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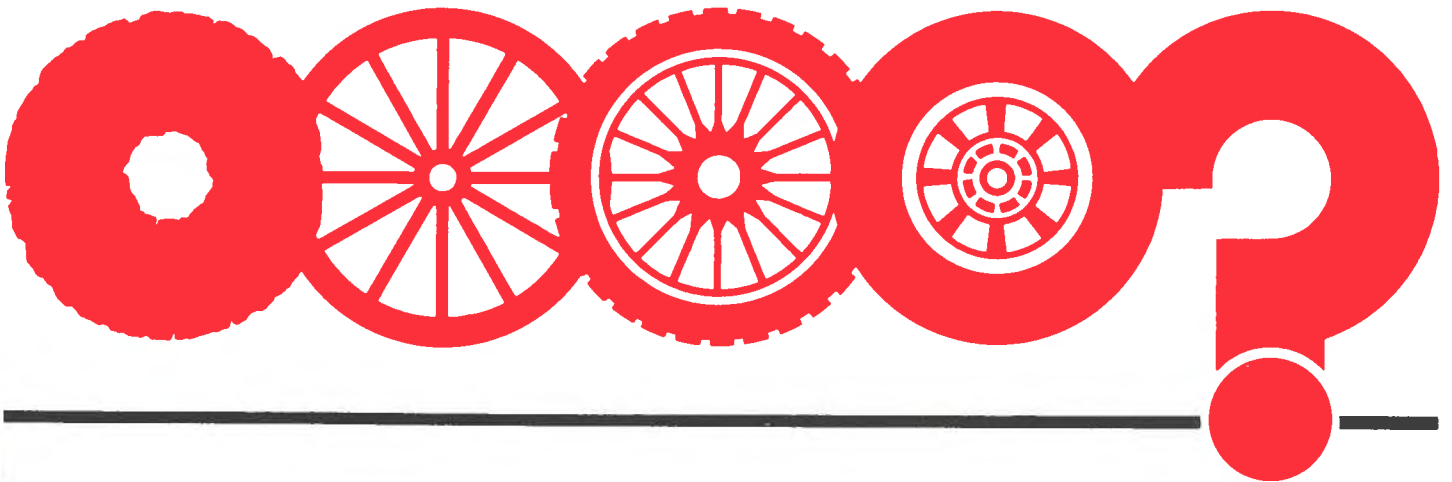
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new products bulletin

Bulletin 299, December 1980

bulletin de produits nouveaux

Bulletin 299, Décembre 1980





new products bulletin

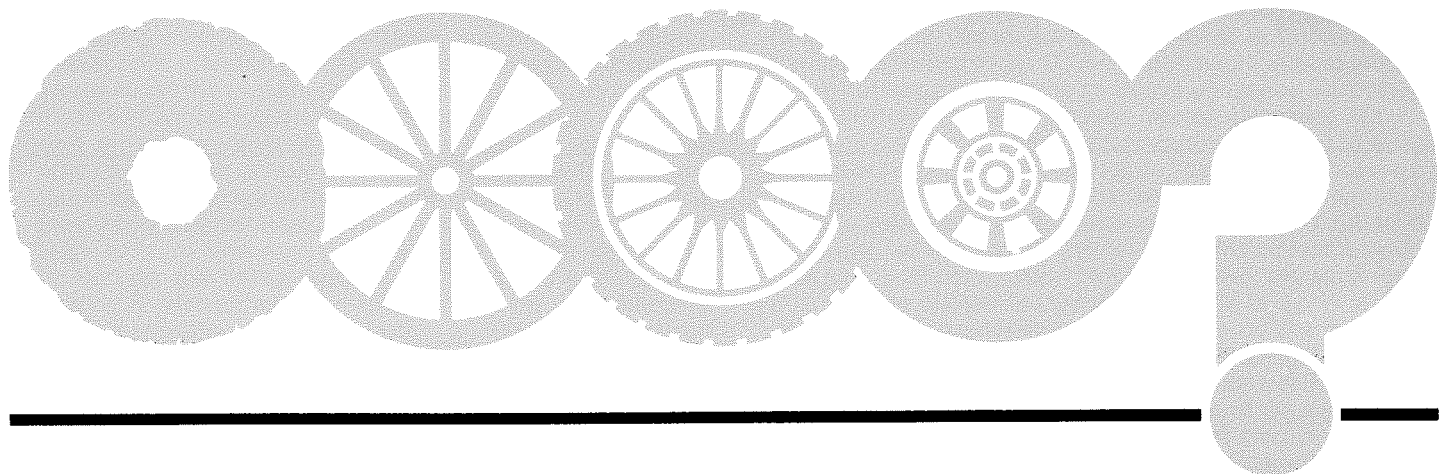
bulletin de produits nouveaux

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

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

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

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



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Selected Licensing or Joint Venture Manufacturing Opportunities

Butter Buds™/299

American manufacturer offers the Canadian manufacturing and marketing rights under a licensing arrangement or a joint venture partnership for the production of its patented natural butter flavour granules which contain less cholesterol than butter and less calories than butter or margarine. Butter Buds have a natural butter flavour that has been extracted from milk fat and spray dried. The resultant highly concentrated granules can be stored for one year without refrigeration and cost less than margarine. There are two basic products, one to which water is added for household, retail and institutional use and the other, a concentrate, for sale to food processors as an added ingredient in the foods they produce. Complimentary products could include nutrition and dietary food products. The Canadian manufacturer must have established marketing and distribution facilities as well as the funds and know-how to promote this new product nationally. The American company will supply detailed material, samples, technical know-how, Canadian patents and trademarks, and marketing support. Write: Mr. Allen C. Buhler, General Manager, Butter Buds Division, Cumberland Packing Corporation, 1636 Taylor Avenue, Racine, Wisconsin 53403 and send a copy of your initial correspondence to Canadian Consulate General, 310 South Michigan Avenue, 12th Floor, Chicago, Illinois 60604.

Guniting Method/299

Russian State licensing agency offers licensing rights to a patented in Canada method of flame spraying or guniting which improves working conditions, is faster than wet or semi-dry guniting methods and dramatically increases the service life of the converter lining. The new method rules out the need for cooling the converter to be patched. The operation begins immediately after the metal has been tapped off. The gunite deposited requires no drying or annealing operations. The flame spraying or guniting operation is effected by means of a self-propelled machine. Mounted on the machine trunk is a lance to be introduced into a horizontally disposed converter. A mixture of pulverized refractory material and fuel is injected through the lance along with a flow of oxygen. The powerful rotating flame formed brings particles of the refractory material to a plastifying temperature, and on hitting the lining, they stick to it. In this way a dense heat-resistant deposit is formed on the lining surface. By turning the lance and moving it horizontally, it becomes possible to produce a deposit of uniform thickness either all along the converter lining or at specific zones. Refractory material is fed at the rate of 1,000 kg per minute taking no more than 5 minutes to hot-patch the converter lining. The mix used is inexpensive as it is composed of waste products of the refractory industry. The flame spraying device deposits no less than 90 percent of the refractory material on the lining surface.

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

Granules Butter Buds™/299

Un fabricant américain offre les droits canadiens de fabrication et de commercialisation sous licence ou en coparticipation de granules brevetés à goût de beurre naturel, contenant moins de cholestérol que le beurre et moins de calories que le beurre ou la margarine. Le goût de beurre naturel des granules, séchés par pulvérisation, est extrait des lipides du lait. Les granules *Butter Buds* fortement concentrés ainsi obtenus peuvent être stockés pendant une année sans réfrigération et se vendent moins cher que la margarine. Il existe deux produits de base: le premier vendu au détail et auquel il faut rajouter de l'eau est pour usage domestique courant; l'autre, un produit concentré, est vendu comme additif aux entreprises de transformation des aliments. Le produit pourrait être commercialisé à titre de complément aux produits diététiques et aux aliments naturels. Le fabricant canadien doit posséder des circuits bien établis de distribution et de vente, ainsi que les fonds et l'expérience nécessaires pour lancer ce produit nouveau à l'échelle nationale. La société américaine fournira tout le matériel requis, les échantillons, l'expertise technique, les marques de commerce et le brevet canadien, et de l'aide pour la commercialisation. Écrire à M. Allen C. Buhler, General Manager, Butter Buds Division, Cumberland Packing Corporation, 1636 Taylor Avenue, Racine, Wisconsin 53403 et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, 310 South Michigan Avenue, 12th Floor, Chicago, Illinois 60604.

Méthode de gunitage/299

Une agence d'État de la Russie offre les droits d'exploitation sous licence d'une méthode, brevetée au Canada, de projection ou de gunitage à la flamme, qui améliore les conditions de travail, est plus rapide et accroît de manière spectaculaire la longévité du garnissage des convertisseurs. La nouvelle méthode met fin au besoin de refroidir le convertisseur à réparer. L'opération peut commencer dès que la coulée est terminée. La gunite déposée ne nécessite ni séchage ni recuit. La projection ou le gunitage à la flamme est effectué au moyen d'une machine automotrice. Sur le coffre de la machine se trouve une lance à introduire dans le convertisseur disposé horizontalement. Un mélange de matière réfractaire et de combustible est injecté à travers la lance, parallèlement à de l'oxygène. La puissante flamme tournante qui est formée porte les particules de matière réfractaire à la température de plastification de sorte que, au contact du garnissage, elles collent à ce dernier. Un dépôt dense, résistant à la chaleur, est ainsi formé à la surface du garnissage. En tournant la lance et en la déplaçant horizontalement, on peut produire un dépôt d'épaisseur uniforme soit le long du garnissage du convertisseur soit à des endroits précis. La matière réfractaire est injectée à raison de 1 000 kg à la minute, la réparation à chaud d'un garnissage ne prenant que cinq minutes. La préparation employée est peu coûteuse, car elle est composée de déchets de l'industrie des matières réfractaires.

Particles of the refractory material strongly adhere to magnesite, magnesite-chromite and even tardolomite linings. With the new flame guniting method, the quality of the deposited gunite is close to that of the best types of fused refractory products, which is unattainable in standard practice. Since worn lining is exposed to the effect of a high-temperature flame, its heat resistance increases, and so does service life. The use of this new method for the flame spraying of converter linings made it possible to achieve 2,500 heats between cold repairs at the West-Siberian Metallurgical Works (USSR). Write: V/O Licensintorg, 31 Ul. Kakhovka, 113461 Moscow, USSR and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 23 Starokonyushenny Pereulok, Moscow, USSR.

Screw and Driver Combination/299

Canadian inventor offers a Canadian company the manufacturing and negotiable marketing rights for his patented screw and driver combination. The screw has a normal straight sided slot for efficient application of torque and a tapered central hole which engages with a tapered pin on the driver to hold the screw on the driver. This allows one hand operation and facilitates use of machine drivers on screws which can still be worked with ordinary drivers. This is of great advantage for assembly of equipment that will be sold to areas where special drivers may not be available. The principal features are the use of the most efficient means of transmitting torque to the screw and separation of the driving and screw holding surfaces so that distortion of the driving surfaces will not affect the screw holding action. Write: Mr. James R. Johnson, 152 Maple Leaf Estates, Port Charlotte, Florida 33952 until March 31, 1981. After March 31st, write to Mr. Johnson at Hillcrest R.R. 3, Brockville, Ontario K6V 5T3 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.

