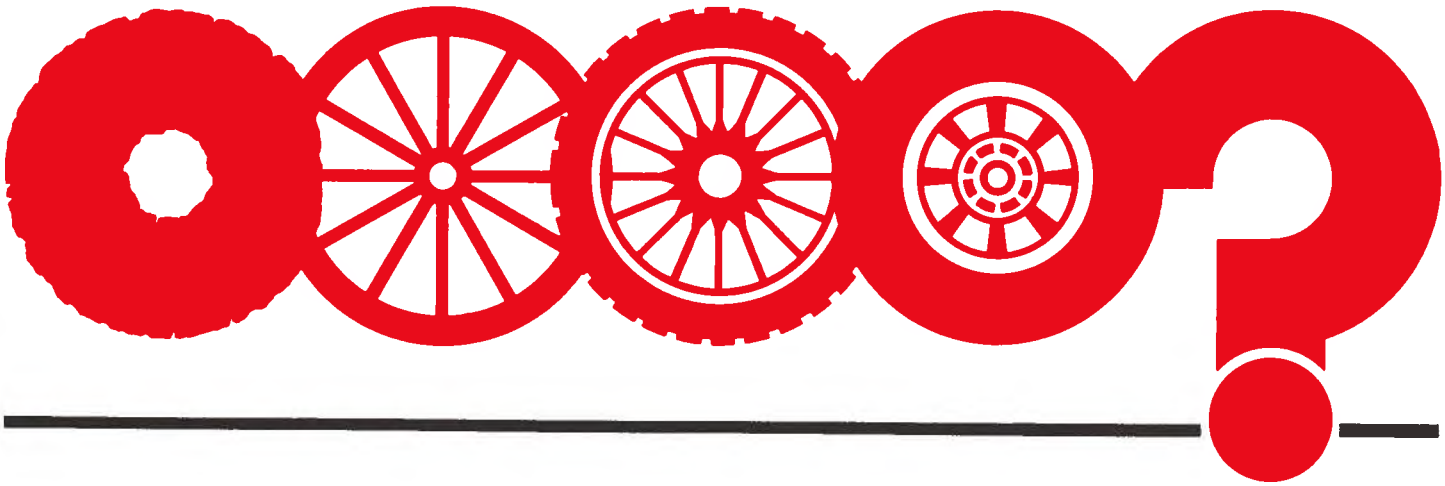
new products bulletin

Bulletin 313, February 1982

bulletin de produits nouveaux

Bulletin 313, Février 1982



new products bulletin

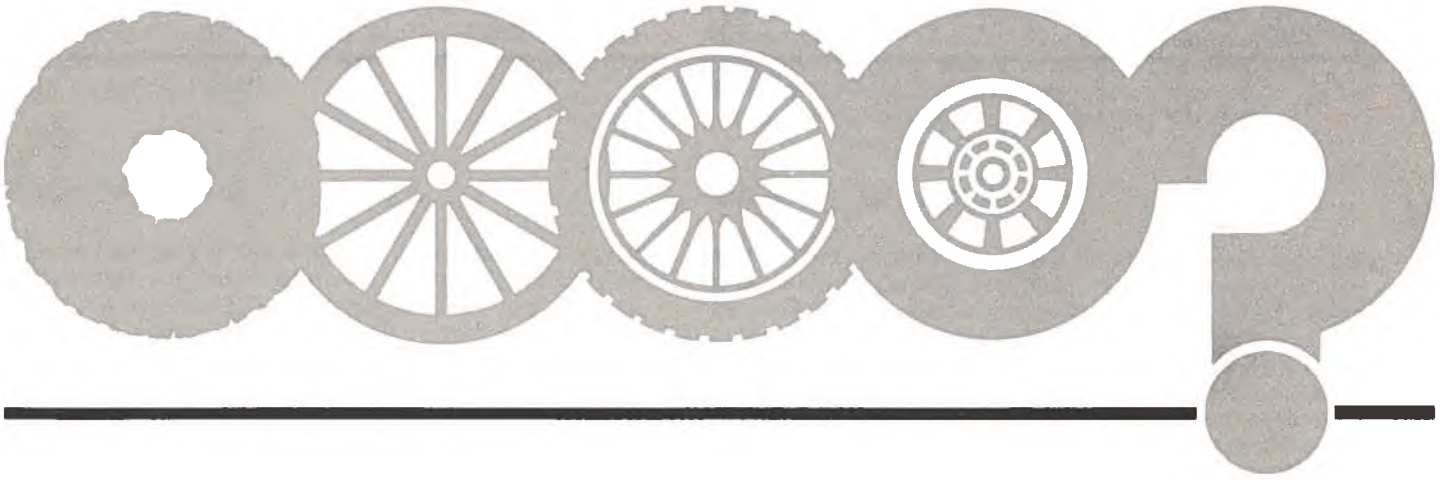
bulletin de produits nouveaux

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.



Selected Licensing or Joint Venture Manufacturing Opportunities

Breaking Oil-in-Water Emulsions/313

This process provides a low-cost method of breaking oil-in-water emulsions particularly those derived from in situ oil recovery and tar sand processing. Following agitation, the treated solution separates into an oil phase and a clear water phase. The small amount of fine solids quickly settles out of the water phase. Write: **Case 6797**, 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.

Asymmetrical SQUID/313

A double hole SQUID device which provides an increased sensitivity, an improved signal-to-noise ratio and an improved slew rate which gives a better resolution of the external magnetic field. Write: **Case 7104**, 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.

Enhancing Rejection Ratio/313

An apparatus which enhances the resolution of a SQUID gradiometer. It eliminates or reduces the common mode signal due to imperfections in the construction of the gradiometer and the eddy current signal due to metallic objects located near the gradiometer. The common mode rejection is improved by a factor of 2. Write: **Case 7124**, 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.

Sulphur Cement/313

Canadian company offers domestic and foreign exclusive or non-exclusive territorial licensing rights to Canadian companies for a patented (10 countries) concrete-like material, Sulfurcrete®, using sulphur and a SRX polymer additive instead of water and cement binder. The product has high compressive strength, extremely high corrosion resistance to most acids, sulphates and salts, very low moisture penetration, good freeze-thaw characteristics and very rapid setting reaching 50 per cent in a few hours, 100 per cent within three days. The product can be poured at – 40°C without

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

Séparation des émulsions huile-eau/313

Ce procédé de séparation, relativement bon marché, permet de traiter sur les lieux les émulsions de récupération des produits pétrolifères et des sables bitumineux. Après avoir été agitée, la solution traitée se sépare en huiles et en eau pure. Les petites quantités de solides se déposent après la séparation de l'eau. Écrire: **Cas 6797**, 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 supraconducteur à interférence quantique/313

Dispositif supraconducteur à interférence quantique (SQUID) à double trou qui permet d'augmenter la sensibilité et d'améliorer le rapport signal/bruit de même que la vitesse de balayage, ce qui augmente la définition du champ magnétique externe. Écrire: **Cas 7104**, 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.

Accroissement du rapport de réjection/313

Appareil qui accroît la définition d'un gradiomètre à SQUID (dispositif supraconducteur à interférence quantique). Il élimine ou réduit à la fois le signal en mode commun causé par des imperfections de construction du gradiomètre et le signal des courants de Foucault produits par des objets en métal situés à proximité du gradiomètre. La réjection en mode commun est doublée. Écrire: **Cas 7124**, 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.

Ciment au sulfure/313

Une société canadienne offre à d'autres sociétés canadiennes les droits de fabrication territoriaux exclusifs ou non-exclusifs d'un matériau possédant des qualités du béton, le Sulfurcrete®, breveté dans 10 pays; ce matériau est fabriqué avec du sulfure et un additif au polymère SRX au lieu d'eau et de liant de ciment. Le produit possède les caractéristiques suivants: grande résistance à la compression, très grande résistance à la corrosion engendrée par la majorité des acides, sulfates et sels, très bonne résistance à l'humidité, bonnes réactions au gel-dégel et prise très rapide,

freezing problems and has very high fatigue resistance. Applications: Highway median barriers; parking lot curbs; sewer pipes; railway crossing plants; traffic islands; pipeline weights; light standard bases; traffic sign bases; elevator counter weights; excavation covers; paving and pavement repairs; foundations and footings; retaining walls; floor slabs and floor repair; chemical plant repairs; irrigation canal lining; chemical effluent system; and, chemical dipping tanks. The product is in commercial production in Canada, the U.S. and West Germany. Write: Gunther Dragert, Operations Manager, Sulphur Innovations Ltd., 3015 - 58th Avenue, S.E., Calgary, Alberta T2C 0B4 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.

c'est-à-dire 50 pour cent en quelques heures et 100 pour cent en moins de trois jours. Le produit peut être coulé à une température de −40°C sans qu'il ne congèle et possède une très grande résistance à la fatigue. Applications: glissières de sécurité médianes de routes; bordures de parc de stationnement; tuyaux d'égout; planches de traverse de chemin de fer; ilôts de circulation; poids de pipeline, socles de réverbère et de panneau de signalisation routière; contrepoids d'ascenseur; chapeaux d'excavation pavage et réparations des chaussées, fondations et semelles; murs de soutènement; dalles de plancher et réparations de plancher; réparations d'installation chimique; revêtement de canal d'irrigation; réseau d'effluent chimique; et bacs de produits chimiques. Le produit est en production industrielle au Canada, aux É.-U. et en Allemagne de l'Ouest. Écrire à: M. Gunther Dragert, directeur des opérations, Sulphur Innovations Ltd., 3015 - 58e avenue, S.E., Calgary, Alberta T2C 0B4 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.

Polyester-Laminated Panels/313

Austrian company offers a license for the manufacture and distribution of reinforced polyester-laminated products such as building facades, window sills, panelling, beams, balconies, planters, containers, etc. The licensee agrees to provide technical information and training of employees in his own factory. (See illustration page 30.) For a draft licensing agreement and descriptive literature write: Mugler Platten Ges.m.b.H., A-2002 Grossmugl, Austria and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Luegerring 10, A-1010 Vienna, Austria.

Panneaux de polyester stratifiés/313

Une entreprise autrichienne offre une licence de fabrication et de distribution de produits de polyester stratifiés, soit revêtements de façade, appuis de fenêtres, revêtements intérieurs, poutres, balcons, bacs à plantes, conteneurs, etc. Le preneur de licence consent à fournir l'information technique et la formation des employés dans sa propre usine. (Voir l'illustration page 30). Pour obtenir un projet de contrat de licence et la documentation nécessaire, écrire à: Mugler Platten Ges.m.b.H., A-2002 Grossmugl (Autriche) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Luegerring 10, A-1010 Vienne (Autriche).

Pressure Cooker/313

American consultant, designer and manufacturer of food processing equipment offers a Canadian established food service machinery manufacturer or an experienced stainless steel sheet metal fabricator, the manufacturing and negotiable marketing rights for the patented "Thompson" pulse-purge pressure cooker. This equipment and process are stated to yield nutritious deep fried food products that are practically grease-free (low fat), sterilized, and have unique taste characteristics. This is accomplished by the pulse-purge process which, firstly, deep fries the product under pulsating pressure and, secondly, steam-cleans the food to strip it of excess fats and oils, sterilizes the product and automatically filters the cooking oil at the end of each cook cycle. Foods thus treated can be consumed by most people who should avoid fried foods due to medical, dietetic or other physical problems. Drawings, technical know-how, technicians on loan, etc., are available. Write: Mr. Neal Thompson, President, Precision Processing, Inc., P.O. Box 15574, Pittsburgh, Pennsylvania 15244 and send a copy of your initial correspondence to Canadian Consulate General, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Autocuiseur/313

L'expert, concepteur et fabricant américain d'appareil de traitement des aliments offre à un fabricant canadien d'appareils de cuisine établi ou à un fabricant canadien expérimenté dans le domaine de l'acier inoxydable, les droits de fabrication et les droits négociables de mise en marché de l'autocuiseur stérilisateur à pression pulsée breveté "Thompson". Cet appareil et ce procédé servent à cuire des produits alimentaires nutritifs dans la friture; ces produits sont pratiquement exempts de graisse (à faible teneur en gras), son stérilisés et ont un goût unique. Tout ceci s'obtient grâce au procédé breveté qui, premièrement, cuit l'aliment dans la friture sous l'effet de la pression pulsée et, deuxièmement, nettoie la nourriture à la vapeur pour lui enlever son surplus de graisse et d'huile, la stérilise et filtre automatiquement l'huile de cuisson à la fin de chaque cycle du procédé. Les aliments ainsi traités peuvent être consommés par la plupart des gens qui doivent éviter de manger des fritures à cause de problèmes médicaux, diététiques ou physiques. Les dessins, les connaissances techniques, les techniciens, etc. sont disponibles. Écrire à: M. Neal Thompson, président, Precision Processing, Inc., P.O. Box 15574, Pittsburgh (Pennsylvanie) 15244 et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983 (É.-U.).

Indoor Portable Exhaust Cleaner/313

German consultant on behalf of the Swedish manufacturer seeks a Canadian licensee or joint venture partner for the production in Canada and sale in North America primarily, of the UNITOX indoor portable exhaust cleaner. This apparatus eliminates any toxic emission from internal combustion engines wherever these are run, for working or display purposes, in an indoor environment. Advantages: eliminates potential atmospheric health and safety hazards; markedly improves working and dwelling atmospheres for customers, passengers and employees; and, cuts energy costs in comparison to extraneous ventilation alternatives; there are no installation costs; it saves heating and ventilation costs; stops pollution at the source and is 100 per cent flexible. Comprehensive assistance by way of know-how, performance data, documentation, market data and technical specification is offered to the potential partner. (See illustration page 30.) Write: Prof. Bruce B. Ekelund Consultant, von-Sauer-Strasse 37, 2000 Hamburg 50, West Germany and send a copy of your initial correspondence to Canadian Consulate General, Immermannstrasse 3, 4 Duesseldorf, West Germany.

Épurateur portatif de gaz d'échappement pour utilisation à l'intérieur/313

Un consultant allemand cherche, pour le compte d'un fabricant suédois, un preneur de licence ou un partenaire commercial pour la production au Canada et la vente, plus particulièrement en Amérique du Nord, de l'épurateur portatif de gaz d'échappement UNITOX pour utilisation à l'intérieur. Cet appareil élimine tout échappement toxique provenant de moteurs à combustion interne fonctionnant en milieu confiné. Les avantages sont nombreux: élimination de certains dangers touchant le milieu atmosphérique et la santé; nette amélioration du milieu ambiant de travail ou de résidence des clients, des passagers et des employés; réduction des frais énergétiques par rapport aux frais exigés par une ventilation spéciale; aucun frais d'installation; économie en matière de frais de chauffage et de ventilation; élimination de la pollution à la source et souplesse totale d'utilisation. Le partenaire choisi bénéficiera d'une aide globale sous forme de know-how, de données de rendement, de documentation, de données commerciales et de renseignements techniques. (Voir l'illustration page 30). Écrire à: Prof. Bruce B. Ekelund, Consultant, von-Sauer-Strasse 37, 2000 Hamburg 50 (République fédérale d'Allemagne) et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, Immermannstrasse 3, 4 Duesseldorf (République fédérale d'Allemagne).

Self-Locking Hooks/313

Norwegian inventor offers the Canadian manufacturing and North American marketing rights for his patented self-locking hook for paper-reel shafts and other uses. It is now being manufactured under license for the Norwegian market. The hook is equipped with a pivoted counterweight arm at the tip of the hook which permits the shaft to enter the hook and prevents the shaft from rolling out of the hook or being accidentally released from it. Construction is simple, operation of the hook is easy with minimum effort. Write: Siv.ing. Finn Strom A/S, Ovre Storgate 92, 3000 Drammen, Norway and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Postuttak, Oslo 1, Norway.

Crochets autobloquants/313

Un inventeur norvégien offre les droits de fabrication et de commercialisation, pour les marchés du Canada et de l'Amérique du Nord, de son crochet autobloquant breveté, pour arbres de rouleaux de papier continu et autres usages. Ce crochet est actuellement fabriqué sous licence pour le marché norvégien. L'extrémité de ce crochet est équipée d'un contrepoids pivotant permettant l'insertion de l'arbre dans le crochet tout en empêchant cet arbre de se dégager par accident. La construction est facile et le maniement du crochet demande peu d'efforts. Écrire à: Siv. ing. Finn Strom A/S, Ovre Storgate 92, 3000 Drammen (Norvège) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Postuttak, Oslo 1 (Norvège).

Granules for Liquid/313

Austrian engineer offers licensing rights to a Canadian machinery manufacturer with a well equipped tool and die plant for a process and device to produce drops, granules and powders from liquid or liquefiable substances. The method utilizes a rotary process with a specially developed atomizer head to produce drops or granules (grains, globes, spheroids, needles, etc.) in predetermined sizes and shapes even uniformly. The range of application covers the production of metal powders (sintered metals, petrochemical and pyrotechnical products, metal paints, chemical reducing agents, aluminothermic products, etc.); powders from organic substances (milk, coffee, cocoa, yeast, proteins, etc.), synthetic substances (pharmaceutical, etc.); powders from inorganic substances (barium sulfate, zinc sulfate, sodium sulfate, smeltery slag, iron sulfate, etc.; and uniform drop sizes in combustion applications. The main advantages over centrifugal and high speed atomizers are:

Production de granules à partir de liquides/313

Un ingénieur autrichien offre à un fabricant de machinerie canadien disposant d'un atelier d'outillage et de matriçage bien équipé, les droits d'exploitation sous licence d'un procédé et d'un dispositif permettant de produire des gouttes, des granules et des poudres à l'aide de substances liquides ou liquéfiables. La méthode utilise un système rotatif et une buse pulvérisante spéciale pour produire des gouttes ou des granules (grains, globes, sphéroïdes, aiguilles, etc.) uniformes et de tailles et de formes déterminées à l'avance. Voici certaines des applications du procédé: poudres métalliques (métaux frittés, produits pétroléochimiques et pyrotechniques, peintures métalliques, réducteurs chimiques, produits aluminothermiques, etc.), poudres provenant de substances organiques (lait, café, cacao, levures, protéines, etc.), synthétiques (pharmaceutiques, etc.) et inorganiques (sulfate de baryum, sulfate de zinc, sulfate de sodium, laitier de fusion, sulfate de fer, etc.) et des gouttes

substantially lower health hazard; no pollution of the environment; produces the desired granulate or drop size and shape in one processing step; lower production costs; low initial investment; and better efficiency. Write: Ing. Johann Rosenthaler, Engerthstrasse 140/1/22, A-1200 Vienna, Austria and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Luegerring 10, A-1010 Vienna, Austria.

de taille uniforme pour la combustion. Les principaux avantages sur les pulvérisateurs centrifugeurs à haute vitesse sont: danger pour la santé nettement inférieur, aucune pollution de l'environnement, production en une seule étape de granules et de gouttes de la taille et de la forme voulues, coûts de production inférieurs, investissement initial peu important et rendement supérieur. Écrire à: Ing. Johann Rosenthaler, Engerthstrasse 140/1/22, A-1200 Vienne (Autriche) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Luegerring 10, A-1010 Vienne (Autriche).

Metal Machining Tools/313

German manufacturer of metal cutting tools, including endless and circular saw blades, milling tools, twist drills, threading tools and lathe tools, is interested in participating with a Canadian company to manufacture the products in Canada. The owner of the German company is considering emigrating to Canada and would therefore be interested in acquiring a Canadian company, or participating in a joint venture. Firms interested in considering a manufacturing affiliation with the submittor of this proposal should provide preliminary information about their company, such as copies of current production publicity material, a brief outline of their facilities and capabilities, etc., to Mr. François Nadeau, Vice Consul and Deputy Trade Commissioner, Canadian Consulate General, Immermannstrasse 3, 4 Duesseldorf, West Germany for passing along to the offering firm for acknowledgement and possible negotiation.

Outils d'usinage du métal/313

Un fabricant allemand d'outils de taille du métal fabriquant, de lames de scie continues et circulaires, d'outils de fraisage, de forets, d'outils à fileter et de tours, aimerait participer avec une compagnie canadienne à la fabrication de ces produits au Canada. Le propriétaire de la compagnie allemande envisage d'émigrer au Canada et aimerait acquérir une compagnie canadienne ou travailler en association. Les firmes que ce genre d'association intéresseraient doivent fournir certains renseignements préliminaires sur leur compagnie et envoyer des exemplaires de leurs brochures de publicité actuelles ainsi qu'un bref résumé décrivant leurs installations, leurs possibilités, etc., à Monsieur François Nadeau, Vice consul et délégué commercial adjoint, Consulat général du Canada, Immermannstrasse 3, 4 Duesseldorf (Allemagne de l'Ouest). Ce dernier transmettra ces documents à la firme allemande ainsi que les négociations éventuelles.

Bearings/313

American company offers the licensing rights to its patented and non-patented group of thrust and load bearing combinations confined within one hermetically sealed unit. All are designed to fit applications for high load low RPM (not exceeding 1000 RPM). The patented group consists of either 1) two uniquely designed thrust and load bearing races without any internal motion absorbing, friction reducing components; or 2) they include singular, nonconventional internal independently operating motion-friction absorbing moving parts. The non-patented group consists of bearings being developed with the following qualifications: The load receiving and hermetic sealing surfaces will readjust automatically at the rate of wear; combination of a long sleeve type load bearing (incorporating friction reducing balls and rollers) and a low friction thrust bearing in one hermetically sealed, permanently locked plastic housing; this double directional thrust-load bearing will turn in excess of 3000 RPM under low friction and outstanding shock absorbing conditions and will eliminate awkward stuffing boxes; self-aligning load bearing that will replace other brand load bearing associated with bearing pillow blocks and various flange type mountings; a new type of spring that will revolutionize all drive shaft and axle suspension assemblies — associating this spring directly with any type of load bearing, it will absorb shock and vibration at any frequency reducing molecular crystallization. Patents will be sought in all industrialized countries. In the meantime, these designs cannot be presented to industry unless the firm licenses its presently marketed patented thrust bearings or thrust load bearings in which case a joined patent venture will be

Paliers/313

Une compagnie américaine offre les droits de licence pour un ensemble de paliers de butée et de paliers de charge combinés, brevetés et non brevetés, enfermés dans un ensemble hermétique. Tous ces paliers sont conçus pour des charges élevées à bas régime (inférieures à 1000 tours/minute). Les ensembles brevetés comprennent, au choix, 1) deux courses de paliers de butée ou de charge sans aucun mouvement interne d'absorption, ni éléments réduisant le frottement; 2) des pièces mobiles absorbant le frottement, indépendantes et non traditionnelles. L'ensemble non breveté comprend des paliers mis au point avec les caractéristiques suivantes: les seules surfaces à scellement hermétique qui reçoivent la charge s'ajustent automatiquement à mesure que le dispositif s'use, la combinaison d'un palier à long manchon (comprenant des rouleaux et des billes réduisant le frottement) et d'un palier de butée à faible frottement dans un ensemble hermétique en plastique verrouillé de façon permanente. Ce palier de butée et de charge à deux sens tourne à plus de 3000 tours/minute avec un faible frottement et une absorption des chocs remarquable. Il élimine les boîtes à graisse gênantes; le palier de charge autoréglable remplace les autres paliers de charge associés avec des blocs de support et différents montages à bride. Un nouveau type de ressort qui révolutionne tous les ensembles d'arbre de transmission et de suspension d'essieu, associant ce ressort directement avec tout type de support de charge permet d'absorber les chocs et les vibrations à une fréquence quelconque et de réduire la cristallisation moléculaire. Les demandes de brevet seront faites pour tous les pays industrialisés. En attendant, ces modèles ne peuvent

considered. Write: Mr. Frank Brkic, Mosaic Enterprises, Inc., P.O. Box 667, Arlington, Virginia 22216 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Electric Disc Brakes/313

German company offers the Canadian manufacturing and marketing rights (worldwide marketing rights for the brakes incorporated into engines) for three phase A.C. single electromagnetic disc brakes for use with three phase A.C. electric motors of IEC sizes 71 to 132. Brake torque varies from 4 to 75 Nm depending upon brake size. Manufacturer claims that the torque release time from 4 ms allows high start/stop frequencies and a fast unbraked acceleration of the motor, allowing energy savings of up to 50 per cent better than presently used brakes. (See illustration page 30.) Write: Binder Magnete GmbH, Monchweilerstraße 1, 7730 Villengen-Schwenningen, West Germany and send a copy of your initial correspondence to Canadian Consulate General, Immermannstrasse 3, 4 Duesseldorf, West Germany.

Permanent Magnet Motor/313

Italian inventor offers licensing rights to manufacture a permanent magnet electric motor, 0.5 HP D.C., 2000 rpm, acceleration 0 to 2000 rpm in 8 seconds. The rotor weighs 27 Kg, and comprises permanent magnets only (no coils, collector or brushes). Power consumption is 5 amps at 24 volts D.C., or 120 watts. The inventor claims that the motor can be battery powered with minimal energy required for input, is noiseless, pollution free, requires no cooling, and guarantees optimum safety. The present output power of ½ HP is expected to be increased shortly with further development. (See illustration page 30.) Write: Mr. Luigi Fornaca, c/o Motoforniture Torinesi, Via S. Giulia 21, 10124 Torino, Italy and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Via G.B. de Rossi 27, 00161 Rome, Italy.

Hot Line Maintenance Equipment/313

East German foreign trade organization offers licensing rights and technical know-how in Canada for the production of hot-line maintenance equipment. Also, consultation and training in its use and the supply of equipment and devices is offered. The equipment is intended for use up to 380 KV voltage level. Included are medium voltage energized metal enclosed switchgear and transformer cleaning and maintenance devices. In addition, a line of insulated cable splicing tools is available. Write: VEB Verbundnetz Elektroenergie Berlin, Alexanderplatz, DDR-1026 Berlin, German

être présentés à l'industrie à moins que la firme ne fasse mettre sous licence les paliers de butée et les paliers de charge actuellement brevetés et sur le marché et dans ce cas on peut considérer une association. Écrire à: M. Frank Brkic, 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 (É.-U.).

Freins à disque électriques/313

Une compagnie allemande offre des droits de mise en marché et de fabrication au Canada (ainsi que des droits de mise en marché pour le monde entier pour les freins intégrés au moteur) pour des freins à disque électro-magnétiques à courant alternatif triphasé qui sont destinés à l'utilisation sur des moteurs électriques triphasés CA de dimensions IEC 71 à 132. Le couple du frein varie de 4 à 75 Nm selon sa taille. Le fabricant estime que le temps de déclenchement du couple de serrage qui commence à partir de 4 ms permet des fréquences marche-arrêt élevées et une forte accélération sans frein du moteur, permettant des économies d'énergie jusqu'à 50 pour cent supérieures aux freins actuels. (Voir l'illustration page 30.) Écrire à: Binder Magnete GmbH, Monchweilerstraße 1, 7730 Villingen-Schwenningen (Allemagne de l'Ouest) et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, Immermannstrasse 3, 4 Duesseldorf (Allemagne de l'Ouest).

Moteur à aimants permanents/313

Un inventeur italien offre les droits de licence de fabrication d'un moteur électrique à aimants permanents, courant continu, 0,5 HP, 2000 tr/min, accélération de 0 à 2000 tr/min en 8 secondes. Le rotor a une masse de 27 kg et ne comprend que des aimants permanents (aucun enroulement, collecteur ni balai). La consommation est de 5 ampères à 24 volts continus, soit 120 watts. L'inventeur prétend que ce moteur peut être alimenté par un accumulateur et n'exige qu'un minimum d'énergie à l'entrée; il tourne sans bruit, ne produit aucune pollution, n'exige aucun refroidissement et assure une sécurité de fonctionnement optimale. D'autres développements devraient permettre d'augmenter bientôt la présente puissance de sortie de ½ HP. (Voir l'illustration page 30.) Écrire à: M. Luigi Fornaca, a/s Motoforniture Torinesi, Via S. Giulia 21, 10124 Torino (Italie) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Via G.B. de Rossi, 27, 00161 Rome (Italie).

Matériel d'entretien des lignes électriques sous tension/313

Une organisation de commerce extérieur est-allemande offre des droits de licence et des conseils techniques pour la production de matériel d'entretien de lignes électriques sous tension. Elle offre aussi des services de consultation, de formation et de vente. Le matériel en question peut être utilisé jusqu'à 380 kV; il comprend une gamme d'outils isolés pour effectuer les épissures, ainsi que des dispositifs de nettoyage et d'entretien, sous tension, des transformateurs et de l'appareillage moyenne tension monté dans des armoires métalliques. Écrire à: VEB Verbundnetz Elektroenergie

Democratic Republic and send a copy of your initial correspondence to 1) Mr. Fritz Zscherning, General Director, Marketing & Development Department, The Central Office of International License Commerce of the G.D.R., Schicklerstr. 57, 102 Berlin, German Democratic Republic and 2) Commercial Division, Canadian Embassy, Matejki 1/5, Srodmiescle, Warsaw, Poland.

Berlin, Alexanderplatz, DDR-1026 Berlin, République démocratique allemande, et faire parvenir une copie de votre correspondance initiale à: 1) M. Fritz Zscherning, Directeur général, Commercialisation et développement, Administration centrale des licences internationales, Commerce de la R.D.A., Schicklerstr. 57, 102 Berlin (République démocratique allemande) et 2) Division commerciale, Ambassade du Canada, Matejki 1/5, Srodmiescle, Varsovie (Pologne).

Fishing Lures/313

Danish inventor offers for licensing, his pending Canadian patent for fishing tackle which combines a spinner and a jig. Because of screw shaped blades the lure can be used as a spinner, and by turning, it can be used as a jig which wriggles without spinning. The design of the tackle and the weight distribution makes it possible to use it as a slow-going jig in shallow water with stones and bottom vegetation, without being caught by any obstacles, i.e., it can be steered and level-controlled without any drawbacks. The surface is glittering and reflects the sun. The lure is patented in the relevant markets; is claimed to have sales possibilities in all angler countries; and is being produced for the Scandinavian market under the SPINNERJIG label. Write: Mr. Jannik Kofoed, The Danish Invention Center, Technological Institute, Gregersensvej, DK-2630 Taastrup, Denmark and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Kr. Bernikowsgade 1, 1105 Copenhagen K, Denmark.