Hard Spray-On Technology/299

Russian State licensing agency offers a manufacturing license for a detonation spray-on technique which provides a porosity rate of less than 1%, good adhesive properties of up to 25 kgf/mm², and superior wear characteristics. Any refractory metals, oxides, carbides and others can be sprayed on a surface using this process. The coating can be applied to improve wear resistance; in one application the operating life of stop valves was increased from 1500 cycles to over 35,000 cycles. Paper cutters made of standard carbon steel and detonation-coated have withstood 6 to 7 million cuts before re-sharpening compared to tool steel cutters which must be sharpened after less than 1 million cuts. In the process, a mixture of combustible gas and oxygen is delivered into a pipe closed at one end. Before the mixture is ignited by an electric spark, a quantity of the material to be sprayed on is blown in. The detonation wave of more than 3500°C transforms the powder

L'appareil de projection dépose au moins 90 pour cent de la matière réfractaire sur le garnissage. Les particules de matière réfractaire adhèrent fortement aux garnissages de magnésite, de magnésite et chromite et même de goudron et dolomite. La qualité de la gunite déposée selon cette nouvelle méthode est proche de celle obtenue par la fusion des meilleurs types de produits réfractaires, qualité impossible à atteindre dans la pratique. Comme le garnissage usé est exposé à une flamme à haute température, sa résistance à la chaleur augmente de même que sa longévité. L'emploi de cette méthode à l'usine sidérurgique de Sibérie occidentale (URSS) a permis d'atteindre le chiffre de 2 500 charges avant réparation à froid. Écrire à: V/O Licensintorg, 31, rue Kakhovka, 113461 Moscou (URSS) et envoyer une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 23 Starokonyushenny Pereulok, Moscou (URSS).

Vis et tournevis assortis/299

Un inventeur canadien offre à une entreprise canadienne les droits de fabrication et de mise en marché de ses vis et tournevis brevetés. La vis comporte une fente normale pour l'application efficace du mouvement de torsion, ainsi qu'un trou conique au centre de la tête; ce trou reçoit une pointe conique située à l'extrémité de la tige du tournevis, empêchant ainsi tout glissement de l'outil. Cet agencement permet de visser d'une seule main et facilite l'utilisation de tournevis mécaniques sur des vis qui peuvent toujours être vissées à l'aide d'un tournevis ordinaire. Il s'agit d'un net avantage lorsqu'il faut procéder à des assemblages sans disposer de tournevis spéciaux. Au nombre des principales caractéristiques, on note le moyen le plus efficace de transmettre le mouvement de torsion à la vis et la séparation des surfaces de contact et de rétention de la vis de manière que la déformation des surfaces de contact n'affaiblisse pas le pouvoir de rétention de la vis. Écrire à: M. James R. Johnson, 152 Maple Leaf Estates, Port Charlotte, Floride 33952 jusqu'au 31 mars, 1981. Après le 31 mars, écrire à M. Johnson, Hillcrest R.R. 3, Brockville (Ontario) K6V 5T3 et envoyer 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.

Technologie de la vaporisation/299

L'agence des brevets du gouvernement soviétique offre un brevet de fabrication pour une technique de vaporisation par détonation qui permet un taux de porosité de moins de 1%, assure une adhérence allant jusqu'à 25 kgf/mm² et une meilleure résistance à l'usure. Les métaux réfractaires, les oxydes, les carbures et d'autres matériaux peuvent être vaporisés sur une surface quelconque à l'aide de ce procédé. Le revêtement peut être appliqué pour améliorer la résistance à l'usure; une application a permis d'augmenter la durée de service de robinets d'arrêt de 1500 à plus de 35 000 cycles. Des massicots en acier ordinaire et recouverts par ce procédé à détonation ont pu effectuer 6 à 7 millions de coupe avant d'être affûtés de nouveau alors que des massicots ordinaires doivent être réaffûtés avant un million de coupes. Dans ce procédé on envoie un mélange dans un tube fermé à un bout et on y souffle le matériau de revêtement avant d'allumer le mélange par étincelle élec-

particles to a plastic state. Travelling at 1200 m/s, they hit the item and form a dense coating on it. As each cycle coats a small area, programmed operation is used. The installation is in a soundproof chamber with a strong wall protecting the remote operator, whose function is limited to monitoring. The installation is fully automatic. Write: V/O Licensintorg, 31 Ul. Kahovka, 113461 Moscow, USSR and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 23 Starokonyushenny Pereulok, Moscow, USSR.

Hair Styling Device/299

Canadian inventors offer the North American manufacturing and marketing rights to a Canadian company for a vacuum jet hair styling device under Canadian Patent 1,084,380 and U.S. patent 4,210,162. The housing forms a suction chamber which allows entry to one lock of hair at a time. An outlet in the chamber permits continuous withdrawal of air from the chamber, as well as supplying of supplementary air, which then comes into contact with the lock of hair at the entrance of the chamber. Each lock of hair is dried and styled individually, as it is drawn into the suction chamber, while the device is held in one hand. In the chamber the moisture is drawn from the lock of hair and the supplementary air, preferably heated, quickens the drying process. When in use, the supplementary air is directed against the lock of hair in the chamber and not directly against the scalp. The new styler produces a fresh natural look. It does not require the excessive manual dexterity to manipulate both a dryer and a brush. The inherent scalp and hair damage caused by the hot air and the pulling of the brush are also eliminated with the new device. (See illustration page 47) Write: M^e S. Noël, Noël and Associates, Suite 200, 95 Victoria Street, Hull, Quebec J8X 2A3 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.

Magnetic/Abrasive Process/299

Russian State licensing agency offers licensing rights in Canada for a new abrasive machining process in which abrasive particles are suspended free in a magnetic field, with no physical binder. Accordingly, controlling the intensity of the field readily obtains a degree of rigidity that will be just right for a particular process and the material to be processed. Thus, with just one machine tool and without resetting the work, the ability to switch from roughing to final machining to finished work, and to machine sheets 0.05 mm in depth and over, may be achieved. In the process, the workpiece is fully immersed in the abrasive. The processing is performed from all sides simultaneously, using rotation, oscillation or longitudinal motion and giving uniform loading and zero deflection. Allowances of 0.02 to 0.5 mm can be removed by the magnetic-abrasive process, while maintaining the work shape preset at the preliminary stage throughout the operation. Also, surface waviness is generally reduced from 8 to 10 times. Surface roughness obtained by grinding and polishing ranges from 0.32 to 0.16 and from 0.08 to 0.04 μ , respectively. Since shavings freely fall between the abrasive grains the operation is always performed with clean tools. Hence, a higher

trique. L'onde de choc à 3500°C transforme les particules de poudre à l'état plastique et frappe la pièce à 1200 m/s, le recouvrant d'une couche épaisse. Comme chaque cycle recouvre une petite surface il faut utiliser un programme. L'installation se fait dans une pièce anéchoïde où un mur solide protège l'opérateur qui se contente de surveiller. L'installation est entièrement automatique. Écrire à V/O Licensintorg, 31, rue Kakhovka, 113461 Moscou (URSS) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 23 Starokonyushenny Pereulok, Moscou (URSS).

Appareil de coiffure/299

Des inventeurs canadiens offrent à une société canadienne les droits de fabrication et de commercialisation pour l'Amérique du Nord d'un appareil de coiffure aspirant breveté au Canada (n° 1 084 380) et aux États-Unis (n° 4 210 162). Le boîtier de l'appareil forme une chambre d'aspiration qui ne happe qu'une mèche de cheveux à la fois. Un orifice de sortie permet l'extraction continue de l'air de la chambre et l'apport d'air nouveau qui souffle sur la mèche de cheveux à l'entrée de la chambre. Chaque mèche de cheveux est donc séchée et coiffée séparément lors de son aspiration dans la chambre, toute l'opération se faisant par ailleurs d'une seule main. Dans la chambre, l'humidité est enlevée des cheveux par aspiration et l'air nouveau, de préférence chauffé, accélère le séchage. Cet air nouveau est dirigé sur la mèche de cheveux aspirée dans la chambre et non sur le cuir chevelu. Le nouvel appareil permet d'obtenir des coiffures d'apparence naturelle. Il est plus facile à manier qu'un séchoir ordinaire et une brosse, et prévient les dommages au cuir chevelu et aux cheveux associés à l'emploi d'un jet d'air chaud et d'une brosse. (Voir l'illustration page 47.) Écrire à: M^e S. Noël, Noël et Associés, Suite 200, 95, rue Victoria, Hull (Québec) J8X 2A3 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.

Procédé magnétique/abrasif/299

L'agence de brevets soviétique offre pour le Canada des droits d'utilisation sous licence d'un nouveau procédé d'usinage par abrasif dans lequel les particules abrasives sont en suspension dans un champs magnétique sans liant. Le contrôle de l'intensité magnétique permet de régler le degré de rigidité en fonction du matériel à traiter. On peut ainsi, à l'aide d'une seule machine-outil, et sans déplacer la pièce, passer du travail grossier au travail de finition et traiter des tôles de 0.05 mm d'épaisseur des deux côtés. Dans ce procédé, la pièce à traiter est entièrement immergée dans l'abrasif. Le traitement se fait de tous les côtés simultanément à l'aide d'un mouvement de rotation, d'oscillation ou de déplacement longitudinal, avec une charge uniforme et une déflexion nulle. Le procédé permet d'enlever les aspérités de 0.02 à 0.5 mm tout en maintenant la forme de l'ébauche prescrite à l'étape préliminaire tout au cours de l'opération. De plus, l'ondulation de la surface est généralement réduite de huit à dix fois. La rugosité de la surface obtenue par le meulage et le polissage passe de 0.32 à 0.16 et de 0.08 à 0.04 μ . Comme les copeaux tombent librement entre les grains abrasifs, l'opération se fait toujours avec des outils propres. On a donc

efficiency of machine tools plus the ability to grind copper, aluminium and other soft materials is achieved. Write: V/O Licensintorg, 31 Ul. Kahovka, 113461 Moscow, USSR and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 23 Starokonyushenny Pereulok, Moscow, USSR.