Leurres pour la pêche/313

Un inventeur danois offre des droits d'exploitation sous licence de son brevet canadien en instance concernant un leurre combinant cuiller tournante et jig. De par la forme spiralée de ses lamelles, le leurre peut servir de cuiller tournante et, en l'inversant, de jig qui ondule sans tourner. La conception de l'appât et la répartition de son poids font qu'on peut s'en servir comme un jig lent dans des eaux peu profondes dont le lit est couvert de roches et d'herbages, sans risquer d'accrocher; on peut le diriger ou le garder à une certaine profondeur sans le ramener. Le revêtement est brillant et réfléchit les rayons du soleil. Le leurre est breveté sur les marchés pertinents; il est possible de le commercialiser dans tous les pays où se pratique la pêche; il est aussi produit pour le marché scandinave sous l'étiquette SPINNERJIG. Écrire à: M. Jannik Kofoed, The Danish Invention Center, Technological Institute, Gregersensvej, DK-2630 Taastrup (Danemark) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Kr. Bernikowsgade 1, 1105 Copenhague K (Danemark).

Solar Collector/313

Israeli R&D company seeks to license its patented thermoelectric solar system to a Canadian company experienced in the production of glass, or methacrylic plastic having capacity to meet gradiant temperatures of 23.63°C to 110°C. A prototype has been developed. Write: Solar Power Laboratories, P.O. Box 149, Hadera 38101, Israel and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 220 Hayarkon Street, Tel Aviv, Israel.

Capteur solaire/313

Une compagnie de R et D israélienne offre les droits de licence pour son système breveté de capteur solaire à une compagnie canadienne expérimentée dans la production du verre ou du plastique méthacrylique pouvant supporter des variations de température de 23,63°C à 110°C. Un prototype a été mis au point. Écrire à: Solar Power Laboratories, B.P. 149, Hadera 38101 (Israël) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 220, rue Hayarkon, Tel-Aviv (Israël).

Canadian Patents Available for Licensing or Sale in Canada Issued December 1981

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

Liste des brevets canadiens disponibles pour octroi de licences ou vente au Canada délivrés en décembre 1981

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

Process for the Treatment of Raw Materials Containing Arsenic and Metal/313

A process for the treatment of raw materials which contain arsenic and metal to produce a metal-free arsenic product and an arsenic-free metal sulfate is disclosed, in which the raw material is leached by using an aqueous solution of sulfuric acid and then the metals are crystallized as sulfates from the separated aqueous solution, which is separated from the metal sulfate crystals. The leach is performed at elevated temperature under oxidizing conditions, in order to bring the arsenic to a 5-valent form, the metal sulfates are crystallized out from the selectively separated, arsenate- bearing aqueous solution by cooling, and arsenic is removed from at least part of this aqueous solution before the aqueous solution is returned to the leach. **PATENT 1,113,253**. Write: Outokumpu Oy, P.O. Box 280, SF-00101 Helsinki, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

Méthode de traitement de matières brutes à teneur d'arsenic et de métal/313

Method for Controlling the Heat Content and Evening Out Temperatures in Various Sulfidizing Processes/313

The dissociation and recombination energies of sulfur molecules is utilized to control the heat content and maintain the temperature between 400°C and 900°C in a sulfur atmosphere wherein the partial pressure of sulfur is 0.1-1 atm by controlling the partial pressure of the sulfur in sulfidizing process. **PATENT 1,113,258**. Write: Outokumpu Oy, P.O. Box 280, SF-00101 Helsinki, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

Méthode pour régulariser l'équilibre thermique et égaliser les températures dans divers procédés de sulfuration/313

Automatic Emergency Brake/313

An improved brake for winches. The brake has a main brake and an emergency brake. Both brakes are solenoid operated and brake when the power is turned off or fails. Means are provided for slightly delaying the operation of the emergency brake compared to the main brake so that the braking force is applied in stages in an emergency. The brakes are mechanically linked together so that either of the main or emergency solenoids operate both brakes if one of the solenoids fails. **PATENT 1,113,408**. Write: Jacques Dufresne, 6889 Lamont Avenue, Montréal, Québec H4E 2T8 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.

Frein de secours automatique/313

Golf Ball Dispenser/313

A trough is pivotally mounted to a central standard and can rotate through approximately 90° from a rest position to a ball dispensing position above a golf ball tee. The trough, which holds golf balls and may be replenished from a hopper, includes a dispensing head at the outboard end, which is constructed to allow passage of a golf ball therethrough. The head is pivotally attached to the outboard end and can be moved from a ball detent position to a ball release position and vice versa, with the head normally being urged to the detent position by means of a small weight. When the head is tipped forwardly to the dispending position, a detent clears the front ball of the chute or trough which then moves forwardly by gravity so that it is held temporarily between the front of the head and the rear of the aperture through which it will pass. As the head is tipped rearwardly, the detent engages behind the front ball and checks the forward movement of the next ball and at the same time, widens the gap between the front of the head and the rear of aperture thus releasing the ball which is deposited upon the tee. **PATENT 1,113,521**. Write: John Eberle, Box 11, Kaleden, B.C. V0H 1K0 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.

Débiteur de balles de golf/313

Articulator/313 **Articulation mécanique/313**

An articulator for interconnecting front and rear chassis portions of a vehicle including a horizontal coupling assembly permitting relative pivoting of the front and rear portions of the vehicle about a generally horizontal axis. The horizontal axis passes longitudinally through the center of a pair of cylindrical mounting sleeves. A pair of insert enclosures each extend about respective cylindrical mounting sleeves and are concentric therewith. The mounting sleeves are connected to one of the vehicle portions while the insert enclosures are connected to a frame which, in turn, is connected to another of the vehicle portions. There is a resilient insert fitted between the cylindrical mounting sleeve and the pair of insert enclosures. **PATENT 1,113,522**. Write: John Holmes, 3380 Francis Road, Richmond, B.C. V7C 1J2 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.

Fish Hook Release Device/313 **Dispositif de dégagement d'un hameçon/313**

A fish hook tension release device comprises a spring wire member with a first end portion suitable for connection to a fishing line, and including a keeper, and a second end portion which rotatably mounts a latch member capable of slidably receiving the eye of a standard fish hook, the latch member having an outer end part capable of engaging with the keeper in the unstressed condition of the spring wire member. The resilience of the spring wire member is such that when the first and second end portions of the wire member are pulled apart as by tension applied between a fish hook and a fishing line the latch member slides lengthwise out of the keeper and pivots to release the fish hook. **PATENT 1,113,721**. Write: Frank E. Graham, Box 39, Coe Hill, Ontario K0L 1P0 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.

Ice Skate Sharpening Device/313 **Affûteuse de patins à glace/313**

A lightweight transversely pivoting and longitudinally sliding skate carriage exhibiting exceptionally low friction, introduces a high degree of sensitivity into the process of skate sharpening, facilitating very light grinding cuts and low uniform traversing speeds, enabling a relatively unskilled operator to product superlative surface finishes and accurately maintain the blade "rocker" profile. The carriage pivotal axis is so located and the skate blade so positioned that the "hollow grind" is accurately centralized throughout the length of the blade. The low friction, pivotal provision enables the blade to be held in sensitive contact with the cutting wheel controlling the depth of cut, whilst the longitudinal sliding provision permits sensitive control of rate of cutting lengthwise along the skate blade. The skate carriage is readily removeable and being lightweight facilitates inspection of the blade surface during the course of sharpening, it may be fitted with rolling elements to accommodate both the pivotal and longitudinal motions. The longitudinal profile or rocker of the blade may be controlled by mounting a template to the carriage parallel to the longitudinal axis, which engages a stationary roller throughout the course of longitudinal travel, thereby replicating the template profile onto the blade during the sharpening operation. **PATENT 1,113,724**. Write: Sidney Broadbent, 5265 West Quaries Drive, Littleton, Colorado 80123 and send a copy of your initial correspondence to Canadian Consulate General, One Maritime Plaza, Alcoa Building, Suite 1100, Golden Gateway Center, San Francisco, California 94111-3468, U.S.A.

Stencil Assembly/313 **Pochoir/313**

The invention provides a stencil assembly including a rigid frame, preferably of rectangular plan without flanges and having a certain preferred width and at least one stencil sheet formed with flanges that in use are bent to an upstanding form and fit around the outside of the frame at its bottom end and which is firmly attached to the frame by removable fasteners such as plastic studs. The assembly can be sold with the stencil sheets in flat form for easy packaging and easy manufacture. The preferred width of the frame, of 4 to 5 inches, allows the user to apply a paint with a spray can nozzle at the correct level, with safe masking and the construction allows the underside of the stencil sheet to make close contact with the surface to the painted and prevents leakage of paint from the interior of the assembly. **PATENT 1,113,783**. Write: Marjorie B. Helsel, 11 Avenue de L'Astrolabe, Port La Galère, 06590, Theoule-Sur-Mer, France and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 35 Avenue Montaigne, 75008 Paris, France.

Heat Recovery System/313 **Système récupérateur de chaleur/313**

This invention is a mechanical system of apparatus for heat recovery from stacks, chimneys, flues, etc. using a special heat exchanger design mounted at the apex of such stacks. Sensible heat as well as the latent heats of moisture in fuels and that in vapor produced as a combustion product can be scrubbed out. The heat is transferred to liquid and then transferred by pump to whatever location desired. The natural draft is not impaired because the column of hot gases is not affected. The use is to effect economies wherever fuels are fired and to reduce environmental contamination. **PATENT 1,113,816**. Write: Arthur R. Kramert, 1410 Del Rio Road, Roseburg, Oregon 97470 and send a copy of your initial correspondence to Canadian Consulate General, 412 Plaza 600, Sixth and Stewart, Seattle, Washington 98101-1286, U.S.A.

Pipette/313

Pipette/313

A pipette having a frame part with a cylinder formed thereinside, a piston slidable in said cylinder and gasketed in relation thereto, a spring urging the piston towards its upper rest position, and separate filling and emptying press-buttons provided to press said piston downwards in connection with filling and emptying the pipette respectively, the filling and emptying press-buttoms being provided with movement limiting members related thereto in such manner that the piston can be pressed to a lower level by emptying press-button than by the filling press-button. The press-buttons may be arranged in such way that in their rest position the emptying press-button is at a slightly higher level than the filling press-button and that both buttons can be pressed down to essentially the same level. **PATENT 1,113,899.** Write: Seppo J. Metsälä, Nauharinne 8, 01260 Vantaa 26, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

Wire Holder for Trappers and the Like/313

Ensemble porteur de bobine de fil et de pince coupante pour trappeurs/313

Individuals such as trappers require ready access to wire which is used by them for many purposes when attending a trap line, often under severe weather conditions. Frequently, a loose spool of wire becomes lost in the snow or gets left behind together with the side cutters required to cut the length of wire from the spool. The present device is readily attached to the belt of the trapper and carries wire wound on a fixed reel or spool extending from a holder. Side cutters which may include pliers, are detachably clipped to the holder and can be used to cut a length of wire from the reel without removal or can be detached from the holder to manipulate the wire after it has been severed from the main supply. **PATENT 1,113,901.** Write: Martin Blanchard, Box 335, Hearst, Ontario P0L 1N0 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.

Lubricant for Plastic Working/313

Lubrifiant pour le travail des matières plastiques/313

A lubricant for plastic working which is positively free of oily matter is prepared by adding a solid powder lubricant to a polyhydric alcohol. **PATENT 1,113,916.** Write: Mitsubishi Jukogyo Kabushiki Kaisha, 5-1, Marunouchi, 2-Chome, Chiyoda-ku, Tokyo, Japan and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 3-38 Akasaka, 7-Chome, Minato-ku, Tokyo 107, Japan.

Method and an Agent for Chemical Purification of Water by Means of Chemical Precipitation and Magnetic Sludge Separation/313

Méthode et agents d'épuration chimique de l'eau par précipitation chimique et séparation magnétique des dépôts/313

A method and an agent for chemical purification of water is provided, especially wastewater with subsequent magnetic sludge separation. A precipitation agent comprising as component aluminium sulphate and/or iron sulphate is used together with a magnetic material for the purification. In order to provide uniform distribution of the magnetic material in the agent composition it is added to the aluminium and/or iron sulphate component of the composition when said component is in the form of a melt or solution prior to crystallization of said composition. **PATENT 1,114,080.** Write: Boliden Aktiebolag, Sturegatan 22, Stockholm, Sweden and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, P.O. Box 16129, S-103 23 Stockholm 16, Sweden.

Device for Disengaging Snagged Fish Hooks and Lures/313

Dispositif pour dégager des hameçons et des leurres accrochées/313

A device for disengaging snagged fishing hooks and lures is disclosed. The device includes a pole member and an operative end member which is bifurcated to define a central opening for retaining the fishing line during operation of the device. The end member is provided with features which include a flat end portion, a downwardly extending hook on one side thereof and a small opening located immediately below the hook to allow the fishing line to enter the central opening. The interior sides of the central opening are straight and smooth to avoid snagging the fishing line. The general construction of the present invention results in a straight or direct line of force from the operator through to the end of the device, thus facilitating the disengagement of snagged hooks and lures. **PATENT 1,114,161.** Write: George S. Bullen, Jr., 1325 Macbeth Street, McLean, Virginia 22101 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Process for the Recovery of Zinc, Copper and Cadmium in the Leaching of Zinc Calcine/313

Méthode d'extraction du zinc, du cuivre et du cadmium lors de la lixiviation du calcin de zinc/313

Zinc, copper and cadmium are recovered from their ferrites by subjecting the ferrites to a sulfuric acid bearing solution in the presence of potassium, sodium or ammonium ions under atmospheric conditions at 80-105°C to precipitate the iron present in the ferrites as jarosite, separating at least a portion of the jarosite-bearing solid material from the solution before recycling the solution to a neutral leach, from which a copper and cadmium bearing solution is recovered and to which acid and calcine are also fed, feeding the solid obtained from the neutral leach to the said ferrite treatment stage classifying the solid obtained from the neutral leach into a finer and coarser fraction, feeding the finer fraction to the ferrite treatment stage, comminuting the coarser fraction by grinding, leaching or milling and recycling the comminuted fraction to the process. **PATENT 1,114,175**. Write: Outokumpu Oy, P.O. Box 280, SF-00101, Helsinki 10, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

Assembling Means for Parallel Tubular Elements in a Cyclone Separator/313

Dispositif de jonction d'éléments tubulaires parallèles d'un séparateur à cyclones/313

Dispositif de jonction de tubes de séparateurs à cyclones de mélanges liquide-vapeur. Il comprend une plaque prédécoupée dans laquelle viennent se loger les embouchures hexagonales de formes embouties ou moulées de fonderie, se raccordant par leurs extrémités opposées aux sections droites des tubes, permettant d'offrir à l'entrée du mélange dans les tubes une section droite peu différente de celle du conduit d'amenée, et une plaque formant entretoise dans la zone à section droite circulaire des tubes. **BREVET 1,114,315**. Écrire à: Stein Industrie, 19-21 avenue Morane Saulnier, 78140 Velizy Villacoublay, France; Électricité de France Service National, 2, rue Louis Murat, 75008 Paris, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Expansion Joint for Wave Guides/313

Joint de dilatation pour guides d'ondes/313

L'invention concerne les joints de dilatation pour guides d'ondes. Le joint de dilatation comporte un premier et un second élément de mêmes dimensions internes que le guide d'ondes et libres de se déplacer longitudinalement l'un par rapport à l'autre, le premier élément ayant uniquement une structure de guide d'ondes, le second élément comportant un piège établi au moins en partie entre lesdits éléments et à l'extérieur du premier élément, la longueur électrique dudit piège étant égale à la moitié de la longueur d'onde de la fréquence centrale transmise par le guide d'ondes, lesdits éléments étant séparés longitudinalement au niveau du piège par une distance qui varie lorsque la longueur du guide varie. Le piège peut être replié pour réduire l'encombrement. Application aux guides d'ondes de grande longueur. **BREVET 1,114,463**. Écrire à: Les Câbles de Lyon, 170, avenue Jean Jaurès, 69353 Lyon, Cédex 2, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Printed Circuit Board Junction Block/313

Bloc de jonction à carte de circuit imprimé/313

L'invention est relative à un bloc de jonction à carte de circuit imprimé comprenant une embase ayant des côtés destinés à être assemblés côte à côte avec les côtés de l'embase d'un bloc de jonction adjacent pour constituer une barrette de raccordement, une face inférieure destinée à être fixée sur un support commun, une face avant, une face arrière et une face supérieure destinée à des raccordements de circuits électriques. Le bloc est caractérisé en ce que la face supérieure de l'embase comporte des supports isolants d'une rangée de barres électriques, disposées parallèlement à l'axe longitudinal de la barrette de raccordement et communes à l'ensemble des blocs de la barrette, et des plots de contact disposés en regard desdites barres et parallèlement à celles-ci, lesdits plots étant reliés à des bornes de raccordement extérieur disposées sur les faces avant et arrière de l'embase, et en ce qu'une carte de circuit imprimé est disposée transversalement sur lesdites barres, le bord inférieur de la carte étant muni de bornes embrochées sur les barres électriques et les plots de contact. L'invention s'applique à la réalisation des installations de commande et de contrôle d'appareils électriques. **BREVET 1,114,468**. Écrire à: CGEE Alsthom, 13, rue Antonin Raynaud, 92309 Levallois — Perret, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Mechanical Protection of Electric Connectors on Electronic Power Assemblies Cooled by a Fluorinated Hydrocarbon/313

Protection mécanique des connecteurs électriques d'ensembles électroniques de puissance refroidis par un hydrocarbure fluoré/313

Dispositif permettant de protéger les connecteurs d'un ensemble électronique de puissance disposé dans une enceinte contenant un hydrocarbure fluoré. Il permet d'isoler les connecteurs en les raccordant à une boîte à bornes étanche au travers d'une chambre rendue étanche au moyen d'un joint. Application au matériel électrique du domaine ferroviaire ou routier. **BREVET 1,114,469**. Écrire à: Alsthom-Atlantique, 38, avenue Kléber, 75784 Paris, Cédex 16, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Extraction Unit/313

Dispositif extracteur/313

An extraction unit of the type having successively in the flow direction of the liquid, a mixer, a pre-settler and a settler, the pre-settler and the settler being separated from each other by several successive perforated partition walls, the perforations of each partition wall being laterally unaligned with the perforations of the following partition wall, the lower section of the mixer having inlets for the heavy phase and the light phase and a mechanical stirrer for mixing the heavy phase and the light phase to form a dispersion, and the upper section having at least one opening for directing the dispersion from the mixer to the pre-settler, the upper section of the settler having members for removing the separated light phase as an overflow from the settler, the lower section of which has an opening for the removal of the separated heavy phase from the settler as a controlled flow, and between the settler and the mixer there are pipes for returning part of the separated heavy and light phase from the settler to the lower section of the mixer. The mixer is at least in part surrounded by the pre-settler and the openings for directing the dispersion from the mixer into the pre-settler are on those sides of the mixer which are facing away from the perforated partition walls between the pre-settler and the settler, in order to lengthen the path of the dispersion coming from the mixer and to divide it into two partial flows following each side of the mixer and to cause these flows to impinge against each other before reaching the said perforated partition walls, in order to damp the flow and to promote the separation of the phase. **PATENT 1,114,531**. Write: Outokumpu Oy, P.O. Box 280, SF-00101, Helsinki 10, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

Compact Toothbrushing Kit/313

Nécessaire compact pour le brossage des dents/313

An assembly of a toothbrush detachably mounted to a hollow cylindrical housing in which dentrifice tube may be stored; with a hollow cap threaded to the housing in which a reel of dental floss is stored. The assembly, in disassembled condition, is stored in an enclosure. A coupling formed of a sleeve fitted with an internal thread serves to join the threaded neck of a dentrifice tube with the threaded neck of a supply tube. **PATENT 1,114,568**. Write: Albert D. Kyte, P.O. Box 2523, Pensacola, Florida 32503 and send a copy of your initial correspondence to Canadian Consulate General, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303-1290, U.S.A.

Bale Handling Apparatus/313

Dispositif de manutention de balles/313

Bale handling apparatus is disclosed which in one embodiment is capable of self-loading a plurality of, for example, four large round hay bales, transporting the hay bales, stacking the hay bales, loading a stack of hay bales for transporting to another area, and unrolling a hay bale. The apparatus comprising a frame, a chassis for movably supporting the frame over the ground, and a bale engaging assembly for releasably engaging a bale at the ends thereof and for loading the engaged bale onto the frame at one side of one end thereof. A transversely movable carriage can move such a bale to the other side of the frame to make room for a further bale on the one side. The frame is pivotably mounted to the chassis at the other end thereof and can be tilted with respect thereto so that bales which have been loaded onto one end of the frame can be displaced rearwardly so as to make room for loading of additional bales. In addition, the frame can be rotated by position of approximately 90° with respect to the chassis so that a stack of bales can be made. **PATENT 1,114,620**. Write: Kent G.M. Ward, General Delivery, Olds, Alberta T0M 1P0; Francis L. Smith, 1024 Cannock Place S.W., Calgary, Alberta T2M 1M7 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.

Internal Combustion Engines Integrated with Heat Recuperators/313

Moteurs à combustion interne avec récupérateurs de chaleur incorporés/313

More than 60% of the heating value of the fuel consumed in the usual internal combustion engines is wasted past remedy. The present invention, which is applicable in combination with any type of internal combustion engine, is devised to reduce the heat losses and to improve the efficiency of the thermodynamic cycles by making practicable an increase of the compression ratio, while suppressing knocking. Besides, a reduction in the emission of pollutants is achieved. The invention embodies apparatus to generate superheated steam, comprising a water preheater, a forced — circulation steam generator, a steam separator, a steam superheater which forms the actual jacketed cooling system of the engine, and a feasibly complete thermal insulation system. Said apparatus is integrated with the internal combustion engine, its steam generating constituent parts being arranged in countercurrent to the flow of the combustion products generated by the engine's process. The superheated pressure steam is utilized as motive power for an injector-compressor serving to pre-compress the combustion air for compression-ignition or other fuel injection engines, or to supercharge the air-fuel mixture in the case of carburetor engines. In all cases, the compressed gaseous intake, incorporating the injected superheated steam, enters the engine's working space with increased enthalpy. If superheated steam is produced in excess of the demand of the compressor, it will be fed directly into the working space with appropriate timing. The invention offers the convenience of reducing the usual heat losses to the only heat being rejected with the cooled exhaust gases. **PATENT 1,114,622**. Write: John J. Haiman, 20 Chesterton Drive, Apartment 408, Nepean, Ontario K2E 6Z7 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.

Water Chilling Plant/313

Installation de refroidissement de l'eau/313

A mining machine provided with means for cooling the motors and other equipment provided on the machine for propelling the machine, said means comprising an electric motor, a refrigeration circuit including a compressor, a condenser and an evaporator and a water cooling circuit wherein water is pumped from a supply through cooling devices associated with the equipment to be cooled on the machine and through the evaporator of the refrigerant circuit. The evaporator is shown downstream of the cooling devices, but could be upstream. By providing an independent water cooling circuit, water normally used for dust suppression need only be sprayed into the mine during mining operations and it is not necessary to use this water when other tasks are performed by the machine in the mine for cooling purposes. **PATENT 1,114,628**. Write: Dosco Overseas Engineering Limited, British Fields, Ollerton Road, Tuxford, Newark, Nottinghamshire, NG22 0PQ, England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

Method of Post-Process Intensification of Images on Photographic Films and Plates/313

Méthode de post-intensification des images de pellicules et plaques photographiques/313

A method of post-process intensification of silver images on developed photographic films and plates comprises the steps of converting silver of the developed film or plate to a radioactive compound by treatment with an aqueous alkaline solution of an organo-S^{35} compound; placing the treated film or plate in direct contact with a receiver film which is then exposed by radiation from the activated film; and developing and fixing the resulting intensified image on the receiver film. **PATENT 1,114,667**. Write: National Aeronautics and Space Administration, NASA Headquarters, Washington, D.C. 20546 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Method of Storing Thermal Energy in a Ground Storage Device/313

Méthode d'emmagasinage de l'énergie thermique dans un dispositif de stockage enfoui/313

In a method of storing thermal energy in a ground storage device a large volume, including a ground body for circulating water in a circuit comprising passages in said body, there are used heat-absorbing and heat-emitting means. The heat-absorbing means has the form of a large, natural or artificial water-mass, such as a lake, sea-inlet or the like, whose water is heated to above a given temperature during warm periods of the year — is charged to the ground storage device. The supply of water to said ground storage device is interrupted when there is equilibrium between the temperature of the water supplies and the temperature of the ground storage device. **PATENT 1,114,700**. Write: Sunroc Energy KB, Box 4179, S-203, 13 Malmo 4, Sweden and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, P.O. Box 16129, S-103 23 Stockholm 16, Sweden.

Dual Zone Heating Unit/313

Appareil de chauffage bizone/313

An improved heating unit for a recirculating hot-water heating system includes a small-diameter tank of inverted U-shape. In each leg of the tank a vertically oriented heating element extends upwardly from the lower-most end of the leg. Heat-transfer fluid enters each leg at the lowermost end thereof, passes upwardly in each leg being heated by the heating element therein, and exits to the appropriate flow conduit system through a single outlet in the top cross-flow portion. The heating elements are not subjected to any cantilever forces, do not develop hot spots or detrimental coating and provide for uniform effective heating at very low power ratings in comparison to prior art heating units. **PATENT 1,114,794**. Write: Remi R. Tittley, 816 boulevard Cartier, Hawkesbury, Ontario K6A 1W7 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.

Multiple Relay/313

Relais multiple/313

Un relais multiple comporte un relais électromagnétique de commande et des relais électromagnétiques. Les contacts semi fixes des relais sont portés par une barre commune, isolante, pivotant autour d'un axe sous l'action du relais de commande. Chaque contact semi fixe d'un relais est relié à une barre conductrice (une barre conductrice pour un contact semi fixe du relais) portée par la barre commune. Le contact électrique entre un contact semi fixe et un contact mobile est établi par alimentation du relais de commande puis du relais, et suppression de l'alimentation du relais de commande puis du relais; le contact semi fixe verrouille le contact mobile. La rupture du contact électrique est obtenue par alimentation momentanée du relais de commande. **BREVET 1,114,861**. Écrire à: La Téléphonie Industrielle et Commerciale — TELIC, 206, route de Colmar, 67023 Strasbourg, Cédex, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Wood Joint Cutter/313

Outil à façonner des joints sur bois/313

A rotary tool adapted for use as an attachment for a router portable, stationary or like machinery, for the main purpose of making tongue and groove joints in boards or plywood. In this invention the cutting devices are of such a size and proportion, that it produces a pair of wood joint components which are identical and fit together to produce a complementary joint, contrary to the normal tongue and groove joint, which has a tongue on one portion and a groove on another portion requiring two separate cutters. **PATENT 1,115,038**. Write: Frede O. Hansen, 770 W., 19th Avenue, Vancouver, B.C. V5Z 1X2 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.

Double Action Fishing Lure/313

Leurre de pêche à double effet/313

A fishing lure consisting of two identically shaped pieces of metal loosely held together by split rings to which are attached a swivel and a hook. When moved through the water these two pieces of metal oscillate and strike each other thus creating a vibration which provokes all types of fish to attack the lure. **PATENT 1,115,052**. Write: Michael J. Kobierski, 8620 East Saanich Road, Sidney, B.C. V8L 1H1 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.

Recovery of Aluminum and Other Metal Values from Fly Ash/313

Méthode d'extraction de l'aluminium et d'autres éléments métalliques en présence dans les cendres volantes/313

The invention described herein relates to a method for recovering aluminum from fly ash comprising mixing the fly ash with calcium sulfate or a mixture of calcium sulfate with a material selected from the group consisting of calcium carbonate, magnesium sulfate, or magnesium carbonate, sintering the resultant mixture at a temperature which will convert the fly ash to a crystalline structure, and then leaching the aluminum from the sintered mass with an aqueous inorganic acid. **PATENT 1,115,064**. Write: Mr. James E. Denny, Assistant General Counsel for Patents, Office of the General Counsel, U.S. Department of Energy, Washington, D.C. 20545 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Process for the Production of Extra Fine Cobalt Powder/313

Méthode de production de poudre surfine de cobalt/313

Extra fine cobalt powder is manufactured by pyrolysing a cobalt (III) hexammine salt and then reducing the obtained oxide. **PATENT 1,115,066**. Write: Outokumpu Oy, Toolonkatu 4, SF-00100 Helsinki 10, Outokumpu, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

Fixed Optical Attenuator for Light Rays Guided by Optical Fiber/313

Atténuateur optique fixe pour rayonnements lumineux guidés par fibre optique/313

La présente invention est relative à la technique des fibres optiques et concerne plus particulièrement un atténuateur optique fixe insérable entre des fibres optiques. Cet atténuateur optique comporte un milieu atténuateur, deux lentilles à faces planes et gradient d'indice, alignées et séparées par le milieu atténuateur, et deux raccords à fibre optique disposés de part et d'autre de l'ensemble formé par les lentilles et le milieu atténuateur. Il s'utilise comme adaptateur de niveau aussi bien entre une source de rayonnement lumineux et un équipement qui lui est raccordé par fibre optique que dans des appareils de test, de calibration ou de mesure pour systèmes optiques. **BREVET 1,115,102**. Écrire à: Compagnie Industrielle des Télécommunications Cit-Alcatel, 12, rue de la Baume, 75008 Paris, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Method of Hydrogenating Coal Liquid/313

Méthode d'hydrogénation d'un liquide houiller/313

Coal liquid having a dissoelved transition metal, catalyst as a carbonyl complex such as $Co_2(CO_8)$ is hydrogenated with hydrogen gas or a hydrogen donor. A dissociating solvent contacts the coal liquid during hydrogenation to form an immiscible liquid mixture at a high carbon monoxide pressure. The dissociating solvent, e.g. ethylene glycol, is of moderate coordinating ability, while sufficiently polar to solvate the transition metal as a complex cation along with a transition metal, carbonyl anion in solution at a decreased carbon monoxide pressure. The carbon monoxide pressure is reduced and the liquids are separated to recover the hydrogenated coal liquid as product. The dissociating solvent with the catalyst in ionized form is recycled to the hydrogenation step at the elevated carbon monoxide pressure for reforming the catalyst complex within fresh coal liquid. **PATENT 1,115,225**. Write: Mr. James E. Denny, Assistant General Counsel for Patents, Office of the General Counsel, U.S. Department of Energy, Washington, D.C. 20545 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Deuterium Enrichment by Selective Photoinduced Dissociation of a Multihalogenated Organic Compound/313

Enrichissement en deutérium par dissociation sélective avec photo-induction de composés organiques multihalogénés/313

A method for deuterium enrichment by photoinduced dissociation which uses as the deuterium source a multihalogenated organic compound selected from the group consisting of a dihalomethane, a trihalomethane, a 1,2-dihaloethene, a trihaloethene, a tetrahaloethane and a pentahaloethane. The multihalogenated organic compound is subjected to intense infrared radiation at a preselected wavelength to selectively excite and thereby induce dissociation of substantially only those molecules containing deuterium to provide a deuterium enriched dissociation product. The deuterium enriched product may be combusted with oxygen to provide deuterium enriched water. The deuterium depleted undissociated molecules may be redeuterated by treatment with a deuterium source such as water. **PATENT 1,115,235**. Write: Mr. James E. Denny, Assistant General Counsel for Patents, Office of the General Counsel, U.S. Department of Energy, Washington, D.C. 20545 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Apparatus for Reducing Fragmentary Stock/313

Méthode de réduction de matériaux fragmentaires/313

A cylindrical working chamber in stock reducing apparatus features opposite ends which are open to the atmosphere so that a fan in the chamber outlet draws atmospheric air into the chamber through the open ends thereof, thence through stock in a turning and centrifugally maintained annular stream on the peripheral chamber wall as it passes over a sizing screen at the chamber outlet, and finally through the screen and following chamber outlet. **PATENT 1,115,250**. Write: Victor Danberg, 6 Mary Ann Lane, Wallingford, Connecticut 06492 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.