Damage Tolerant Structures/299

British National Research Development corporation offers the manufacturing and marketing rights to a number of inventions related to the design of structures which are tolerant to damage by both impact and fatigue loads. Called duplex energy absorbers, these are a simple form of mechanical friction damper capable of large extensions at controlled loads. They absorb energy through friction between two components as they slide over each other but they differ from conventional frictional energy absorbers in that they embody a simple feedback mechanism which regulates the pullout load during extension. These absorbers consist of corrugated spring steel strips of helical wire core duplex, duplex single plane wire core, flat strip duplex core or dupile tube and core, held in frictional contact with the inside surfaces of a parallel-sided slot. During operation, a tensile load is applied to one end of the corrugated strip, which is then pulled through the slot, absorbing energy by frictional losses. The load applied to the convoluted strip tends to straighten it, thus reducing the frictional effect and it is this simple feedback mechanism which prevents the device from jamming as well as providing consistent deformation loads. Using these devices it has been shown to be technically feasible to suppress completely the growth of fatigue cracks in metal structures when operating at typical design strain values (0.1%–0.2%). This is achieved without the loss of structural efficiency through the use of a new type of reinforcing member. The devices may be used in seat belts, seat anchorages, collapsing steering columns and wheels, reinforced doors, bumpers, motorway crash barriers, lightweight armour plating, containment rings for aircraft engines, aircraft panels, ships, pressure vessels, civil engineering structures, cranes, mines and domestic lift cables, mooring, towing and rigging cables; and for clamping together two components without exceeding a predetermined maximum force, bolts incorporating duplex or dupile devices, could be used. Patents and confidential comments by the inventor will be provided in response to detailed enquiries. (See illustrations page 47.) Write: Dr. R.N. Barraclough, Industrial Chemistry Group, National Research Development Corporation, P.O. Box 236, Kingsgate House, 66/74 Victoria Street, London SW1E 6SL, England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

Blast-Furnace Slag Granulation Plant/299

Russian State licensing agency offers manufacturing licenses for new equipment for granulating 98 percent of

une plus grande efficacité des machines-outils et la possibilité de meuler du cuivre, de l'aluminium et d'autres matériaux mous. Écrire à V/O Licensintorg, 31, rue Kakhovka, 113461 Moscou (URSS) et envoyer une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 23 Starokonyushenny Pereulok, Moscou (URSS).

Protection des structures susceptibles de dommages/299

La British National Research Development Corporation offre les droits de fabrication et de commercialisation d'un certain nombre d'inventions touchant la conception de dispositifs de protection des structures susceptibles d'être endommagées par choc et par fatigue. Appelés amortisseurs dynamiques duplex, les dispositifs sont de simples amortisseurs mécaniques à frottement caractérisés par un fort pouvoir d'allongement sous des charges prévisibles. Ils absorbent l'énergie par frottement entre deux éléments en glissant l'un sur l'autre, mais diffèrent cependant des amortisseurs à frottement classiques car ils comportent un mécanisme de réaction simple qui ajuste la charge d'extraction lors de l'allongement. Ces amortisseurs se composent de noyaux duplex en fils d'acier à ressort ondulés de forme hélicoïdale, de noyaux duplex en fil de forme sinusoïdale, de noyaux duplex en bandes, ou de tubes et noyaux "dupile", maintenus en frottement par les parois internes d'un étranglement parallèle. En pratique, une tension est appliquée à l'une des extrémités de la bande ondulée qui est alors tirée à travers l'étranglement, absorbant ainsi l'énergie sur des pertes par frottement. La charge appliquée à la bande ondulée tend à la redresser, réduisant ainsi l'effet de frottement; ce simple mécanisme de réaction empêche le coinçage du dispositif et assure des efforts de déformation uniformes. C'est ainsi qu'il a été démontré qu'il est techniquement possible de supprimer entièrement les criques dues à la fatigue dans les assemblages métalliques lorsque ce dispositif est soumis à des efforts calculés typiques (0.1%–0.2%). On y parvient sans perte d'efficacité de la structure grâce à un nouveau genre de pièce de renfort. Les amortisseurs peuvent être utilisés dans les ceintures de sécurité, les ancrages de sièges, les colonnes de direction et les volants à absorption d'énergie, les portes renforcées, les pare-chocs, les glissières de sécurité, les blindages légers, les bâtis de moteurs et les tableaux de bord d'avions, les navires, les chaudières, le génie civil, les grues, les câbles miniers, les câbles d'amarrage, de touage et d'arrimage; pour l'assemblage de deux pièces sans dépasser une force maximale préétablie, on peut utiliser des boulons comportant un dispositif duplex ou "dupile". L'inventeur fournira les brevets et divers renseignements sur demandes précises. (Voir les illustrations page 47.) Écrire à: Dr R.N. Barraclough, Industrial Chemistry Group, National Research Development Corporation, P.O. Box 236, Kingsgate House, 66/74 Victoria Street, London SW1E 6SL, Angleterre et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Haut Commissariat du Canada, One Grosvenor Square, London W1X 0AB, Angleterre.

Usine de granulation du laitier de haut-fourneau/299

Une agence d'État de la Russie offre des licences de fabrication au sujet d'un nouvel équipement destiné à granuler

blast-furnace slag into very small particles of 0.2 to 1.0 mm in size with a resultant 11 percent increase in throughput and 13 percent lower input of power of mills at cement plants. The granulator is equipped with two water-supply nozzles, a closed loop system and no pump except the one supplying water to the slag poured into the granulator. Consequently, start and control equipment and a water cooling system are no longer required. A flow of air under the pressure of approximately 3 kgf/cm² is fed to the air lift system from a plant source and if the air lift pipe drops below the permissible level, a blast system can be used as an emergency source. All systems are designed to permit evolving gases and fumes to be vented through a smoke stack of a height prescribed by standards. Alkalized water is supplied to the granulator nozzles to promote effective binding of sulphur and its decrease in the flue gases by 90 percent. Capital and operating costs are cut by 15 to 30 percent, yield increase is 20 to 30 percent and two to three times fewer workers are needed. Write: V/O Licensintorg, 31 Ul. Kahovka, 113461 Moscow, USSR and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 23 Starokonyushenny Pereulok, Moscow, USSR.

Boiler/299

Danish inventor offers a Canadian manufacturing and North American marketing license for its commercially proven Cottage-Unit gas/oil fired boiler which provides domestic heat and hot water. The boiler is said to purify gases before they enter the flue. It can be connected to solar and buried heat pipe systems. The boiler is described as having vertical bottom firing, ceramic liner, symmetrical construction, ash collector, sloped heating surfaces, exploitation of the natural dynamic forces on water and gas side, unstayed construction, uniform temperatures in material, four peepholes to combustion chamber, flue outlet as for gas fired boiler; is easy to fabricate in readily available material, easy to install with Bacharac soot index approaching zero, noise criteria below 35, radiation from boiler 90 Watt, efficiency of heat exchange 94%, CO₂ 13%, rated output 20-30 kW. Dimensions are 167.5 cm x 59.4 cm weight 218.25 kg, domestic hot water capacity 100 UKG/h., temperature 60°C-50°C. The burner is below the boiler where the incoming air keeps electrical parts below 50°C and has an ash collector for one year consumption. The assistance offered consists of delivery of workshop drawings, technical descriptions and training of technical and manufacturing staff according to the model form of patent licence agreement of ORGALIME. (See illustration page 47.) Write: Mr. Ernst Hecht Mathiasen, Gersonsvej 83, 2900 Hellerup, Denmark and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Kr. Bernikowsgade 1, 1105 Copenhagen K, Denmark.

98 pour cent du laitier de haut-fourneau en particules très petites de 0,2 mm à 1 mm de diamètre, d'où une augmentation du rendement de 11 pour cent et une réduction de 13 pour cent de la consommation d'énergie des broyeurs des cimenteries. Le granulateur est équipé de deux arrivées d'eau et d'un système en circuit fermé, mais n'a aucune pompe sauf celle qui apporte l'eau au laitier versé dans le granulateur. Aucun appareillage de démarrage et de commande n'est donc nécessaire ni de circuit de refroidissement de l'eau. Un extracteur pneumatique est alimenté par une source d'air comprimé propre à l'usine sous une pression d'environ 3 kgf/cm², et si la pression dans la tubulure d'extraction tombe au-dessous du minimum admissible, on peut recourir à un système de soufflage comme source de secours. Toute l'installation est conçue de façon à permettre aux émanations de gaz et de vapeurs de s'échapper par une cheminée d'une hauteur prescrite par des normes. L'eau injectée dans le granulateur est alcalinisée pour favoriser la rétention du soufre, ce qui réduit de 90 pour cent la teneur en soufre des gaz de combustion. Les dépenses en immobilisation et les frais d'exploitation sont réduits de 15 à 30 pour cent, le rendement est accru de 20 à 30 pour cent, et il faut deux ou trois fois moins d'ouvriers. Écrire à: V/O Licensintorg, 31, rue Kakhovka, 113461 Moscou (URSS) et envoyer une copie de votre correspondance initiale à: Ambassade du Canada, Division commerciale, 23, Starokonyushenny Pereulok, Moscou (URSS).

Chaudière/299

Un inventeur danois propose une licence pour la fabrication et la mise en marché au Canada et en Amérique du Nord d'une chaudière alimentée au gaz ou au pétrole pour les chalets qui assure le chauffage et fournit l'eau chaude. La chaudière purifie les gaz avant qu'ils pénètrent dans la cheminée. Elle peut être branchée à un réseau de tuyaux de chauffage solaire enterrés. La chaudière a un brûleur en bas, une garniture intérieure en céramique, elle est de construction symétrique, elle a un cendrier, des surfaces de chauffage inclinées, elle permet l'utilisation des forces dynamiques naturelles pour l'eau et le gaz. Elle assure une température uniforme dans le matériau, elle a quatre trous de regard dans la chambre à combustion, une sortie d'évacuation comme pour les chaudières au gaz; elle est facile à fabriquer et constituée de matériau facilement disponibles. Elle est facile à installer et à un indice de suie Bacharac proche de zéro, l'indice de bruit est inférieur à 35, la radiation de la chaudière est de 90 watts, le rendement calorifique est de 94%, CO₂ 13%, la sortie est de 20-30 kW. Les dimensions sont: 167.5 cm x 59.4 cm; le poids: 218.25 kg; la capacité d'eau chaude: 100 UKG/h., la température 60° à 50°C. Le brûleur se trouve sous la chaudière où l'air d'entrée garde les pièces électriques au-dessous de 50°C. Le cendrier peut accumuler les cendres pour toute une année. L'aide consiste à fournir les dessins, les instructions techniques et la formation du personnel technique et de fabrication conformément à l'accord type des licences ORGALIME. (Voir l'illustration page 47.) Écrire à M. Ernst Hecht Mathiasen, Gersonsvej 83, 2900 Hellerup, Danemark et envoyer une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, Kr. Bernikowsgade 1, 1105 Copenhagen K, Danemark.

Forming Tooling/299

Russian State licensing agency offers a manufacturing license to a Canadian company for a forming process for sheet metal shapes that are claimed to be simple and inexpensive to prepare, and equipment that is easy to operate. With electrohydraulic, electromagnetic and hydroimpact stamping, a high deformation rate is achieved by pulsing energy. For example, electrohydraulic stamping is performed by a shock wave produced by an electric discharge through water. The pulsed force forms sheet metal to the shape of a die. Steel dies are used in applications requiring pulses over 8 kJ. For less energy and only 30 or so items, the die may be of wood or epoxy. It is claimed that manufacturing costs can be cut by 80% to 90% compared against conventional tooling. The process is patented worldwide. Write: V/O Licensintorg, 31 Ul. Kakhovka, 113461 Moscow, USSR and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 23 Starokonyushenny Pereulok, Moscow, USSR.