Step-Control of Electrochemical Systems/313

Commande-régulation pour processus électrochimiques/313

The response of an automatic control system to a general input signal is improved by applying a test input signal, observing the response to the test input signal and determining correctional constants necessary to provide a modified input signal to be added to the input to the system. A method is disclosed for determining correctional constants. The modified input signal, when applied in conjunction with an operating signal, provides a total system output exhibiting an improved response. This method is applicable to open-loop or closed-loop control systems. The method is also applicable to unstable systems, thus allowing controlled shut-down before dangerous or destructive response is achieved and to systems whose characteristics vary with time, thus resulting in improved adaptive systems. **PATENT 1,115,384**. Write: Mr. James E. Denny, Assistant General Counsel for Patents, Office of the General Counsel, U.S. Department of Energy, Washington, D.C. 20545 and send a copy of your initial correspondence to Canadian Consulate General, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

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Intermediate Cable Support/313

Support de câble intermédiaire/313

Filed March 10, 1981, by the Department of Agriculture. This invention relates to cable logging systems, and more particularly to systems which are long and which require an intermediate support. Intermediate supports are used to lengthen the harvest span by raising the cable system up, so that the cable does not touch the ground at an intermediate point. In skyline logging systems which slacken the skyline cable when attaching or releasing loads, it is essential that the intermediate support permit the cable to pass freely through the support in order to prevent unnecessary wear or abrading of the cable. This invention is an improved intermediate support which provides for free passage of the skyline cable through the intermediate support at all times. Write: **PAT-APPL-6-242 513**, NTIS.

High Shear Strength Adhesive and Method for Bonding Nylon to Nylon/313

Adhésif à forte résistance au cisaillement et méthode de collage nylon sur nylon/313

Filed April 6, 1981, by the Department of Agriculture. An adhesive and method for providing a high shear strength bond of nylon to nylon. The bond exhibits a shear tensile strength of greater than 48,990 kPa. The adhesive is a solution of 2.0 to 10%, v/v, stabilized sulfur trioxide in methylene chloride. Write: **PAT-APPL-6-251 665**, NTIS.

Diesel Fuel-Aqueous Alcohol Microemulsions/313

Microémulsions carburant Diesel et alcool aqueux/313

Filed April 21, 1981, by the Department of Agriculture. The energy crisis of recent years has simulated research in the field of alternate and hybrid fuels. One area of particular interest relates to fuels for commercial and agricultural vehicles, which are typically powered by diesel engines. The potential of many farmers to generate their own alcohol has led to an intensive study of combining alcohol with diesel fuel. However, among the problems encountered by this combination are water intolerance, phase separation, undesirable rheological properties, and reduction of cetane levels. This invention relates to diesel fuel-alcohol blends and to a novel surfactant system for obviating the characteristic problems of prior art compositions. Write: **PAT-APPL-6-256 206**, NTIS.

Poultry Semen Extender/313

Diluant de sperme de volaille/313

Filed July 29, 1981, by the Department of Agriculture. This invention relates to a medium for diluting and preserving poultry semen without critical loss in viability and more particularly to a medium for extending the useful life of poultry semen. Write: **PAT-APPL-6-288 260**, NTIS.

Phospha-S-Triazines/313

Phospha-s-triazines/313

Filed March 25, 1981, by the Department of the Air Force. The present invention concerns itself with a novel method for synthesizing novel dumbbell phospha-s-triazines which are characterized by having high molecular weights and, associated with this, decreased volatility and good fluid compatibility. The synthesis of the novel triazine compounds of this invention is accomplished by effecting a reaction between a substituted amidoylamidine and a pentavalent phosphorus halide. The resulting reaction product is a dumbbell phospha-s-triazine of high molecular weight. Generally, specific reaction times and temperatures depend upon the particular moiety utilized as the substituent in the imidoylamidine reactant. Reaction times of 150 to 300 hours and temperatures of from about 90 to 125 have been found suitable. Accordingly, the primary object of this invention is to provide a novel method for synthesizing phospha-s-triazines. Another object of this invention is to provide a novel series of dumbbell phospha-s-triazines. Write: **PAT-APPL-6-247 412**, NTIS.

Buckle-Retainer for Webbing and Like Materials/313

Dispositif d'accrochage pour sangles et autres tissus/313

Filed April 1, 1981, by the Department of the Army. A buckle-retainer is described that, when attached to a piece of personal equipment, allows easy attachment and secure carriage of that equipment by the wearer. The buckle-retainer clips over and around the wearer's belt and small claws secure it to the belt at that spot. Write: **PAT-APPL-6-249 595**, NTIS.

System for Multistage, Aerial Dissemination and Rapid Dispersion of Preselected Substances/313

Système multistage de dissémination aérienne et de dispersion rapide de substances/313

Price per copy from NTIS: PC U.S. $6.50/MF U.S. $3.50, filed April 9, 1981, by the Department of the Army. Broadly, the present invention embodies a unique system for aerial dispersion of a plurality of interspaced clouds or cloud-like patterns of particulate matter at aerial locations relatively remote from the launch site of the system. As such, the system permits aerial dispersion of substances over a relatively extended aerial path disposed above ground locations safely distant from the launch location. As such, widely varied military and domestic uses and applications of the system are envisioned which, among others, include aerial dispersion of decoy material for protection of aircraft against electronic and radar tracking devices; agricultural fertilizers, pesticides, herbicides, and the like; fire prevention and fire fighting substances especially suitable for large range, brush and forest fires, as well as, for example, cloud-seeding substances for rain propagation purposes and the like. Write: **PAT-APPL-6-252 632**, NTIS.

A Double Sideband Linear Frequency Modulation System for Radar Applications/313

Système de modulation de fréquence linéaire à double bande latérale pour radars/313

Filed April 15, 1981, by the Department of the Army. A double sideband linear frequency modulation technique for radar applications is disclosed for obtaining simultaneous range and doppler measurements. The method of obtaining measurements is useful in a variety of radar applications; however, the most promising area is in continuous wave radar systems. Linear Frequency Modulated (LFM) waveforms of both increasing and decreasing frequency are simultaneously transmitted. Upon reception these sideband signals are combined coherently to give an output that is a function of the target's radial velocity. The received signals are also processed separately to obtain target ranging information. Write: **PAT-APPL-6-254 237**, NTIS.

Phase Shifter Start/Stop Electronic Trimming/313

Réglage électronique d'un déphaseur à commande par départ-arrêt/313

Filed May 26, 1981, by the Department of the Army. The phase shifter start/stop electronic trimming circuit provides a means for electronically trimming phase shifters when stop/start two-axis steering is used. A time delay is incorporated into the start logic line of each phase shifter driver allowing the particular insertion phase characteristic of the microwave portion of the phase shifter to be accounted for. Variations of 360 degrees of insertion phase can be trimmed by this method. Delaying the start pulse into the logic device makes the phase setting less than that required of a perfect phase shifter, thereby correcting all units whose insertion phase is longer than the perfect unit. Consequently, the nominal insertion phase of a perfect unit will normally be the shortest phase length encountered. Where a shorter than nominal insertion phase is involved, the insertion phase difference may be subtracted from 360 degrees and using the value. Write: **PAT-APPL-6-266 771**, NTIS.

Transmitter Peak Power Efficient Pseudo-Blink Arm Decoy System/313

Réseau d'émetteurs de diversion à rendement élevé et à champ pseudoclignotant/313

Filed June 1, 1981, by the Department of the Army. This application discloses a technique using sector antennas on a plurality of decoy transmitters such that each antenna only has to cover a portion of the required azimuth coverage but the total azimuth is covered at all times by all the decoy transmitters. Switching between sectors of the various decoy transmitters is done to provide pseudo-blinking decoy field. Write: **PAT-APPL-6-269 282**, NTIS.

Direction Finding and Frequency Identification Method and Apparatus/313

Méthode et appareil de radiogoniométrie et d'identification de fréquence/313

Filed June 15, 1981, by the Department of the Army. A surface acoustic wave interferometer direction finding and frequency identification method and apparatus is disclosed. The invention utilizes a plurality of dispersive delay lines in order to represent a multiplicity of signals, having different frequencies and angles of arrival at a plurality of antennae, by a train of pulses which retain phase information. Analysis of the interpulse spacing among the pulses in this pulse train, which represents the difference in frequency among the multiplicity of signals arriving at the antennae of the invention, and a pulse comparison of the signals at each of the antennas, allows selective correlation of signal with angle of arrival. Write: **PAT-APPL-6-273 806**, NTIS.

EM Sensor for Determining Impedance of EM Field/313

Sonde électromagnétique pour la détermination de l'impédance des champs électromagnétiques/313

Filed June 19, 1981, by the Department of the Army. A method and device are given for determining the impedance of the electric and magnetic fields in the near and far fields associated with a radiating antenna. The electric and magnetic field components are sensed in a far field location and the system is calibrated using a known relationship between the electric and magnetic field components. The sensed signals are transmitted optically via a fiber optic link to an optical receiver. The received optical signals are modulated by an audio signal generator and input into a ratio detector via variable attenuators which are used to calibrate the system. Multiple subsequent ratios are measured and recorded as a function of location of the sensor. Write: **PAT-APPL-6-275 470**, NTIS.

Test Set for Transient Protection Devices/313

Nécessaire d'essai pour dispositifs de protection contre les phénomènes transitoires/313

Filed June 25, 1981, by the Department of the Army. A method and device for testing protection circuits comprising positive positive and negative high voltage protection circuits and high voltage fast rise time protection circuits. A bipolar tests signal with alternate positive and negative high voltage pulses is applied to the circuit under test. Determination is made whether the pulses are within a predetermined voltage window. Signals indicating pass/fail responsive to that determination are generated. A high voltage fast rise time negative pulse is applied to the circuit under test. Changes in the voltage-time waveform are sensed and compared to predetermined levels. Pass/fail signals are generated in response to the comparison. Write: **PAT-APPL-6-277 306**, NTIS.

Method of Making a Composite Wire/313

Méthode de fabrication d'un câble électrique en matériau composé/313

Filed June 25, 1981, by the Department of the Army. A high strength, lightweight composite wire is made by intercalating graphite fiber with a material that will impart high electrical conductivities to the fiber. The intercalated fiber is coated with a wetting agent and the coated intercalated graphite fiber then placed in a molten bath of magnesium or a low melting magnesium alloy. A composite wire is then produced by extrusion through a suitable die. Write: **PAT-APPL-6-277 365**, NTIS.

Coherent Optical Source/313

Source de lumière cohérente/313

Filed June 25, 1981, by the Department of the Army. A laser master oscillator and a laser power amplifier are described which utilize different lasing substances such as a semiconductor diode injection laser as the master oscillator and either a solid state or gas laser as the amplifier. A preferred embodiment utilizes an indium gallium arsenide laser diode and a neodymium solid state laser amplifier. The latter may be optically pumped with either a flash lamp or pulsed light emitting or laser diodes, the latter configuration resulting in an all solid state optical source. Write: **PAT-APPL-6-277 424**, NTIS.

Control Device for Steerable Null Antenna Processor/313

Dispositif de commande pour processeur d'antenne à angle de rayonnement nul orientable/313

Filed July 1, 1981, by the Department of the Army. A radio receiving system partially overcomes jamming and other interference by receiving on a narrow selected frequency which is rapidly changed, i.e., fast frequency hopping (FFH). The system includes a broadband receiving antenna array and a steerable null antenna processor which creates an antenna null pattern. A control device connected to the FFH radio connects a portion of the intermediate frequency (IF) of the radio to a bank of three narrowband IF filters in the control device. The output of the first IF filter, at the IF frequency, provides the signal (S) level and the outputs of the second and third filters, which are offset from the IF frequency, are summed to provide the interference (I) level; the I and S levels being used to control the antenna processor means. Write: **PAT-APPL-6-279 397**, NTIS.

Active Transmitting Antenna/313

Antenne d'émission active/313

Filed July 6, 1981, by the Department of the Army. A high power, broadband, active transmitting antenna operates in the frequency range below 1GHz, which is in the order of 0.15 wavelength in electrical size. The relatively small antenna is coupled across an electron bombarded semiconductor device in the form of a diode which is penetrated by high energy electrons from an electron gun modulated with the RF signal to be transmitted. Write: **PAT-APPL-6-280 562**, NTIS.

Seismic Parameter Measurement Method and Apparatus/313

Méthode et appareil de mesure des paramètres sismiques/313

Filed July 20, 1981, by the Department of the Army. The apparatus comprises a geophone connected to a circuitry case containing a battery, a voltage regulator, a solid state preamplifier and amplifier tuned to respond to seismic signals between 2 and 25 Hz. The amplified seismic signals are rectified and applied to a microammeter connected to efficiently respond to pulsations at the step frequency of walking or crawling personnel. The apparatus can be used to measure seismic noise and to determine soil conditions prior to the emplacement of an intrusion detection system. Write: **PAT-APPL-6-284 429**, NTIS.

Remotely Operated Microtome/313

Microtome commandé à distance/313

Filed April 2, 1981, by the Department of Health and Human Services. This patent application relates to microtomes, and more particularly to a remotely controlled microtome assembly constructed and arranged to remove thin sections from a block of tissue while said block is supported within a vacuum chamber or similar enclosure associated with an optical microscope or a scanning electron microscope, so as to allow exact observation of otherwise hidden tissue structure. Write: **PAT-APPL-6-250 269**, NTIS.

The BRH Test Pattern for Gamma Camera Performance (An Evaluator)/313

Fantôme BRH pour l'évaluation de la performance des caméras à rayons gamma/313

Filed March 2, 1981, by the Department of Health and Human Services. The present invention relates to evaluation of the performance of nuclear medicine imaging systems and, more particularly, to a transmission test pattern which can be utilized to determine the performance parameters of gamma cameras. The test pattern or phantom of the present invention provides information on gamma camera performance parameters which cannot be measured with imaging procedures employed in the prior art for gamma camera performance evaluation. Write: **PAT-APPL-6-254 097**, NTIS.

Ion Sputter Textured Graphite/313

Graphite texturé par pulvérisation ionique/313

Filed May 15, 1981, by NASA. A specially textured surface of pyrolytic graphite which exhibits extremely low yields of secondary electrons and reduced numbers of reflected primary electrons after impingement of high energy primary electrons is described. An ion flux having an energy between 500 eV and 1000 eV and a current density between 1.0 mA/sq cm and

6.0 mA/sq cm produces surface roughening or texturing which is in the form of needles or spires. Such textured surfaces are especially useful as anode collector plates in high efficiency electron tube devices. Write: **PAT-APPL-6-264 378**, NASA, Lewis Research Center, 2100 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Heat Transparent High Intensity High Efficiency Solar Cell/313

Pile solaire transparente à la chaleur, de rendement élevé aux fortes insolations/313

Filed May 15, 1981, by NASA. A heat transparent high intensity solar cell with improved efficiency is described. The surface of each solar cell has a plurality of grooves. Each groove has a vertical face and a slanted face that is covered by a reflecting metal. Light rays are reflected from the slanted face through the vertical face where they traverse a photovoltaic junction. As the light rays travel to the slanted face of an adjacent groove, they again traverse the junction. The underside of the reflecting coating directs the light rays toward the opposite surface of solar cell as they traverse the junction again. When the light rays travel through the solar cell and reach the saw toothed grooves on the under side, the process of reflection and repeatedly traversing the junction again takes place. The light rays ultimately emerge from the solar cell. These solar cells are particularly useful at very high levels of insolation because the infrared or heat radiation passes through the cells without being appreciably absorbed to heat the cell. Write: **PAT-APPL-6-264 380**, NASA, Lewis Research Center, 2100 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Method of Forming Oxide Coatings/313

Méthode de formation de revêtements d'oxyde/313

Filed June 10, 1981, by NASA. This invention is concerned with an improved plating process for covering a substrate with a black metal oxide film. The invention is particularly directed to making a heating panel for a solar collector. A compound is electrodeposited from an aqueous solution containing cobalt metal salts onto a metal substrate. This compound is converted during plating into a black, highly absorbing oxide coating which contains hydrated oxides. This is achieved by the inclusion of an oxidizing agent in the plating bath. The inclusion of an oxidizing agent in the plating bath is contrary to standard electroplating practice. The hydrated oxides are converted to oxides by treatment in a hot bath, such as boiling water. An oxidizing agent may be added to the hot liquid treating bath. write: **PAT-APPL-6-272 152**, NASA, Lewis Research Center, 2100 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Polyvinyl Alcohol Battery Separator Containing Inert Filler/313

Séparateur de batterie en polyalcool de vinyle contenant une charge inerte/313

Filed June 10, 1981, by NASA. A cross-linked polyvinyl alcohol battery separator is disclosed. A particulate filler, inert to alkaline electrolyte of an alkaline battery, is incorporated in the separator in an amount of 1-20% by weight, based on the weight of the polyvinyl alcohol, and is dispersed throughout the product. Incorporation of the filler enhances performance and increases cycle life of alkaline batteries when compared with batteries containing a similar separator not containing filler. Suitable fillers include titanates, silicates, zirconates, aluminates, wood floor, lignin, and titania. Particle size is not greater than about 50 microns. Write: **PAT-APPL-6-272 233**, NASA, Lewis Research Center, 2100 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Cross-Linked Polyvinyl Alcohol and Method of Making Same/313

Polyalcool de vinyle réticulé et méthode de fabrication/313

Filed June 10, 1981, by NASA. A method is described for producing cross-linked polyvinyl alcohol battery separators. A film-forming polyvinyl alcohol resin is admixed, in aqueous solution, with a dialdehyde cross-linking agent which is capable of cross-linking the polyvinyl alcohol resin and a water soluble acid aldehyde. The acid aldehyde contains a reactive aldehyde group, capable of reacting with hydroxyl groups in the polyvinyl alcohol resin, and an ionizable acid hydrogen atom. The amount of acid aldehyde is from 1 to 5% by weight and is sufficient to reduce the pH of the aqueous admixture of 5 or less. The admixture is then formed into a desired physical shape, such as by casting a sheet or film, and the shaped material is then heated to simultaneously dry and cross-link the article. Write: **PAT-APPL-6-272 234**, NASA, Lewis Research Center, 2100 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Additive for Zinc Electrodes/313

Additifs pour électrodes de zinc/313

Filed June 10, 1981, by NASA. An improved zinc electrode for alkaline cells includes up to about ten percent by weight of Ba(OH)2.8H2O with about five percent being preferred. The zinc electrode may or may not be amalgamated with mercury.

Write: **PAT-APPL-6-272 406**, NASA, Lewis Research Center, 2100 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Ion Beam Sputter-Etched Ventricular Catheter for Hydrocephalus Shunt/313

Cathétère ventriculaire perforé par un faisceau d'ions pour shunt hydrocéphalique/313

Filed June 10, 1981, by NASA. A cerebrospinal fluid shunt in the form of a ventricular catheter for controlling the condition of hydrocephalus by relieving the excessive cerebrospinal fluid pressure is described. A method for fabrication of the catheter and shunting the cerebral fluid from the cerebral ventricles to other areas of the body is also considered. Shunt flow failure occurs if the ventricle collapses due to improper valve function causing over-drainage. The ventricular catheter comprises a multiplicity of inlet microtubules. Each microtubule has both a large opening at its inlet end and a multiplicity of microscopic openings along its lateral surfaces. The microtubules are perforated by an ion beam sputter etch technique. The holes are etched in microtubule by directing an ion beam through an electro formed metal mesh mask producing perforations. Write: **PAT-APPL-6-272 407**, NASA, Lewis Research Center, 2100 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113-1983, U.S.A.

Wingtip Vortex Turbine/313

Turbine pour turbulence de bout d'aile/313

Filed March 16, 1981, by NASA. Means of extracting rotational energy from the vortex created at aircraft wing tips, of a turbine with four blades which are located in the cross flow of the vortex and attached downstream of the wing tip are described. The turbine blades are attached to a core. When the aircraft is in motion, the rotation of the core transmits energy to a centrally attached shaft. The rotational energy thus generated is utilized within the airfoil or aircraft fuselage. Write: **PAT-APPL-6-243 685**, NASA, Langley Research Center, Mail Code: 279, Hampton, Virginia 23665 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Bldg., Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

A Self-Correcting Electronically Scanned Pressure Sensor/313

Capteur de pression autocorrecteur à balayage électronique/313

Filed March 31, 1981, by NASA. A multiple-channel high data rate pressure sensing device for use in wind tunnels, spacecraft, airborne, process control, automotive, pressure measurements, etc., is described. The device offers data rates in excess of 100,000 measurements per second with inaccuracies from temperature shifts less than 0.25% of full scale over a temperature span of 55°C. The device consists of 32 solid state sensors, signal multiplexing electronics to electronically address each sensor, and digital electronic circuitry to automatically correct the inherent thermal shift errors of the pressure sensors and their associated electronics. Write: **PAT-APPL-6-249 304**, NASA, Langley Research Center, Mail Code: 279, Hampton, Virginia 23665 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Bldg., Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Method of and Apparatus for Double-Exposure Holographic Interferometry/313

Méthode et appareil d'interférométrie holographique à double exposition/313

Filed June 17, 1981, by NASA. Double exposure holographic interferometry is carried out using two lasers which are responsive to respective applied firing signals for producing respective pulsed output beams. An optical system is provided which is so oriented that the output beams of the lasers produce coinciding scene and reference beams. An initiator circuit generates and applies a firing signal to the first laser and a timer/firing device, responsive to the generation of a firing signal by the initiator circuit, generates and applies a firing signal to the second laser at a predetermined period of time later. Write: **PAT-APPL-6-274 708**, NASA, Marshall Space Flight Center, Mail Code: CC01, Huntsville, Alabama 35812 and send a copy of your initial correspondence to Canadian Consulate General, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303-1290, U.S.A.

Refrigerator Module, System and Process/313

Module réfrigérateur, principe et processus de fonctionnement/313

Filed June 24, 1981, by NASA. A hermetically sealed, valve-free assembly containing helium 3 or other refrigerant is used in a refrigerator module including a refrigerant evaporator, a refrigerant condenser, and a refrigerant adsorption pump serially connected but thermally isolated, so that the refrigerant may pass from one element to another. A heater is provided for the adsorption pump. During operation, the adsorbing unit is heated to drive adsorbed refrigerant vapor to the condenser. Refrigeration occurs when the refrigerant is evaporated in the evaporator and simultaneously adsorbed in the adsorbing unit to decrease refrigerant vapor pressure. When connected to the cold plate of a helium 4 or other refrigerant

cryostat, the resulting multistage refrigeration system gives improved and simplified operation in practice. Write: **PAT-APPL-6-276 750**, NASA, Ames Research Center, Mail Code: 200-11A, Moffett Field, California 94035 and send a copy of your initial correspondence to Canadian Consulate General, One Maritime Plaza, Alcoa Building, Suite 1100, Golden Gateway Center, San Francisco, California 94111-3468, U.S.A.

A Stable Density-Stratification Solar Pond/313

Bassin solaire stable à couches de densités différentes/313

Filed April 30, 1981, by NASA. A solar pond for collecting and storing solar thermal energy includes a container having one section characterized by an internal wall of a substantially cylindrical configuration and a second section having an internal wall of a substantially truncated conical configuration surmounting and in coaxial alignment with the first section. The second section is characterized by a base of a diameter substantially equal to the diameter of the first section and a truncated apex defining a solar energy acceptance opening. A body of immiscible liquids is disposed within the container and comprises a first portion substantially filling the first section of the container and a second portion substantially filling the second section of the container. The first portion is of a darker color than the second portion and of a greater density. A protective cover plant is removably provided for covering the acceptance opening. Write: **PAT-APPL-6-259 208**, NASA, 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 Suspension System/313

Système de suspension acoustique/313

Filed June 12, 1981, by NASA. A device for acoustically supporting small objects under 1 mm diameter, such as hollow glass spheres during processing into nuclear fusion target pellets is described. The acoustic levitation system utilizes single acoustic source and a small reflector to stably levitate an object while the object is processed by coating or heating. The concave acoustic source is located on opposite sides of its axis and vibrates towards and away from a focal point to generate a converging acoustic field. A small reflector is located near the focal point, to create an intense acoustic field that supports a small object near the reflector. The reflector can be located about one half wavelength from the focal point and can be concavely curved to a radius of curvature of about one half the wavelength, to stably support an object one quarter wavelength from the reflector. Write: **PAT-APPL-6-272 837**, 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.

Multiple-Quantum Interference Superconducting Analog-to-Digital Converter/313

Convertisseur analogique/numérique comportant plusieurs dispositifs supraconducteurs à interférence quantique/313

Filed May 7, 1981, by the Department of the Navy. This application discloses an analog-to-digital converter using superconducting interferometers connected in parallel, each interferometer being identical. The coupling of the analog signal to each successive interferometer is increased in the ratio of 1:2:3:8:16:32:, etc. The application of a pulsed power supply to the parallel connected interferometer generates output voltages on the interferometers. The output voltages are a Gray Code representation of the analog signal. Write: **PAT-APPL-6-201 669**, NAVY.

A Loss-of-Phase-Lock Indicator Circuit/313

Circuit indicateur de perte de verrouillage de phase/313

Filed October 31, 1980, by the Department of the Navy. A loss-of-phase-lock indicator circuit is described which detects an out-of-limit voltage, whether steady or transitory. A pair of comparators, one for the high limit and the other for the low limit, are inserted in series between the tuning voltage and the sweep feedback amplifier, and are dc-coupled to the peak detector in the failure circuit. Additionally a 'dither' voltage is added in series with the phase detector, which ac voltage is large enough to swing the tuning voltage between limits at the loop amplifier output, but small enough to produce little effect on the output during phase lock. Write: **PAT-APPL-6-203 086**, NAVY.

Non-Alloyed Heterojunction Ohmic Contacts/313

Contacts ohmiques à hétérojonction non alliée/313

Filed November 19, 1981, by the Department of the Navy. Ultra low resistance heterojunction ohmic contact to semiconductors such as gallium arsenide (GaAs) is described wherein a single crystal layer of germanium degenerately doped with arsenic is deposited on gallium arsenide using molecular-beam epitaxy (MBE). A metallic film is then deposited over the single crystal layer of heavily doped germanium so as to obtain a non-alloyed heterojunction ohmic contact having a very low specific resistance. Write: **PAT-APPL-6-208 596**, NAVY.

Switching Regulated Power Supply/313

Alimentation stabilisée à découpage/313

Filed January 2, 1981, by the Department of the Navy. A power converter system for providing a regulated high voltage, high power DC power supply. Means are provided for the breakdown of power requirements into modular, stackable sub assemblies. Unregulated AC is rectified and regulated in a pulse width regulator to provide a well regulated DC voltage this is converted to a high voltage, high power by means of DC/DC converters whose outputs are connected in series. Write: **PAT-APPL-6-221 964**, NAVY.

Multi-Band Single-Feed Microstrip Antenna System/313

Antenne réseau microruban multibande à point d'alimentation unique/313

Filed January 26, 1981, by the Department of the Navy. A multi-band microstrip antenna comprising a plurality of separate radiating elements which operate at widely separated frequencies from a single common input point. The common input point is fed at all the desired frequencies from a single transmission feed line. A variety of combinations of microstrip elements can be used. The individual radiating elements are each made to look substantially like an open circuit to all other frequencies but the respective frequency at which they are to operate by respective feed point location and dimensioning of the transmission lines from the common input point to the feed points of the separate elements. Write: **PAT-APPL-6-228 428**, NAVY.

Microstrip Backfire Antenna/313

Antenne microbande à réflecteurs/313

Filed January 26, 1981, by the Department of the Navy. This invention relates to microstrip antennas and more particularly to a multi-mode antenna using both microstrip antenna elements and a backfire cavity. Compact missile-borne antenna systems require complex antenna beam shapes. At times, these beam shapes are too complex to obtain with a single antenna type, such as slots, monopoles, microstrip, etc., and require a more expensive phased array. A microstrip backfire antenna configuration combines the microstrip type antenna element with a backfire cavity. This new combination, depending on the various antenna parameters, can provide more than three times the gain over a single microstrip element and thereby be capable of replacing four or more elements of a conventional microstrip array. The microstrip backfire antenna of this invention consists of placing a microstrip element between a total reflector and a partial reflector (i.e., in a Fabray Perot Cavity). This antenna is characterized by multiple reflections of electromagnetic waves between the two reflectors and by the energy being radiated normal to and through the partial reflector. The microstrip element can also be placed on coplanar with the total reflector. In this antenna near symmetry is provided in both the E and H plane patterns. Write: **PAT-APPL-6-228 429**, NAVY.

Electro-Pneumatic Hydraulic System Complex/313

Ensemble de circuit hydraulique électro-pneumatique/313

Price per copy from NTIS: PC U.S. $6.50/MF U.S. $3.50, filed February 20, 1981, by the Department of the Navy. A propulsion system for undersea vehicles comprises a pair of counter-rotating low speed impellers driven from a spider shaft rotating at relatively high speed. The reduction is accomplished by a variable speed reducing and torque transmitting device which allows infinite resolution for speed control, including a zero speed setting, while maintaining a constant high speed at the input spider shaft. Attitude of the vehicle is controlled by regulated inlet ports and roll control is regulated by increasing the speed of one impeller and decreasing the speed of the other. The sea water utilized for the attitude is also used for propulsion. Control systems within the vehicle utilize an electro-pneumatic-hydraulic system complex. Write: **PAT-APPL-6-236 404**, NAVY.