Humorous and Graphic Designs/299

American greeting card and poster manufacturer offers to license its designs for a unique line of humorous and graphic seasonal and every day greeting cards to Canadian companies mainly for use on stationery gift products, tee shirts and toys. Licensing arrangements will include 5% royalty on the invoiced order of all cards sold; a \$100.00 U.S. royalty advance for each design it licenses; company's copyright mark on each card; quarterly reports. Duplicate separations will be furnished by U.S. firm for a nominal fee. Write: Ms. Jacqueline A. Cuda, International Marketing Director, Kersten Brothers Company, Inc., 7735 East Redfield Road, Scottsdale, Arizona 85254 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014.

Sportswear/299

American company in business for 150 years offers manufacturing and marketing licenses for various lines of active quality sportswear, woolen shirts, jackets, coats, overcoats and pants; cotton and cotton blend shirts, pants, shorts, jeans; down-filled parkas, jackets and pants; synthetic-filled parkas, jackets and pants; woolen knickers and a complete cross-country line of ski clothing; complete downhill ski line of clothing; clothing for backpacking and canoeing. Technical know-how in manufacturing, patterns, markers, U.S. supplies now being used and woolen fabric from the Woolrich Woolen Mill will be supplied. Distribution may also be arranged through new Canadian agent for the American firm. Write: Mr. Richard J. Holcombe, Woolrich, Inc., Woolrich, Pennsylvania 17779 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102.

Procédé de façonnage de la tôle/299

L'agence des brevets du gouvernement soviétique offre un brevet de fabrication à une compagnie canadienne pour un procédé de façonnage de la tôle qui est censé être simple, peu coûteux à préparer et facile à exploiter. On obtient une grande vitesse d'emboutissage par impulsions dynamiques électrohydrauliques, électromagnétiques et par hydroimpacts. Par exemple, l'emboutissage électrohydraulique se fait par onde de choc produite par une décharge électrique dans l'eau. L'impulsion dynamique façonne la tôle selon la forme de l'étampe. Les étampes d'acier sont utilisées dans des applications nécessitant une énergie d'impact de plus de 8 kJ. Pour des énergies inférieures ou pour faire 30 pièces au plus, on peut utiliser des étampes en bois ou en epoxy. On estime que le coût de fabrication peut être réduit de 80 à 90% par rapport aux machines traditionnelles. Le procédé est breveté dans le monde entier. Écrire à V/O Licensintorg, 31, rue Kakhovka, 113461 Moscou (URSS) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 23 Starokonyushenny Pereulok, Moscou (URSS).

Conceptions graphiques humoristiques et artistiques/299

Un fabricant américain d'affiches et de cartes de voeux offre aux sociétés canadiennes l'exploitation sous licence de conceptions graphiques originales à effet humoristique et artistique pour produits de papeterie, pull-overs et jouets. L'entente d'exploitation devra prévoir le versement de droits de 5% sur les ventes de cartes, le versement d'une avance sur les droits de US \$100 pour chaque conception graphique, la reproduction de la marque de droits d'auteur de la société américaine et l'envoi à cette dernière de rapports trimestriels. Des contretypes de sélection séparés seront fournis par la société américaine à un prix symbolique. Écrire à: Ms. Jacqueline A. Cuda, International Marketing Director, Kersten Brothers Company, Inc., 7735 East Redfield Road, Scottsdale, Arizona 85254 et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, 510 West Sixth Street, Los Angeles, Californie 90014.

Vêtements de sport/299

Une compagnie américaine connue depuis 150 ans offre des licences de fabrication et de commercialisation de divers genres de vêtements de sport, chemises, vestes, manteaux, paletots et pantalons de laine; chemises, pantalons, shorts et jeans de coton et de mélange de coton; anoraks, vestes et pantalons doublés de duvet; anoraks, vestes et pantalons doublés de matières synthétiques; pantalons de golf en laine et assortiment complet de vêtements pour ski de fond; assortiment complet de vêtements de ski alpin; vêtements de randonnée et de canotage. La compagnie Woolrich Woolen fournira le savoir-faire technique en ce qui a trait à la fabrication, aux modèles, aux marqueurs, aux produits américains actuellement utilisés et aux lainages produits par cette entreprise. La distribution peut également être assurée par le nouvel agent canadien. Écrire à: M. Richard J. Holcombe, Woolrich, Inc., Woolrich, Pennsylvanie 17779 et envoyer une copie de votre correspondance initiale au Consulat canadien,

Continuous Chemical Nickel Plating/299

Russian State Licensing organization offers licensing rights to technology covering a chemical nickel-plating solution which permits the same amount of solution to remain useable for 30 hours, recovering up to 40g of nickel from every litre of solution. It can be recycled and uses 50 percent less space than previous installations. The essence of the invention is that the bath holds two layers of solution heated to different temperatures: $90 \pm 2^\circ\text{C}$ and 60°C for the top and bottom layers, respectively. The nickel plating occurs in the top zone, with solid particles settling at the bath bottom. The process eliminates the need for pumps, filters, heat exchangers and feed tanks standard in the conventional operation. Basic installation specifications are: Maximum overall dimensions of work, mm — 600x350x250; throughput at 15-18 a nickel layer, m^2/hr — 1; effective bath capacity, litre — 100; steam requirement (at $+120^\circ\text{C}$), kg/hr — 14; installation overall dimensions, mm + 990x1.010x1.510; weight, kg — 300. Write: V/O Licensintorg, 31 Ul. Kahovka, 113461 Moscow, USSR and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 23 Starokonyushenny Pereulok, Moscow, USSR.

Self Storing Outdoor Grill/299

American inventor offers manufacturing and marketing rights under his Canadian Patent No. 1,061,209 for a self storing outdoor cooking device, designed for cooking over campfires or charcoal. The complete unit (including grill) stores in one leg of a tripod. It can be assembled and disassembled without nuts, bolts, screws or adjustments in a few minutes. The grill can be raised or lowered for desired temperature, turned to prevent "hot spots" and removed to serve or add food. When disassembled it is the easiest grill on the market to clean. The model being built now is 5 cm in diameter and 150 cm long when stored. When assembled it has a 1980 cm^2 grill area. To get maximum sales, several sizes and styles could be marketed with success and within the scope of the patent. (See illustration page 47.) Write: Mr. Robert A. Boda, 6627 Hideaway Road, Ooltewah, Tennessee 37363 and send a copy of your initial correspondence to Canadian Consulate General, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303.

Nickelage chimique en continu/299

L'organisme soviétique responsable de l'octroi de brevets offre les droits d'exploitation sous licence d'un nouveau procédé de nickelage comportant une solution dont la durée utile est de 30 heures et de laquelle 40 grammes de nickel par litre de solution sont récupérables. De plus, la solution peut être régénérée et l'encombrement du matériel nécessaire est de 50 pour cent inférieur à celui du matériel classique habituellement employé à cette fin. Voici le principe sur lequel repose ce nouveau procédé: le bain d'électrolyse contient une solution séparée en deux couches de température différente, soit $90 \pm 2^\circ\text{C}$ et 60°C pour les couches supérieure et inférieure respectivement. Le nickelage est réalisé dans la couche supérieure et les particules solides qui sont alors produites se déposent dans l'autre couche. Le procédé n'exige aucunement l'utilisation de pompes, de filtres, d'échangeurs de chaleur et de réservoirs pour les solutions de nickel, qui sont des éléments normalement requis dans les procédés classiques. Voici les caractéristiques techniques essentielles du matériel: encombrement, 600 x 350 x 250 mm; taux surfacique de nickelage, 15-18 m^2/h ; capacité efficace du bain, 100 L; quantité de vapeur nécessaire (à $+120^\circ\text{C}$), 14 kg/h; encombrement après installation, 990 x 1 010 x 1 510 mm; masse, 300 kg. Ecrire à: V/O Licensintorg, 31, rue Kakhovka, 113461 Moscou (URSS) et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 23 Starokonyushenny Pereulok, Moscou (URSS).

Gril d'extérieur repliable/299

Un inventeur américain offre les droits de fabrication et de commercialisation (brevet canadien n° 1 061 209) d'un gril d'extérieur repliable pour feux de bois ou de charbon de bois. Tout l'appareil, incluant la grille, tient dans un des pieds du trépied. Son montage et son démontage se font en quelques minutes, sans boulon, vis ou écrou. La surface de grillage est réglable en hauteur, ce qui permet d'obtenir la température de cuisson voulue et de prévenir une cuisson localisée trop rapide; on peut aussi l'enlever facilement pour la nettoyer et prendre les aliments cuits. Une fois démonté, c'est le gril le plus facile à nettoyer sur le marché. Le modèle actuel est, replié, d'un diamètre de 5 cm et d'une longueur de 150 cm. Monté, sa surface de grillage est d'une aire de 1980 cm^2 . Pour en accroître les ventes, on pourrait avec succès mettre en marché des modèles de tailles et de types différents, ce que permet le brevet. (Voir l'illustration page 47.) Écrire à: Mr. Robert A. Boda, 6627 Hideaway Road, Ooltewah, Tennessee 37363 et faire parvenir une copie de votre correspondance initiale au Consulat général du Canada, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303.

Canadian Patents Available for Licensing or Sale Issued October 1980

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

Note:

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

Note:

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

Patent 1,086,503

Brevet 1,086,503

Process for the Production of Ferromolybdenum in an Electric Arc Furnace/299

Méthode de production de ferromolybdène dans un four à arc électrique/299

The invention is directed to a process which consistently produces a ferromolybdenum alloy useful as a furnace additive with a molybdenum content of at least 50% by weight and a carbon content of not more than 0.1% by weight with a high recovery of molybdenum. In the process which is carried out in an electric arc furnace, a charge of molybdenum oxide concentrate, lime and a carbonaceous reducing agent such as coke is fed to a bath containing iron suitably covered by a layer of slag. The coke is fed in an amount sufficient to reduce the molybdenum oxide which itself is added in an amount to provide the required

property of molybdenum in the alloy. Molybdenum in the slag is stripped with a carbonaceous material such as coke in order to enhance the overall recovery of molybdenum in the process. The process itself can be carried out either on a batch or continuous basis. Write: Placer Development Limited, 700-1030 West Georgia Street, Vancouver, British Columbia V6E 3N9 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Patent 1,086,510

Brevet 1,086,510

Chain Saddle Assembly/299

Selle de support pour chaîne/299

A chain saddle assembly is disclosed which permits a chain used as a sling to be supported at any point between its opposite ends. The supported link is placed in a groove so that the link is lying sideways with one leg of the link above the other. Ledges are provided which engage the two links of the chain adjacent to the link which is being supported. The assembly thus prevents possible slippage of the

chain through the assembly while providing proper support without imposing undue stress concentrations on the supported link or the links adjacent to it. Write: I & I Sling Company Inc., Route 452 and 1-95, Aston, Pennsylvania 19014, U.S.A. and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Patent 1,086,557

Brevet 1,086,557

Pepper Relish and Vegetable Cocktail Juice/299

Achard de poivrons et coquetel de jus de légumes/299

Pepper relish comprises a dozen ground large green sweet bell peppers, a dozen ground large red sweet bell peppers and a half-dozen ground large bermuda onions. Three cups of white granulated sugar, two teaspoons of table salt and two and one-half tablespoons of mustard seed are included. One quart of apple cider vinegar of 5% acid strength is added to the foregoing. Vegetable cocktail juice comprises approximately eight cups of juice of a dozen ground large green sweet bell peppers, a dozen ground large red sweet bell peppers and a half-dozen large ber-

muda onions and water. Eight cups of tomato juice, one teaspoon of Worcestershire sauce and one teaspoon of hot sauce are included. The strained puree of eight raw carrots and eight sticks of celery are added. Two teaspoons of table salt and one-half teaspoon of ground black pepper are included in a blend of all the ingredients. Write: Robert B. Hutchinson, 710 Country Road, P.O. Box 938, Pocasset, Massachusetts 02559, U.S.A. and send a copy of your initial correspondence to Canadian Consulate General, 500 Boylston Street, Boston, Massachusetts 02116, U.S.A.

Patent 1,086,582**Truck Mounted Cattle Control Box/299**

A cattle control box is mounted upon a small two wheeled trailer that can be towed by a tractor, truck or the like. The box is pivotally secured or mounted upon the axle and a hand operated fluid operator extends between the front of the trailer and one side of the box so that the box can be placed in a vertical position with the base on the ground whereupon an animal can be placed in or removed from the box, and the box can then be rotated upon the axle through approximately 90° so that it is lying on its side with the animal held firmly in the box for treatment. The upper side

Brevet 1,086,582**Compartiment pour le traitement des animaux, monté sur camion/299**

of the box, when in the last mentioned position, includes an upper and lower gate for access to the animal. A head squeeze gate is provided at one end to hold the animal and also to release it after treatment and belts or the like are provided within the box to raise and hold the animal within the box. Write: Martin Wedman, New Fish Creek, Alberta T0H 2S0 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Patent 1,086,674**Remote Shut-Off Means for Grain Augers/299**

In this invention a flexible wand is secured adjacent the lower or intake end of the auger tube with a switch secured to the upper end of the wand. The switch is connected to the source of power for the auger and can be used by operator to switch off the auger from within an enclosure if he or his clothing becomes engaged with the intake of the

Brevet 1,086,674**Dispositif d'arrêt à distance pour élévateurs à vis/299**

auger. Alternatively, a spring loaded switch can be utilized also adjacent the intake end of the auger. Write: Terry Betker, P.O. Box 295, Souris, Manitoba R0K 2C0 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Brevet 1,086,846**Obturbateur électro-optique ultrarapide/299**

Obturbateur électro-optique ultrarapide comprenant un cristal électro-optique recevant un faisceau incident et pouvant le transmettre sous l'influence d'un champ électrique une électrode étant disposée sur l'une de ses faces, un premier joint de silicium étant intercalé sur cette électrode et la divisant en deux parties, le champ électrique étant créé par une tension appliquée entre l'une des parties de

Patent 1,086,846**High-Speed Electro-Optical Shutter/299**

l'électrode et la face du cristal opposée à celle comportant l'électrode. L'invention est mise en oeuvre dans la technique du laser. Écrire: Compagnie Générale d'Électricité, 54, rue La Boétie, 75382 Paris, Cédex 08, France et faire parvenir une copie de votre correspondance initiale à la Division Commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Patent 1,086,902**Vented Helmet and Face Shield/299**

A face shield affixed to a safety helmet has a plurality of air vents formed therein in mutually spaced relation. Each of the air vents has a movable closing member and is selectively openable and closable via the closing member. Each of the air vents includes a slot, a raised cover over the slot spaced from the corresponding one of the helmet and face plate to form an opening, a pair of spaced parallel grooves formed in the cover on opposite sides of the opening and extending along the length of the opening and a closing

Brevet 1,086,902**Casque avec visière munie d'ouvertures d'aération/299**

member movably mounted in the grooves. The closing member selectively opens and closes the opening to a desired extent when it is inserted in the grooves and provides air circulation in the helmet during hot weather to cool the helmet. Write: John Adams, Sr., 2778 N., 19th Street, Milwaukee, Wisconsin 53206, U.S.A. and send a copy of your initial correspondence to Canadian Consulate General, 310 South Michigan Avenue, 12th Floor, Chicago, Illinois 60604, U.S.A.

Brevet 1,087,007**Connecteur pour liaison à fibre optique/299**

L'invention concerne un dispositif de positionnement de fibre. Dans un connecteur pour fibre optique, la fibre est

Patent 1,087,007**Connector for Optic Fibre Linking/299**

logée dans le canal formé entre trois tiges cylindriques serrées les unes contre les autres, et un système élastique,

constitué par exemple de bagues faites d'un élastomère et entourant les tiges, fait saillié dans ce canal pour assurer un positionnement correct des fibres dont le diamètre est trop petit pour qu'elles touchent les trois tiges à la fois. Écrire: Compagnie Générale d'Électricité, 54, rue La

Boétie, 75382 Paris, Cédex 08, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Brevet 1,087,008

Patent 1,087,008

Procédé et dispositif de raccordement de fibres optiques/299

Process and Device for Connecting Optic Fibres/299

Procédé et dispositif de raccordement permettant de réaliser des jonctions de fibres optiques par connecteur ou épissure à faible atténuation. Le dispositif comprend deux éléments identiques qui viennent s'emboîter pour réaliser la jonction. Il existe une variante avec un support de gui-

dage commun à toutes les jonctions. Écrire: 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.

Patent 1,087,015

Brevet 1,087,015

Rotary Row Crop Cultivator Carried or Drawn by Tractor and Precision Controlled or Not by Operator/299

Cultivateur rotatif pour cultures en rangées, porté ou tiré par un tracteur/299

The invention provides a weeding machine for weeding in the spaces between rows of crops planted in a field, comprising a plurality of weeding units mounted side-by-side in a spaced apart relationship on a rigid support, each weeding unit comprising cutters rotatable about vertical axes for cutting weeds below the surface of the soil and screened on each side thereof, by a separator panel, the adjacent separator panels of adjacent weeding units defining between them channels extending in the direction of

movement of the machine whereby, in use, the machine is moved across the field with the weeding units disposed in the spaces between the rows of crops, and the crops themselves pass through said channels and are thereby protected from the cutters by the separator panels. Write: Gaston Burnel, Roncey 50.210, France; Guy Ecolasse, 24, rue Falourdel, Saint-Lo 50.000, France and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 35 avenue Montaigne, 75008 Paris, France.

Patent 1,087,056

Brevet 1,087,056

Vehicular Desk Unit/299

Bureau monté sur véhicule/299

A board-like desk member has a planar writing surface and a spaced opposite parallel planar back surface. A fastening device affixed to the back surface of the desk member removably affixes the desk member to the steering wheel of the vehicle in juxtaposition with the steering wheel and parallel to such wheel whereby a person seated behind the wheel may comfortably use the desk member as a desk. A ledge member extends across the desk member and is slid-

ably mounted thereon for movement from top to bottom thereof. A securing device releasably secures the ledge member to a desired position on the writing surface of the desk member. Write: Gerald A. Jamison, 239 Dahlia Avenue, Dorval, Quebec H9S 3N6 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Patent 1,087,130

Brevet 1,087,130

Method and Apparatus for the Recovery of Easily Evaporable Components from Hot Gases/299

Appareil pour la récupération de composés facilement évaporables à partir de gaz chauds/299

For recovery, e.g., methanol and turpentine, particularly from the expansion vapors of waste liquor such as sulphate black liquor. Buffer vapors emerging from the heat exchanger are exposed to an indirect heat exchange in one or more successive concurrent or countercurrent evaporators. The liquid to be evaporated flows downwards along the heat exchanger surfaces of the evaporator to effectively use the heat contained in the hot gases for evapora-

tion of the liquid. The easily evaporable components contained in such gases can be separated from the other condensates. The advance of the invention over prior art is in an increased economy of the recovery process. Write: A. Ahlström Osakeyhtiö, Noormarkku, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

Patent 1,087,160

Material Handling System/299

An apparatus and method for handling and transporting material comprising a helicopter having a center of gravity, a main suspending point generally under and in vertical alignment with the center of gravity, and an auxiliary suspending point under the helicopter and generally adjacent a pilot's seating position. A main winch is connected to the helicopter. A main cable is connected to the main winch with means for suspending the main cable from the helicopter below the main point. An auxiliary winch is connected to the helicopter. An auxiliary cable is connected to the auxiliary winch with means for suspending the auxiliary cable from the helicopter below the auxiliary point. A

Brevet 1,087,160

Système de manutention/299

material handling instrument is connected to the main cable and the auxiliary cable and is adapted to handle material when suspended by the auxiliary cable below the auxiliary point and to hold the material when suspended by the main cable below the main point. Write: Philip S. Jarman, R.R. 1, Mayne Island, British Columbia V0N 2J0; Gilles A. Challe, 11551 Kingfisher Drive, Vancouver, British Columbia V7E 4P8 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Patent 1,087,247

Electrostatic Charge Measurement/299

In apparatus for continuously monitoring the electrostatic charge transport rate or the charge density in a stream of insulating material flowing through a pipeline, a charge collection chamber and a volumetric flowmeter are connected into the pipeline. The chamber is electrically isolated from the pipeline and connected to earth through an electrometer. The chamber is constructed to ensure turbulent flow within the chamber, the cross-sectional area being enlarged in relation to the pipeline to produce a sub-

Brevet 1,087,247

Mesure de charge électrostatique/299

stantial reduction in linear flow rate. When calibrated for a particular material, such as a hydrocarbon fuel, a value for charge density is derived from measurements of the flow rate and of the current measured between chamber and earth. Write: National Research Development Corporation, 66-74 Victoria Street, London SW1E 6SL, England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

Patent 1,087,255

Digitally Programmable Sampled-Analog Transversal Filter/299

The filter comprises a charge transfer device delay analog-delay line with a non-destructive readout mechanism at each of the delay stages, a multiplying digital to analog conversion circuit which is multiplexed amongst the outputs from the delay stages to provide weighting of the time-shifted analog signal samples by digital techniques, and a serial summer network to sum a finite series of pulse amplitude modulated signals appearing at the output of the multiplying digital to analog conversion circuit. One particular advantage of the filter organisation is the wide output dynamic range capability, useful in a myriad of signal processing applications, e.g. match filtering, correlation, equalisation and adaptive filtering, echo cancellation, etc. The filter structure is particularly suited for spectral analysis of an analog signal. An alternate configuration of the filter structure requires the multiplying digital to

Brevet 1,087,255

Filtre transversal analogique d'échantillonnage à commande numérique/299

analog converter interacting directly with the input analog signal to produce a series of coefficient-weighted samples corresponding to each sample of the input signal. These samples can be summed progressively in a parallel-input serial-output charge transfer device analog-delay line by shifting the samples down the delay line. For an integrated circuit implementation of this concept, a design of a differential input multiplying digital to analog converter circuit and a parallel input charge transfer device delay line are important and are presented in the disclosure. Write: Dipak Roy, P.O. Box 4779, Station "E", Ottawa, Ontario K1S 5H9; Pierre Ménard, P.O. Box 629, R.R. No. 2, Embrun, Ontario K0A 1W0 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Patent 1,087,273