Solid State Commutator Switch/313

Commutateur à semiconducteurs/313

Filed February 20, 1981, by the Department of the Navy. This application discloses a switching system for connecting a plurality of input signals to a plurality of selected outputs. A plurality of input signals are connected to a crosspoint matrix through a buffer circuit. The crosspoint switching matrix is comprised of a plurality of CMOS crosspoint switch integrated circuits and switching is controlled by a microprocessor which provides the desired connections for selected outputs. A built-in-test circuit (BITE) is provided for testing each circuit path in the switching system. Write: **PAT-APPL-6-236 474**, NAVY.

Dual-Gate Deep-Depletion Technique for Carrier-Generation-Lifetime Measurement/313

Technique de mesure de la durée de vie d'une génération de porteurs des dispositifs semiconducteurs à double grille et à zone d'épuisement profonde/313

Filed March 9, 1981, by the Department of the Navy. A method is described for investigating the quality of dielectrically isolated thin film semiconductor layers in inversion-mode MOS devices having dual-gate control capabilities which allow

two channels to be created in the semiconductor film. With one channel conducting and a drain voltage providing operation in the saturation region, a step voltage is applied to the gate associated with the second channel which has a transient effect on the current in the first channel. This transient may be analysed to measure the generation lifetime and other parameters in the body of the device. Write: **PAT-APPL-6-241 307**, NAVY.

Shock Simulator/313

Simulateur de chocs/313

Filed March 10, 1981, by the Department of the Navy. A projectile ground shock simulator is described for simulating the force pulse on a projectile in testing for shock effect on the guidance system of the projectile. The simulator incorporates a liquid/solid material as an energy absorbing and storing spring for simulating the force pulse on the projectile. The projectile is positioned in a drop tube and impacted with a drop vehicle to simulate the force created during firing of the projectile. The drop vehicle is provided with the liquid/solid spring having a piston and cylinder on the impact face of the drop vehicle. The cylinder is filled with a liquid or solid polymer material having a high bulk modulus of compressibility which gives the spring volumetric stiffness. The spring thus duplicates the force pulse acting on a fired projectile and also allows for the drop vehicle to be reused. Write: **PAT-APPL-6-242 199**, NAVY.

Electrochemical Deoxygenation for Liquid Phase Epitaxial Growth/313

Désoxygénation électrochimique pour dépôt épitaxial en phase liquide/313

Filed March 19, 1981, by the Department of the Navy. A method is described for removing residual oxygen from a growth solution prior to liquid phase expitaxial crystal growth by disposing the materials in a containment vessel of a solid oxide electrolyte material under a protective atmosphere, heating the materials, to form a liquid charge in the containment vessel, placing an electrode of an inert conducting solid in physical contact with the liquid charge, and applying a DC electric potential between the electrode and the containment vessel. The electrical contact to the containment vessel is made through a porous metallic coating of an inert metal on the outside surface of the containment vessel in the region where the liquid charge is contiguous to the inside surface of the containment vessel. The porous coating is relatively positive and the electrode being relatively negative. Write: **PAT-APPL-6-246 529**, NAVY.

Superior Ohmic Contacts to III-V Semiconductor by Virtue of Double Donor Impurity/313

Contacts ohmiques de haute qualité sur semiconducteurs III-V réalisés par double impurité donneuse/313

Filed March 25, 1981, by the Department of the Navy. This application discloses a method for fabricating superior ohmic contacts in a III-V semiconductor wafer by virtue of double donor (or double acceptor) impurity complex formation. A typical III-V, e.g., GaAs, semiconductor device is fabricated by depositing in thin Si3N4 layer and then regions are opened, by photoresist methods, upon which ohmic contacts are to be made. New resist is applied over the wafer and the ohmic contact regions are again opened. Si ions are now implanted to form the active channel and the drain and source regions (in an FET device). The resist layer is removed, a layer of Ge is laid down and a layer of Se over the Ge. The Ge layer is coated with a layer of SiO2, Si3N4 or a mixture of both, and annealed, causing the Ge and Se to diffuse rapidly into the Si ion implant region. The Si3N4 and excess surface Ge and Se is now removed. Metallization of the electrode areas, preferably with reliable refractory metals, is effected, producing ohmic tunneling contacts over the Ge/Se diffused regions rectifying, non-ohmic, Schottky barrier contacts over the selected remainder of the Si-implanted region. Write: **PAT-APPL-6-247 423**, NAVY.

Drill-Tap-Bolt Padeye/313

Bloc de levage avec boulons auto-perceurs et auto-taraudeurs/313

Filed March 27, 1981, by the Department of the Navy. This invention relates to a coupling apparatus for secure attachment to the surface of the plate-like structure by means of minimal mechanical motion. The apparatus includes a flat padeye portion having a suction cup one side and a coupling device such as a lifting eye on the other side. Several holes are spaced around the periphery of the padeye, each hole being of such radius that a linear drill tap bolt tool may pass through it. Each drill tap bolt tool comprises a drill, a tap and a bolt of similar radii which are joined together in colinear relationship. The suction cup holds the padeye in place while each of the drill tap bolt tools are sequentially rotated to drill and tap the plate-like structure and then to bolt the padeye to the plate-like structure. Write: **PAT-APPL-6-248 647**, NAVY.

Separation of Carbon Isotopes/313

Séparation des isotopes du carbone/313

Filed April 3, 1981, by the Department of the Navy. An object of the present invention to separate carbon isotopes by using a relatively inexpensive and readily available feedstock by a highly energy efficient, pressure-scalable process having a high enrichment factor. A further object of the present invention is to separate carbon isotopes through a substantially

more energy efficient endothermic reaction, of approximately 15 kcal/mole. A still further object of the present invention is to separate carbon isotopes by an inexpensive photochemical technique requiring a simple cw CO2 laser. These and other objects are achieved by irradiating at a saturating energy flux, a mixture of two carbon-isotope species of an methyl fluoride with a laser tuned to an absorption band of one of the isotopic forms of an methyl fluoride, reacting the isotopic mixture with atomic bromine in the presence of a nonabsorbing deactivating gas sufficient to provide adequate VT and VVT deactivation of the isotopic mixtures and finally separating the chemically distinct products. Write: **PAT-APPL-6-250 997**, NAVY.

Separation of Hydrogen Isotopes/313

Séparation des isotopes de l'hydrogène/313

Filed April 3, 1981, by the Department of the Navy. An object of the present invention to separate hydrogen isotopes using an inexpensive and readily available feedstock by a highly energy efficient, pressure-scalable process having a high enrichment factor. A further object of this invention is to excite, at moderate laser fluxes and in reasonable path lengths, isotopic forms of reagent molecules which could not be excited directly by a laser. A still further object of the present invention is to produce isotopical selective excitation by energy not coming from lasers. These and other objects are achieved by imparting vibrational excitation to sensitizer molecules, transferring the vibrational excitation to a mixture of normal and deuterated alkanes, whereby the deuterated alkane is preferentially excited, reacting the alkane mixture with bromine atoms, and separating the deuterated end products. Write: **PAT-APPL-6-250 998**, NAVY.

Synthesis of Hydrocarbon Soluble Vanadium Catalyst/313

Synthèse de catalyseur au vanadium soluble dans les hydrocarbures/313

Filed April 9, 1981, by the Department of the Navy. This invention relates to a process for preparing a composition of matter and in particular to a component of a promoter, soluble in hydrocarbons, used to cure a styrenated polyester resin. The use of promoters as catalysts to increase the curing of polyester resin is well known in the art. Some promoters do not work well in the presence of water, do not have sufficient shelf-life, or do not increase the rate of cure sufficiently. A need arose to lay down a firm surface within a short time in adverse environments sufficient to support light truck or aircraft traffic. To accomplish this goal, a polyester-glass mat was developed. Write: **PAT-APPL-6-252 712**, NAVY.

Triple Minimum Dispersion Wavelengths for a High NA Single-Mode Step-Index Fiber/313

Fibre optique à mode simple et à saut d'indice ayant une dispersion minimale à trois longueurs d'onde discrètes/313

Filed April 13, 1981, by the Department of the Navy. Single-mode, step-index optical fibers can be fabricated which enable the wideband long-distance duplex transmission of data at 1.3 microns and 1.55 microns, where attenuation and dispersion are both minimized. The appropriate index difference between the core and cladding materials and the dimensions of the core diameter are identified and selected to achieve minimum total dispersion at three discrete wavelengths in the single-mode, step-index fibers. The three minimum total dispersion wavelengths results from a cancellation between the material and waveguide dispersions which is owed to the proper selection of the parameters. Write: **PAT-APPL-6-253 622**, NAVY.

1, 9-Diazido-2,4,6,8-Tetranitro-2,4,6,8-Tetrazanonane/313

1, 9-diazido-2,4,6,8-tétranitro-2,4,6,8-tétrazanonane/313

Filed April 21, 1981, by the Department of the Navy. A new azido compound 1,9-diazido-2,4,6,8-tetranitro-2,4,6,8-tetrazanonane is disclosed, and a method of preparation is disclosed wherein 1,9-dichloro-2,4,6,8-tetranitro-2,4,6,8-tetrazanonane or 1,9-dinitroxy-2,4,6,8-tetranitro-2,4,6,8-tetrazanonane is reacted with sodium azide and dimethyl-formamide. This new azido compound is useful as an explosive, propellant, or component thereof to modify properties. Write: **PAT-APPL-6-256 230**, NAVY.

ASWIXS Remote Speaker and Handset Set/313

Poste de télécommande à haut-parleur et combiné téléphonique/313

Filed May 28, 1981, by the Department of the Navy. A remote speaker and handset unit is interfaced with a satellite communications system to a number of common users. A vocoder is interposed between each unit and the communications system to enable a real-time voice modulation-demodulation with suitable encryption. Means are provided for permitting a user to listen over a loudspeader and to interrupt the loudspeaker with the handset when it is desired to perform a transmission. Write: **PAT-APPL-6-267 937**, NAVY.

Widerange Photomultiplier Circuit/313

Circuit photomultiplicateur à large gamme dynamique/313

Filed May 29, 1981, by the Department of the Navy. An improvement for a photomultiplier tube having its cathode, dynodes and anode spaced apart within an envelope increases the tube's linear dynamic range capability. A constant and stable collection potential is maintained between the anode and the dynode nearest the anode. In one form a zener diode voltage source and serially connected resistor are used or a fixed voltage is appropriately connected separate and distinct from the dynode potential connected across the other dynodes and the cathode. Thusly modified, a light flux range of approximately eight orders of magnitude can be accommodated by the improved photomultiplier tube circuitry. Write: **PAT-APPL-6-268 203**, NAVY.

Analog to Digital Converter/313

Convertisseur analogique-numérique/313

Filed June 2, 1981, by the Department of the Navy. A device for converting a signal voltage into a multibit digital word that defines that voltage magnitude and polarity. The input voltage V to be digitized is used to control the frequency of a voltage controlled oscillator, whose output is defined to be f = f(o) + kV. The signal out of the voltage controlled oscillator is fed to differential delay line filters that permit all digits to be derived in parallel. The filters comprise pairs of delay lines of unequal length, each pair feeding a respective phase detector whose output is amplified, and diode-rectified and limited. To increase the accuracy of this device, an automatic frequency control loop can be incorporated to control f(o). This loop zeros V occasionally and reads the output digital word to measure the frequency error and add a correcting voltage to the input voltage V when it is not zeroed for the measurement. Write: **PAT-APPL-6-269 455**, NAVY.

A Solid-State Magnetometer/313

Magnétomètre à dispositif à état solide/313

Filed July 9, 1981, by the Department of the Navy. This application discloses a magnetic-field detection device useful as a sensitive magnetometer. The device employs a solid-state field-sensing element which experiences a change in permeability when it is exposed to a magnetic field. The change in permeability results in a change in skin depth and therefore in resistance offered by the element to passage of a high-frequency alternating current. The element is used as one arm of a balanced bridge circuit to which an A.C. voltage is applied. Upon exposure to a magnetic field, the bridge is rebalanced to a null, the amount of current flow or rebalancing being measures of the magnetic field strength. Write: **PAT-APPL-6-270 035**, NAVY.

Anchor Holding Capacity Augmentation System/313

Dispositif destiné à augmenter la capacité de retenue des ancres/313

Filed June 15, 1981, by the Department of the Navy. A series of spaced in-line plates attached to a through wire, rope or chain mooring line is placed between an anchor and the main mooring line to enhance overall mooring capability of an installed anchor of any of a variety of types including stake piles, propellant embedment anchors, vibratory anchors, and jetted-in anchors. For the device to be functional the mooring load should be approximately unidirectional and mooring scope should be such that upon loading, the anchor plate system is forced into the seafloor as the line catenary between the anchor deadman and the moored object straightens. Write: **PAT-APPL-6-273 825**, NAVY.

Linearizing Circuit for a High Frequency Voltage Controlled Oscillator/313

Circuit de linéarisation pour un oscillateur commandé par une tension haute fréquence/313

Filed June 19, 1981, by the Department of the Navy. A circuit for linearizing the oscillator sweep output frequency signal of a voltage controlled oscillator. The voltage controlled oscillator responds to a plurality of eight-bit digital words provided by an erasable programmable read only memory such that the voltage controlled oscillator will produce the above-mentioned output frequency signal. The memory is, in turn, responsive to a plurality of eight-bit digital addresses provided by a unique combination of gates, counters, and a clock. Write: **PAT-APPL-6-275 474**, NAVY.

Collapsible Salvage Drum and Method/313

Méthode de récupération avec conteneur à soufflet/313

Filed June 22, 1981, by the Department of the Navy. A salvage apparatus is provided which includes a bellows type drum container. The container includes a flexible skirt which is generally tubular with top and bottom ends. The container further includes a pair of rigid plates, one of the plates being sealably mounted to the top of the skirt and the other plate being sealably mounted to the bottom of the skirt. It is important that the lateral area of each plate substantially encompass the lateral expanded area of the respective skirt end. A plurality of controllable valves are provided for selectively opening and closing the passage of fluid. One of these valves is located in the bottom plate for selectively allowing the passage of water

into or out of the container and another valve is located through the container for selectively introducing pressurized air into the container. A relief valve is also located through the container for relieving air from the container when the inside and outside differential pressure has exceeded a predetermined level. Write: **PAT-APPL-6-276 099**, NAVY.

Multiplexed Computer-Controlled Protective System/313

Système de protection multiplex commandé par ordinateur/313

Filed June 23, 1981, by the Department of the Navy. A computer-controlled system is described for protecting a feeder circuit (or power supply) and one or more branch load circuits, each circuit supplied by a power buss fed through current sensors. Each of the source and branch circuits has a current sensor in each positive and negative leg and a set of contacts (circuit interrupters) in each leg. The current sensors feed data to a microcomputer which stores fault-condition information for each separate sensed circuit. The data fed into the computer is compared to the stored information in look-up tables and, when a fault-condition is sensed, the computer sends a fault output signal to the current interrupter associated with the circuit from which the fault signal has come, the fault output signal acting to open the contacts in that circuit and inactivate it. If the fault condition is severe, the source interrupter is activated immediately, the branch circuit interrupter is then opened and the computer then directs the closing of the source interrupter. The branch circuit interrupters, however, are not closed until the fault condition is cleared. The whole operation and sequence of events before, during, and following fault conditions is performed automatically and managed by the computer. Write: **PAT-APPL-6-276 593**, NAVY.