Low Tire Alarm/299

An alarm for indicating low pressure in a ground engaging pneumatic tire of a vehicle. The alarm is operated through the electrical system of the vehicle to warn the vehicle operator of a low pressure condition in one or more of the ground engaging vehicle tires as the vehicle moves along a

Brevet 1,087,273

Alarme de basse pression pour pneumatiques/299

roadway. A switch arrangement is mounted within a housing at a point on the vehicle closely adjacent to a ground supporting wheel. A feeler member extends downwardly from the housing to an end that is normally held above the ground level when the associated vehicle tire is

in a normally inflated condition. The feeler member is pivoted on a shaft within the housing. An integral swing arm extends from the feeler arm to a free end that mounts an electrical contact surface. An integral spring member connects the feeler and swing arm to the housing. The spring resists pivotal movement of the contact surface. An insulator mounts an electrically conductive pad to the housing. A single electrical wire leads from the pad to connect in a series circuit with a lamp and an ungrounded side of the vehicle electrical power supply. Thus, when contact is made with the road surface by the feeler member, a circuit is completed to light the lamp. The feeler may engage

the ground only if the adjacent tire becomes deflated to allow the feeler to move downwardly into contact with the ground surface. Upon engaging the roadway surface, the feeler pivots about the shaft axis against resistance of the spring and correspondingly pivots the electrical contact surface into engagement with the pad, grounding the circuit through the vehicle axle. A cushion is held within the housing to effectively seal the housing. Write: Darrell S. Clothier, 744 6th Avenue, W., Kalispell, Montana 59901, U.S.A. and send a copy of your initial correspondence to Canadian Consulate General, 412 Plaza 600, Sixth and Stewart, Seattle, Washington 98101, U.S.A.

Brevet 1,087,287

Patent 1,087,287

Dispositif de refroidissement d'une tête laser/299

Cooling Device for Laser Head/299

L'invention concerne un dispositif de refroidissement d'une tête laser par circulation d'un liquide. Ce dispositif comporte notamment un réservoir de ce liquide muni, à sa partie supérieure, d'une membrane étanche au liquide et perméable aux gaz. Application aux générateurs laser solide fonctionnant en déclenché avec une cadence de

répétition élevée. Écrire: Compagnie Industrielle des Lasers, Route de Nozay, 91460 Marcoussis, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Patent 1,087,408

Brevet 1,087,408

Device for End-to-End Connection of Elongated Concrete Elements/299

Dispositif pour le raccordement bout à bout d'éléments oblongs en béton/299

An improved joint for end-to-end connection of elongated concrete elements by means of coupling members and connecting elements. The coupling member comprises a sleeve section intended to be threaded on or otherwise secured to reinforcement rods of the elongated concrete elements, such as concrete piles, to be joined together, and a stub section, preferably provided with a head. The

connecting element is arranged to engage the stub sections of two oppositely disposed coupling members, thus joining together the elongated elements associated therewith. Write: Frank O. Silvander, Richertsgatan 10, S-412 50 Goteborg, Sweden and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, P.O. Box 16129, S-103 23 Stockholm 16, Sweden.

Patent 1,087,423

Brevet 1,087,423

Low Expansion Low Resistivity Composite Powder Metallurgy Member/299

Élément métallurgique formé de poudres mélangées à faible coefficient de résistivité et d'expansion/299

A compacted article having low thermal expansivity and high thermal conductivity is made by compacting a mixture of two metal powders, one of which has low thermal expansivity and the other of which has high thermal conductivity, and strip material made therefrom which is suitable for use in forming the supportive lead frames in integrated circuit components. The powders are mixed together, formed into a green compact, sintered, and rolled to size to produce strip which has a unique combination of low thermal expansivity and high thermal conductivity. A low-expan-

sivity metal disclosed is an alloy containing about 45-70% iron, 20-55% nickel, up to 25% cobalt, and up to 5% chromium which in powder form is mixed with a high-conductivity metal powder disclosed as substantially elemental iron, copper or nickel. Write: Carpenter Technology Corporation, 101 West Bern Street, Reading, Pennsylvania 19603, U.S.A. and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Patent 1,087,467

Brevet 1,087,467

Phosphorescent Materials/299

Substances phosphorescentes/299

The invention is a process for rendering at least part of a surface phosphorescent. The process involves applying to the surface a composition comprising a solution of a phosphorescence activator and a soluble precondensate. The

precondensate is obtained by a reaction between formaldehyde and an amino compound, is capable of further reaction in the absence of the phosphorescence activator to form an insoluble condensation product that does not sub-

stantially absorb ultraviolet radiation at any wavelength at which the phosphorescence activator substantially absorbs ultraviolet radiation and is capable of such further reaction in the presence of the phosphorescence activator in the amount present in the solution to form a phosphorescent insoluble condensation product. By such further

reaction there are formed *in situ* on the surface phosphorescent insoluble condensation products. Write: The Post Office, 23 Howland Street, London W1P 6HQ, England and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London W1X 0AB, England.

Brevet 1,087,523

Réaction immunologique d'agglutination du bacille agrobacterium tuméfaciens pour le dépistage précoce du cancer/299

Les méthodes actuellement utilisées pour le dépistage du cancer se font par analyse microscopique d'une partie de la tumeur en résultant. Dans la présente invention, la méthode de dépistage consiste à déceler la formation d'anticorps anticancer au moyen d'une réaction immunologique d'agglutination du bacille agrobacterium tuméfaciens. Une telle méthode de dépistage permet de déterminer la présence d'un processus néoplasique "cancer"

Patent 1,087,523

Immunological Reaction I.E. Agglutination of the Bacillus Agrobacterium Tumefaciens for the Early Detection of Cancer/299

sans attendre le développement d'une tumeur pouvant faire l'objet d'un examen clinique. Écrire: Hector Turcotte, 1572, avenue du Ruisseau, Sillery, Québec G1S 3V1 et faire parvenir une copie de votre correspondance initiale à la Section des possibilités de licences (34/3), Centre des entreprises, Ministère de l'Industrie et du Commerce, Ottawa, Ontario K1A 0H5.

Patent 1,087,602

Well Drill Pipe Support/299

An adjustable vise support is engaged over the upper end of the well casing with the drill pipe string extending freely therethrough and into the well bore. When it is desired to support the drill pipe string for attaching or detaching additional lengths of drill pipe, the movable jaw is adjusted and swung closed whereupon the coupling between adjacent lengths of drill pipe, engages the upper sides of the jaws by the lower end thereof thereby supporting the drill string so that the uppermost pipe length can be attached or

Brevet 1,087,602

Support pour tige de forage/299

detached. The movable jaw is readily swung clear when the uppermost length of the pipe has been attached or detached from the drill string and drilling and/or withdrawing of the drill string can continue. Write: Wellington Friesen, P.O. Box 473, Brandon, Manitoba R7A 5Z4 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Brevet 1,087,749

Système de traitement de courrier de caractère confidentiel/299

Procédé de traitement du courrier permettant d'assurer le secret entre le donneur d'ordres et le destinataire. Il consiste à rendre non accessibles la génération de documents à partir d'informations codées, le pliage du document, la mise sous enveloppe, le collage de l'enveloppe. Application: machines assurant le secret dans la transmission des

Patent 1,087,749

Confidential Mail Processing System/299

documents. Écrire: Société pour l'Affranchissement et le Timbrage Automatiques S.A., 107, rue Henri Barbusse, 92111 Clichy, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Patent 1,088,110

Process for Manufacturing Concrete of High Corrosion Resistance/299

Concrete having high resistance to corrosion is prepared by using low aluminate (C₃A) cement, preferably having less than 5 weight per cent of aluminate, and, in addition to conventional concrete constituents, at least 10 weight per cent of finely divided, reactive silica based on the cement weight. A highly corrosion resistant cement composition comprises, in addition to conventional cement constituents, 70-90 parts by weight of low aluminate cement and 10-30 parts by weight of reactive silica. An additive useful

Brevet 1,088,110

Procédé de fabrication de béton ayant une grande résistance à la corrosion/299

for making concrete highly corrosion resistant comprises 80-90 weight per cent of reactive silica, 0-10 weight per cent of low aluminate cement, 3-8 weight per cent of formaldehyde condensed sodium sulfonate, 3-8 weight per cent of lignosulfonate. Write: Aksjeselskapet NORCEM Haakon VII's Gate 2, Oslo 1, Norway and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Posttuttak, Oslo 1, Norway.

Brevet 1,088,154**Procédé et dispositif de contrôle d'une batterie d'accumulateurs/299**

Le procédé comportant les opérations suivantes effectuées dans un délai compté à partir de la fin de charge allant de quelques dizaines de minutes à une dizaine d'heures: — on mesure la tension transitoire élémentaire en circuit ouvert aux bornes de chaque accumulateurs, — on compare lesdites tensions élémentaires à la tension transitoire moyenne desdits accumulateurs (tension transitoire en circuit ouvert totale divisée par le nombre d'accu-

Patent 1,088,154**Method and Control Device for a Bank of Batteries/299**

mulateurs), — on élimine la batterie si la différence entre ladite tension transitoire moyenne et une desdites tensions transitoires élémentaires devient supérieure à un seuil prédéterminé. Écrire: Compagnie Européenne d'Accumulateurs S.A., 16, rue de la Baume, 75008 Paris, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Patent 1,088,261**Process for the Delignification of a Cellulose-Containing Material with an Oxidizing Gas in an Alkaline Milieu/299**

Delignification of a lignocellulosic material is effected by means of an oxygen containing gas in an alkaline aqueous solution containing a water-soluble oxygen-transferring agent at an elevated temperature. Write: A. Ahlström

Brevet 1,088,261**Procédé de délignification de substances cellulosiques utilisant un gaz oxydant en milieu alcalin/299**

Osakeyhtiö Noormarkku, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

Patent 1,088,295**Solar Radiation Absorbing Material/299**

Solar energy absorbing means in solar collectors are provided by a solar selective carbon surface (a microporous carbon surface having pores within the range of 0.2 to 2 micrometers). Such a surface is provided in a microporous carbon article by controlling the pore size. A thermally conductive substrate is provided with a solar selective surface by adhering an array of carbon particles in a suitable binder to the substrate, a majority of said particles having dia-

Brevet 1,088,295**Matériau absorbant les rayons solaires/299**

meters within the range of about 0.2-10 microns. Write: Mr. James E. Denny, Assistant General Counsel for Patents, Office of the General Counsel, U.S. Department of Energy, Washington, D.C. 20545, U.S.A. and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Patent 1,088,303**Graduated Ruler for Perspective Drawing/299**

To draw lines converging to or diverging from a point with an ordinary ruler, it is necessary to locate the edge of the ruler on the fixed point each time a thin line is to be drawn, and care has to be taken to put the edge of an ordinary ruler a distance away from the fixed point when a thick line is to be drawn. The different positions of the holes in the invented ruler wherein a pivot is inserted, enables the accu-

Brevet 1,088,303**Règle graduée pour dessin en perspective/299**

rate and quick drawing of such lines of different thickness. Write: Edgar Xuereb, 43j/4 St. Paul's Buildings, West Street, Valletta, Malta G.C., U.K. and send a copy of your initial correspondence to Commercial Division, Canadian High Commission, One Grosvenor Square, London, W1X 0AB, England.

Patent 1,088,347**Molten Metal Sampler with Treated Wall Structure for Easy Sample Release/299**

The invention involves a device for obtaining a sample of molten metal for analysis comprising of wall structure or cavity constructed from powdered metal for receiving a sample of molten metal. This wall structure is porous and is treated in such a way that the porosity of the structure is materially reduced to prevent the sample obtained from

Brevet 1,088,347**Dispositif d'échantillonnage du métal en fusion, muni d'une paroi traitée pour faciliter l'extraction de l'échantillon/299**

sticking or becoming cohesive with the inner surfaces of the structure. Write: William J. Collins, 7005 Madison Street, Merrillville, Indiana 46410, U.S.A. and send a copy of your initial correspondence to Canadian Consulate, 1920 First Federal Building, 1001 Woodward Avenue, Detroit, Michigan 48226, U.S.A.

Patent 1,088,406**Method of Bonding a Solid Layer of Intumescent Material to a Second Sheet and Laminate Made by Said Method/299**

A method of bonding a solid layer of intumescent material carried by a support to a second sheet of material in surface-to-surface contact to form a light-transmitting laminate, wherein the sheet and layer are combined to form the laminate after wetting at least one of the surfaces which are to be brought into contact with an inorganic solvent for

Brevet 1,088,406**Méthode pour faire adhérer ensemble une couche épaisse d'un matériau intumescent et une feuille mince, et le produit laminé ainsi obtenu/299**

the intumescent material so that such solvent is present at the time of such contact. Write: BFG Glassgroup, rue Caumartin, 43, Paris, France and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 35 Avenue Montaigne, 75008 Paris, France.

Patent 1,088,407**Method of Manufacturing a Laminated, Light Transmitting, Fire Screening Panel/299**

A panel comprising at least one solid layer of intumescent material sandwiched between two structural plies without the use of a sheet of plastic material to effect the bonding, comprising the steps of forming a stratum from an intumescent material assembling the stratum and a first structural ply to an inorganic face of a pane comprising a second structural ply so that the stratum is in contact with the inorganic face and sandwiched between the structural plies, enveloping at least the edges of the sandwich assembly in such manner as to define a space around the edges in which sub-atmospheric pressure can be created for subjecting the inter-ply space to suction at the edges,

Brevet 1,088,407**Méthode de fabrication d'un panneau laminé luminescent et pare-feu/299**

and subjecting the sandwich assembly to a treatment in which at least one of the main external faces of the sandwich assembly is exposed to sub-atmospheric environmental pressure while the sandwich assembly is exposed to heat in a treatment chamber and the inter-ply space is subjected to the aforesaid suction to effect bonding of the various plies without causing the intumescent material to become tumid. Write: BFG Glassgroup, rue Caumartin, 43, Paris, France and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, 35 Avenue Montaigne, 75008 Paris, France.

Patent 1,088,511**Portable Drilling Rig/299**

A portable drilling rig for mounting on a flatbed truck or other carrier vehicle includes a turntable rotatably mounted on the truck bed; a slide pivotally mounted on the top of the turntable for rotation around a horizontal axis; a hydraulic cylinder interconnecting the turntable and slide for raising and lowering one end of the slide so that the slide can be tilted from a transport position to an operating position beside the truck; a carriage slidably mounted on the slide, the position of the carrier on the slide being controlled by a winch, pulley and cable system; a derrick

Brevet 1,088,511**Appareil de forage portable/299**

pivotally mounted on the carriage for rotation between the transport and operating positions, and a hydraulic cylinder interconnecting the carriage and the derrick for causing the derrick to move between the transport and operating positions. Write: Robert B. Culver, P.O. Box 1234, Clare-sholm, Alberta T0L 0T0 and send a copy of your initial correspondence to Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Patent 1,088,513**Apparatus for Heating a Liquid Suspension by Another Liquid Suspension/299**

An apparatus is provided herein for heat exchange between two liquids without solid matters contained in the liquids. The apparatus comprises a pressure vessel which is divided into a plurality of compartments, each compartment comprising an inner space having an open end and an outer annular space. A baffle having a closed upper end is provided around the upper portion of each inner space with an annular slit between the baffle and the wall of the inner space. The baffle extends to a level below the upper end of the inner space. Injection nozzles for the heat receiving

Brevet 1,088,513**Appareil pour chauffer un liquide en suspension au moyen d'un autre liquide en suspension/299**

liquid are provided in the upper portion of the outer space of each compartment, and an outlet pipe is connected to the lower end of the outer space. Inlet and outlet pipes for the heat delivering liquid are connected to the upper and lower ends respectively of the inner space. The inner and outer spaces respectively are connected in series, and the heat delivering and heat receiving liquids are fed in countercurrent flow with respect to each other. The heat delivering liquid generates vapor that passes downwardly through the annular slit between the inner space and the baffle and

then upwardly to meet droplets of the heat receiving liquid from the nozzles. This heat exchange apparatus has several advantages, namely: several units are built in into one pressure vessel, whereby the costs both of the pressure vessels and of their supporting structures are substantially reduced; the cyclone part is completely enclosed with the pressure vessel and has no part in common with the pressure vessel wall; the expansion vapor is carried down into

the condenser part so that countercurrent flow is accomplished in this part; and a plurality of nozzles is employed for distributing the suspension in the condenser part, whereby better utilization of its volume is achieved. Write: RA-Shipping Ltd. Oy, Nädendal, Finland, c/o Oy Navire Ab, SF-21600 Pargas, Finland and send a copy of your initial correspondence to Commercial Division, Canadian Embassy, Pohjois Esplanadi 25B, 00100 Helsinki 10, Finland.

Brevet 1,088,593

Jeu de projections/299

La présente invention est un jeu de société à caractère stratégique dont le déroulement dépend entièrement des décisions prises par les joueurs, sans l'intervention du hasard. Le jeu symbolise un conflit entre deux empires: les Blancs et les Noirs. Dans le palais du Prince des Blancs se trouve la Princesse des Noirs et dans le palais du Prince des Noirs se trouve la Princesse des Blancs au moment où les armées des Empereurs et des Impératrices des deux camps sont sur le champ de bataille pour se battre. Les Empereurs et les Impératrices décident, que celui sera le vainqueur qui réussira le premier, soit à faire sortir la Princesse du palais du Prince adverse avant que celui-ci puisse l'attraper, soit à faire attraper la Princesse adverse par le Prince dans le palais de celui-ci avant qu'elle puisse s'échapper. Les Empereurs, en se déplaçant, dirigent les mouvements des Princes, et les Impératrices, en se déplaçant, dirigent les mouvements des Princesses en projetant leurs propres mouvements du champ de bataille dans les palais. Les armées facilitent cette action en entravant les mouvements de l'Empereur et de l'Impératrice adverses

Patent 1,088,583

Projection Game/299

qui restent intouchables, et en éliminant le potentiel de l'armée adverse. Le jeu est joué sur un plan qui est divisé en trois parties distinctes (le champ de bataille et les deux palais) par deux joueurs qui effectuent alternativement chacun un mouvement avec leurs pièces. La présente invention est basée sur l'idée de projections de mouvements de pièces spécifiques d'une partie du plan du jeu dans deux autres parties distinctes figurant sur le plan du jeu. Le jeu est conçu de manière que les projections susmentionnées lui donnent un caractère particulier et le rendent ainsi distinct des autres jeux de société de ce genre. Le jeu, ayant un vaste ensemble de possibilités de combinaisons stratégiques, développe le sens de la logique et peut, de ce fait, être considéré comme un jeu éducatif. Écrire: Tomek I. Vaclav, 10,625, rue Francis, App. 14, Montréal (Québec) H2C 3A5 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.

Brevet 1,088,640

Multiplexeur en ondes millimétriques/299

L'invention se réfère à la technique des ondes millimétriques pour la transmission en multiplex d'un grand nombre de communications téléphoniques MIC. Elle concerne en particulier un multiplexeur permettant de décomposer ou de recomposer une bande de fréquences en plusieurs sous-bandes. L'invention fait usage de duplexeurs semi-circulaires mis en série, et dont les rayons des coupleurs sont

Patent 1,088,640

Multiplexer Using Millimeter Waves/299

choisis de façon que la naissance des modes parasites soit hors de la bande réfléchie, c'est-à-dire, de la sous-bande considérée. Écrire: Compagnie Industrielle des Télécommunications CIT-Alcatel, 12, rue de la Baume, 75008 Paris, France et faire parvenir une copie de votre correspondance initiale à la Division commerciale, Ambassade du Canada, 35, avenue Montaigne, 75008 Paris, France.

Patent 1,088,647

Silo Level Indicating System/299

The silo level indicating system includes a plurality of temperature indicating sensor units placed on the outside wall of a silo at vertically spaced positions. Each sensor unit and an adjacent portion of the surrounding sidewall is thermally insulated from the atmosphere so that a sensor unit is responsive to the temperature on the inside of the silo at the thermally insulated wall portion. The air within the silo above the level of material is at the same temperature. Thus, in a comparison of the temperature within the silo opposite each sensor unit to that of a reference sensor unit situated at the top of the silo, so as to be above the upper-

Brevet 1,088,647

Système indicateur de niveau pour silos/299

most level of the material in the silo, a temperature differential between the reference sensor unit and a compared sensor unit indicates the presence of material at or above the compared sensor unit. Write: Robert E. Kirkpatrick, Curtis C. Weaver, c/o Mr. N.S. Hewitt, Marks & Clerk, P.O. Box 957, Station "B", Ottawa, Ontario K1P 5S7 and send a copy of your initial correspondence to the Licensing Opportunities Section (34/3), Business Centre, Department of Industry, Trade and Commerce, Ottawa, Ontario K1A 0H5.

Patent 1,088,659

Azaquinolone Dye Lasers/299

A dye laser comprising a laser dye solution of a compound having the general structure: wherein at least one of the 5, 6 and 8 ring positions is occupied by a nitrogen atom in lieu of the corresponding CR group and X is OH, alkoxy, or amino including amino substituted by at least one of the following: alkyl, aryl, acyl, aracyl, a group which taken together with the nitrogen atom of the amino group forms a heterocyclic ring, or part of one or two 5 or 6 membered aliphatic heterocyclic rings attached to ring A at positions

Brevet 1,088,659

Laser de teinture à l'azaquinolone/299

6 or 8 or both depending on where the N in ring A is located. R₁, R₃, R₄, R₅, R₆ and R₈ are hydrogen or other groups as defined below. The compounds lase in the blue to near ultraviolet region. Write: Mr. James E. Denny, Assistant General Counsel for Patents, Office of the General Counsel, U.S. Department of Energy, Washington, D.C. 20545 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

Canadian Patents Dedicated to Public Use

Brevets canadiens abandonnés au domaine public

The following patents were dedicated to public use:

Les brevets canadiens suivants ont été abandonnés au domaine public:

Patent 871,193

Fluidized Bed Reactor Employing a Poly (Hydrocarbylaluminum oxide) Catalyst/299

Date of Dedication: August 12, 1980

By: Union Carbide Corporation, 270 Park Avenue, New York, N.Y. 10017.