Passive Optical Rangefinder/Sextant Having Search Capability/313

Télémètre/sextant passif à miroir chercheur/313

Filed June 25, 1981, by the Department of the Navy. Uniquely integrating a search mirror and a deflection mirror with a passive optical rangefinder and a remote sextant enhances the operation of both devices. The improved rangefinder/sextant provides day/night 360 deg azimuthal and −5 to 90 deg elevational search capability with the additional capability of pointing the search mirror at a navigational star in a direction different from that of an imaging camera. Thus, the imaging camera, can be pointed at the sea horizon that is least obscured by haze and/or sea clutter, thereby allowing altitude readings under adverse conditions. Write: **PAT-APPL-6-277 376**, NAVY.

Long Line Hydrophone/313

Hydrophone à longue ligne/313

Filed June 24, 1981, by the Department of the Navy. This application discloses a longline hydrophone wound with a pair of bifilar ribbons that are connected to a constant current high frequency source. Write: **PAT-APPL-6-278 300**, NAVY.

Ultrasonic Loading of Extrudable Plastic Bonded Explosives/313

Chargement ultrasonique des explosifs en plastic par extrusion/313

Filed July 2, 1981, by the Department of the Navy. It has been commonplace in the art of manufacturing warheads and other explosive devices to extrude plastic explosives at high pressures. When plastic bonded explosives are extruded into a steel or other metallic warhead or warhead initiator, pressures in the range of 34,450 to 68,900 kPa have been used. The invention comprises a method for extruding a plastic explosive composition such as PBXN - 301 into small channels in plastic or other low yield material. The length to diameter ratio of these channels is in the range of 100 to 1 to 500 to 1. In this range of L/D the current art is not feasible since the high pressures required for extrusion would cause cracks and fissures, in the low yield material which constitutes a severe safety hazard to the loading personnel. The new method, broadly stated involves applying a low level of pressure (6,890 to 13,780 kPa) combined with an ultrasonic vibration to aide extrusion of plastic bonded explosives into the channels. Write: **PAT-APPL-6-279 644**, NAVY.

Synthesis of Alkenols/313

Synthèse d'alcènols/313

Filed July 2, 1981, by the Department of the Navy. An object of the present invention to prepare inexpensively and quickly, unsaturated alcohols, in particular 3-buten-1-o1, from polyhydric alcohols. Another object of the present invention is to prepare unsaturated alcohols by a method involving few side reactions. And another object of the present invention is to produce unsaturated alcohols in high yields and with few impurities. A further object of the present invention is to prepare unsaturated alcohols from polyhydric alcohols in the liquid phase, thereby reducing equipment and energy costs. These and other objects are achieved by heating a polyol in the presence of a trivalent metal sulfate to a temperature from about 70°C below to about 100°C above the boiling point of the polyol. Write: **PAT-APPL-6-279 645**, NAVY.

Optical Gyroscope with Time Dependent Wavelength/313

Gyroscope optique avec longueur d'onde fonction du temps/313

Filed July 2, 1981, by the Department of the Navy. A Sagnac rotation sensing interferometer disposed on a rotating platform for use as a gyroscope comprising a wound optical fiber light path, a beam splitter for splitting a light beam into two beams directed to traverse the optical path in opposite directions, a light source circuit for generating a light beam which is switched between two wavelengths at a switching or modulation frequency substantially higher than the speed of change of the phase due to rotation, and a detector for extracting a signal from the recombined beam interference pattern at the wavelength modulation frequency, this signal being proportional to the shift caused by rotation. Write: **PAT-APPL-6-280 107**, NAVY.

A Reusable Cable Termination/313

Terminaison de câble réutilisable/313

Filed July 2, 1981, by the Department of the Navy. In oceanic water sampling for trace metals including iron there has been a wide variation in measured particulate iron concentrations which suggest the probability of contamination from suspending cables and terminations — the mechanical transition between a long cable and a suspended vehicle. The present invention provides a reusable cable termination which will not add trace contaminants to samples of the environment. A main frame has two parallel immovable grooved discs with a crossover area so that a cable can pass smoothly from one disc to the other. Transition segments, which are portions of a third immovable disc, provide a turn of controlled radius so that the cable leaves tangentially from the discs. The free end and supporting end of the cable are secured by bowspring clamps. The transition segments and discs provide capstan action to unidirectionally amplify tension on the cable. The material of the termination is of a material which has the necessary mechanical strength and corrosion resistance. Therefore, it is an object of the present invention to provide a reusable cable termination which does not contaminate samples of the environment. Write: **PAT-APPL-6-280 166**, NAVY.

Synchronously Filtered Demodulator/313

Démodulateur à filtrage synchrone/313

Filed July 13, 1981, by the Department of the Navy. A synchronously filtered synchro demodulator is driven by timing and sampling signals that are phase locked to the synchro excitation frequency of the synchro which provides the error signal to be demodulated. Write: **PAT-APPL-6-282 474**, NAVY.

A Controller for a Locked Carrier Distributed Multiplexed Telemetry System/313

Commande de système de télémesure multiplex à porteuse verrouillée/313

Filed July 15, 1981, by the Department of the Navy. The present invention provides a controller for a locked carrier distributed multiplexed telemetry system which uses on-off switching of a d.c. power supply and a pilot signal generator at a remote control unit. A pilot signal from the remote control unit is amplified and rectified. The d.c. rectifier output, occurring only during the presence of the pilot signal, is sensed by a comparator which provides rapid transition pulses to advance a counter. The counter is advanced one count for each pilot signal cycle (on-off-on) and is reset for each d.c. power supply cycle (on-off-on). The devices to be controlled are connected to the output of the counter. Therefore, it is an object of the present invention to provide a controller for a locked carrier distributed multiplexed telemetry system which is insensitive to noise. Another object of the present invention is to provide a controller which does not require additional conductors between the controller and a remote control unit. Write: **PAT-APPL-6-283 418**, NAVY.

Licensing Opportunities Through Research Corporation, U.S.

The following inventions arising from research at educational and scientific institutions are offered to Canadian industry through patent licensing arrangements with Research Corporation, the New York foundation for the advancement of science and technology. Further R&D efforts are required to bring these embryonic inventions to the marketplace. Interested manufacturers should write for additional information to: Mr. W. Stevenson Bacon, Director of Communications, Research Corporation, 405 Lexington Avenue, New York, N.Y. 10017. Please quote the title and project number and send a copy of your initial correspondence to the Canadian Consulate General, 1251 Avenue of the Americas, New York City, N.Y. 10020-1175, U.S.

Brucellosis Vaccine/313

Although undulant fever (brucellosis) is close to being eradicated in the U.S., outbreaks of the disease are possible among vaccinated cattle that have developed inadequate resistance. A new vaccine which could stimulate immunity in this relatively small group may finally wipe out the disease. Developed by Lynn F. Woodard of the University of Idaho, the new vaccine is the killed type and incorporates an adjuvant (muramyl dipeptide or MDP) to stimulate cell-mediated immunity. Brucellosis, rare today, was long a hazard to farmers and veterinarians as well as livestock. While the new vaccine has limited application, it is vital to public health.
Protect number 139 1245.

Mass Spectrometry Device/313

Mass spectrometry, a powerful tool of analytical chemistry, is difficult to apply to relatively involatile or decomposition-prone compounds—among them many of biological, medical or pharmaceutical interest. Now some of these difficult-to-analyze substances can be converted into the electrically charged vapors required for mass spectrometry. Disclosed by Marvin L. Vestal and Calvin R. Blakley of the University of Houston is an ion vapor source that uses a vacuum chamber and heated atomizing nozzle to generate a liquid-particle aerosol which is easily vaporized. In addition to its other advantages, the ion vapor source facilitates the combination of liquid chromatography and mass spectrometry as a continuous process.
Project number 069 1249.

Possibilités d'acquisition de licences par l'intermédiaire de la Research Corporation, É.-U.

Les inventions ci-après, fruits de recherches faites dans des établissements d'enseignement et de sciences, sont offertes à l'industrie canadienne par contrats de licence à passer avec la Research Corporation, fondation pour l'avancement des sciences et de la technologie de l'État de New-York. Elles devront faire l'objet de R&D supplémentaire avant de pouvoir être commercialisées. Les industriels intéressés sont priés d'écrire à: Mr. W. Stevenson Bacon, Director of Communications, Research Corporation, 405 Lexington Avenue, New York 10017. Prière de citer le titre et le numéro du projet et de 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.).

Vaccin contre la brucellose/313

Bien que l'éradication de la fièvre ondulante (brucellose) soit presque chose faite aux États-Unis, des cas risquent toujours de survenir chez le bétail vacciné qui n'a pas développé une résistance suffisante. Un nouveau vaccin qui pourrait stimuler l'immunité chez ce groupe relativement petit permettrait peut-être d'éradiquer cette maladie. Ce nouveau vaccin qui a été mis au point par Lynn F. Woodard de l'Université de l'Idaho, est du type vaccin tué et contient un adjuvant (muramyl dipeptide ou MDP) destiné à stimuler l'immunité provoquée au niveau cellulaire. La brucellose est une maladie rare de nos jours, mais elle a longtemps constitué un danger pour les fermiers et les vétérinaires ainsi que pour le bétail. Malgré son champ restreint d'application, ce nouveau vaccin est très important pour protéger la santé du grand public.
Projet n° 139 1245.

Appareil de spectrométrie de masse/313

La spectrométrie de masse est un outil puissant en chimie analytique, mais elle est difficile à appliquer aux composés peu volatils ou très instables, dont un grand nombre présente un intérêt en biologie, en médecine ou en pharmacie. Il est désormais possible de transformer ces substances rebelles à l'analyse en des vapeurs ionisées qui se prêtent à la spectrométrie de masse. Marvin L. Vestal et Calvin R. Blakley de l'Université de Houston ont mis au point un ajutage atomiseur qui produit un aérosol de particules liquides ionisées dans une chambre à vide. Entre autres avantages, l'appareil permet de combiner en un procédé continu la chromatographie en phase liquide et la spectrométrie de masse.
Projet n° 069 1249.

Test for Prostatic Cancer/313

A new test for prostatic cancer has been developed by Tsann Ming Chu, Ming Chang Wang and Lawrence Papsidero, all of the New York State Health Department's Roswell Park Memorial Institute. Basic to the test is a recently isolated antigen that appears in prostatic fluid and is specific to the prostate gland. The antigen also appears in the blood of victims of prostatic cancer, and can furnish a reliable means of diagnosis. Drs. Chu and Wang are the inventors of an earlier diagnostic procedure that rests on the detection of high levels of prostatic acid phosphatase in sera as an indication of disease.
Project numbers 278 1173 and 280 1218.

Veterinary Product "Bolus"/313

A simple, inexpensive device could make easy the task of administering growth promoters, therapeutic or additive substances to foraging cattle or sheep. The device — termed a bolus — is designed to remain the rumen for extended periods, kept in place by a sealed weight at one end. Made in the form of a small cylinder of biochemically resistant plastic, the bolus is divided into compartments by coated paper or other spacers, and releases up to 90 daily doses of growth promoters, vitamins and minerals or therapeutic agents as each spacer is digested in turn. The inventor of the device is Joseph W. Holloway of the University of Tennessee.
Project number 304 1258.

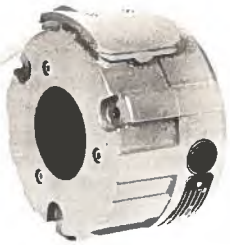
Méthode diagnostique du cancer de la prostate/313

Une nouvelle méthode permettant de diagnostiquer le cancer de la prostate a été mise au point par Tsann Ming Chu, Ming Chang Wang et Lawrence Papsidero, tous du Roswell Park Memorial Institute qui relève du New York State Health Department. Cette méthode est fondée sur la présence dans le liquide prostatique d'un antigène récemment isolé qui est spécifique à la prostate. On retrouve aussi cet antigène dans le sang des hommes atteints d'un cancer de la prostate; il peut donc constituer une méthode fiable de diagnostic. Les docteurs Chu et Wang avaient auparavant mis au point une méthode diagnostique fondée sur la présence en concentration élevée de phosphatase acide prostatique dans le sérum.
Projets n^{os} 278 1173 et 280 1218.

Pilule vétérinaire/313

Un dispositif simple et peu coûteux pourrait faciliter l'administration d'agents de croissance, de substances thérapeutiques ou de suppléments au bétail ou aux moutons en pâturage. Le dispositif est conçu pour demeurer dans le rumen pendant de longues périodes. Il est maintenu en place par la présence d'un poids scellé à l'une de ses extrémités. La pilule, de la forme d'un petit cylindre de plastique résistant aux attaques biochimiques, est divisée en compartiments par des papiers traités ou d'autres types de cloisons. Elle permet d'administrer jusqu'à 90 doses quotidiennes d'agents de croissance, de vitamines et minéraux ou d'agents thérapeutiques à mesure que les cloisons sont digérées. L'inventeur de ce dispositif est M. Joseph W. Holloway de l'Université du Tennessee.
Projet n° 304 1258.

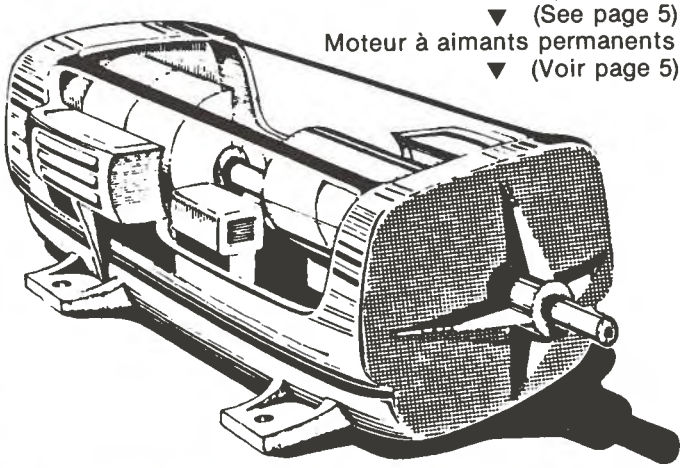
Electric Disc Brakes ▶
(See page 5)
Freins à disque électriques
(Voir page 5) ▶



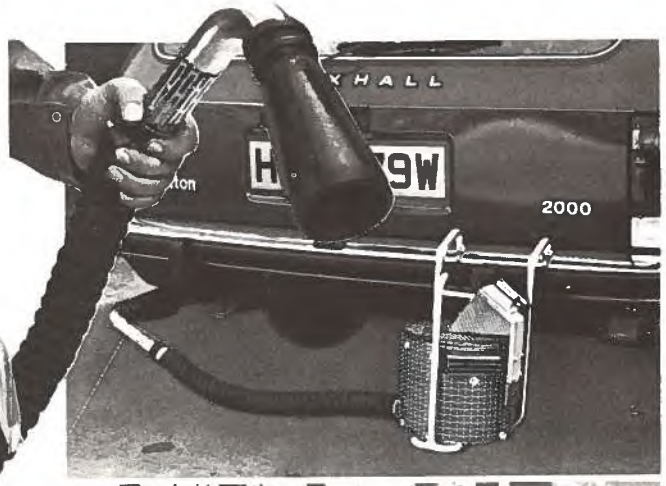
Type 73 241 10 to 16 A
with Flying Leads

Type 73 245 10 to 16 A
with integral Terminal Box

Permanent Magnet Motor
▼ (See page 5)
Moteur à aimants permanents
▼ (Voir page 5)



Polyester-Laminated Panels ▲
(See page 2)
Panneaux de polyester stratifiés ▲
(Voir page 2)



Indoor Portable Exhaust Cleaner
(See page 3) ▶
Épurateur portatif de gaz d'échappement pour
utilisation à l'intérieur
(Voir page 3) ▶

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