It has now been found that solid particulate olefin polymers of low, non-corrosive catalyst residue content can be obtained by continuously contacting a gaseous stream containing a polymerizable olefin with a powdery poly (hydrocarbylaluminum oxide) catalyst complex for said olefin in a polymerization zone comprising a fluidized bed of formed and forming polymer particles at a mass gas flow rate sufficient to maintain complete fluidization, withdrawing from the polymerization zone a small portion of the fluidized bed as discrete polymer particles in suspension with a portion of the gaseous stream and subsequently separating the discrete polymer particles from the gaseous mobilizer. That portion of the gaseous stream which does not enter into the polymerization reaction is removed from the reaction zone, cooled to remove the heat of reaction and recycled below the base of the fluidized

Brevet 871,193

Réacteur à lit fluidisé utilisant un catalyseur polymérique (oxyde d'hydrocarbylaluminium)/299

Date d'abandon: 12 août 1980

Par: Union Carbide Corporation, 270 Park Avenue, New York, N.Y. 10017.

bed to maintain complete fluidization of the bed and to maintain the bed at a temperature below the sintering temperature of the polymer particles. To maintain an essentially steady state operation, make-up feed gas and powdery catalyst are fed to the fluidized bed respectively at rates equal to the rate of product formation and catalyst consumption. The make-up catalyst is fed to the fluidized bed above the base of the bed to achieve rapid catalyst distribution throughout the bed. In addition to being non corrosive, the catalyst residue in the polymer particles produced according to this invention is sufficiently low to allow the polymer particles to be used directly without treatment for catalyst removal. Another embodiment of this invention is the use of hydrogen to control the melt index and melt flow characteristics of polymers produced in a fluidized bed reactor.

Patent 971,700

A Continuous Process for the Production of High Molecular Weight Polymers of Olefins by Employing a Particulate Catalyst/299

Date of Dedication: August 12, 1980

By: Union Carbide Corporation, 270 Park Avenue, New York, N.Y. 10017.

High molecular weight particulate olefin polymers are formed by continuously feeding a particulate catalyst, such as a powdery silyl chromate catalyst, and a gaseous stream containing a polymerizable olefin to a fluidized bed

Brevet 971,700

Procédé continu de production de polymères d'oléfines de poids moléculaires élevés au moyen de catalyseurs granulés/299

Date d'abandon: 12 août 1980

Par: Union Carbide Corporation, 270 Park Avenue, New York, N.Y. 10017.

of formed and forming polymer particles while removing heat and olefin polymer particles therefrom. Hydrogen serves to control melt index and enhance monomer reactivity.

Paper copies of Canadian patents may be obtained for \$2.25 plus .27¢ postage and microfiche copies for \$1.25 by writing to: Micromedia Limited, 165 Hotel de Ville, Hull, Quebec J8X 3X2.

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DOE

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PAT-APPL-6-034 877**Tris (N-carbalkoxyaminomethyl) phosphine Oxides and Sulfides/299****Oxyde et sulfure de tris (N-carbalkoxyaminométhyl)phosphine/299**

Filed April 30, 1979, by the Department of Agriculture. The title compounds, having the formula $(RO_2CNHCH_2)_3PY$ where Y = oxygen or sulfur, are prepared by reacting a tris (N-carbalkoxyaminomethyl)phosphine, having the for-

mula $(RO_2CNHCH_2)_3P$, with an oxidizing or sulfurizing agent. The products, after methylation with formaldehyde, are useful as finishing agents for imparting flame retardant properties to cotton fabrics. Write: NTIS.

PAT-APPL-6-098 459**Quaternary Ureidomethyl Phosphonium Salts/299****Sels d'uréidométhyl-phosphonium quaternaire/299**

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed November 29, 1979, by the Department of Agriculture. Novel quaternary ureidomethyl phosphonium salts are prepared by condensing a urea having the formula $RNHC(O)NR'(R \text{ double prime})$ with a quaternary hydroxymethyl

phosphonium salt having the formula $(HOCH_2)_4P(+)X(-)$ in a molar ratio of at least 2:1. The products, which are characterized by the absence of residual hydroxymethyl groups, are useful as finishing agents for imparting flame retardant properties to cotton fabrics. Write: NTIS.

PAT-APPL-6-118 948**Improved Abrasion Resistance and Strength of Cotton-Containing Fabric Made Resilient with N-methylolacrylamide-Type Reagent/299****Amélioration des caractéristiques mécaniques et de la résistance à l'abrasion des tissus contenant du coton, par addition de réactifs à base de N-méthylolacrylamide/299**

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed February 6, 1980, by the Department of Agriculture. High levels of durable-press appearance rating and conditioned wrinkle recovery angle together with improved abrasion resistance, breaking strength, and tearing strength

are the primary textile qualities imparted to cellulosic textile with aqueous solutions containing N-methylolacrylamide-type reagents, a salt of persulfuric acid, and an alkali metal phosphate, which may be supplemented with standard wetting agents and fabric softeners. Write: NTIS.

PAT-APPL-6-118 949**Process for Producing Durable-Press Cotton Fabrics with Improved Balances of Textile Properties/299****Fabrication de tissus en coton infoissables présentant des caractéristiques textiles plus équilibrées/299**

Filed February 5, 1980, by the Department of Agriculture. Improved levels of abrasion resistance, breaking strength are coupled with high levels of resilience, as measured by durable-press appearance rating and wrinkle recovery angles, by a process in which cotton or cotton-containing

fabric is treated with poly-functional N-methylol reagents, a Bronsted acidic catalyst or Bronsted acid-generating catalyst and selected phosphate salts. The fabric is impregnated with these and supplementary agents as desired and cured by conventional methods. Write: NTIS.

PAT-APPL-6-124 011**PAT-APPL-6-124 012****Protection of Insect Pheromones from Degradation by Ultraviolet Radiation/299****Absorbant destiné à protéger les phéromones des insectes contre la dégradation par irradiation UV/299**

Filed February 25, 1980, by the Department of Agriculture. A substituted benzene compound was found to protect an insect pheromone against ultraviolet (UV) radiation degradation. The UV absorbing material significantly extended

the biological activity and quality of the pheromone while at the same time remaining nontoxic to the insect and non-destructive of the environment. Write: NTIS.

PAT-APPL-6-128 440

Process for the Preparation of Tris (aminomethyl)phosphine Oxide and its Ternary Salts/299

Filed March 10, 1980, by the Department of Agriculture. Tris(aminomethyl)phosphine oxide and its ternary salts, useful as catalysts for the chemical finishing of cotton, are prepared by the hydrolysis of tris(N-carbalkoxylamino-

Méthode de préparation de l'oxyde de tris(aminométhyl)phosphine et de ses sels ternaires/299

methyl)-phosphine oxides having the formula (RO₂CNHCH₂)₃PO with an alkali or alkaline earth in the presence of water, followed optionally by acidification. Write: NTIS.

PAT-APPL-6-132 589

Method of Decontaminating Waste Liquors/299

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed March 21, 1980, by the Department of Agriculture. Contaminants are removed from waste liquor particularly in a closed recirculatory system by adding a soluble silicate to the contaminated waste liquor in an amount sufficient to flocculate the contaminants. Then, the liquid is

Méthode de décontamination des liqueurs industrielles usées/299

treated to separate the flocculated contaminants therefrom. Other features for enhancing flocculation of the contaminants in a waste liquor in conjunction with the above method are described. the method of the invention has particular application to wool scouring liquor. Write: NTIS.

PAT-APPL-6-132 594

Method of Imparting Smolder Resistance to Cotton-Containing Textiles/299

Filed March 21, 1980, by the Department of Agriculture. Smolder resistance is imparted to cotton and cotton-containing fabrics by applying a certain boron-nitrogen-phosphorus system to the fabric, employing conventional equipment. An inorganic boron compound is placed in

Méthode destinée à accroître la résistance à la combustion lente de textiles contenant du coton/299

solution with a phosphorus-containing compound, then a nitrogen-containing compound is added. The aqueous mixture is applied using conventional textile equipment, dried, and cured by standard methods. Write: NTIS.

PAT-APPL-6-134 014

Compositions and Processes for Producing Flame Retardant Textile Materials Based on Methylolaminotrihalopropyl Triazines and Antimony Oxides/299

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed March 26, 1980, by the Department of Agriculture. The tetramethylol derivatives of 2,4-diamino-6(3,3,3-tribromo-1-propyl)-1,3,5-triazine and 2,4-diamino-6(3,3,3-trichloro-1-propyl)-1,3,5-triazine, namely: 2,4-bis(di(hydroxymethyl)amino)-6-(3,3,3-tribromo-1-propyl)-1,3,5-triazine and 2,4-bis(di(hydroxymethyl)amino)-6-(3,3,3-trichloro-1-propyl)-1,3,5-triazine, respectively, were used in combination with col-

Procédés et produits à base de méthylolaminotrihalopropyl triazines et d'oxydes d'antimoine pour l'ignifugation des textiles/299

loidal antimony oxides and or water emulsifying agents and suitable solvent to impart durable flame-retardancy to cellulosic materials, protein fibers such as wool, and to blends of cellulosic materials and synthetic fibers, particularly to cotton textiles or textiles composed of blends of cotton and polyester. After-glow was eliminated by the use of small amounts of reactive phosphorus compounds. Write: NTIS.

PAT-APPL-6-146 546

Wrinkle-Resistance and Durable-Press Cotton-Containing Fabric by Treatment with Acrylamide and Glyoxal/299

Filed May 5, 1980, by the Department of Agriculture. Cotton, or other fabric containing cellulose, is treated with

Tissu à base de coton à pli durable et résistant au froissement obtenu par traitement à l'acrylamide et au glyoxal/299

acrylamide and a chemical initiator that promotes reaction of acrylamide with cellulose. The fabric, with bound acryla-

mide, is then treated with glyoxal and an acidic, metal salt catalyst to produce a fabric containing crosslinked cellulose. Thus, the fabric is given wrinkle resistance and

durable-press properties by the treatment without using formaldehyde, free or combined, that could be released during treatment or from the treated fabric. Write: NTIS.

PAT-APPL-6-150 550

Encapsulation by Entrapment/299

Filed May 16, 1980 by the Department of Agriculture. Chemical biological agents to be encapsulated are dissolved or dispersed in an aqueous solution of polyhydroxy polymer xanthate. Simultaneous addition of a strong acid and a coupling agent to the solution insolubilizes the polyhydroxy polymer without degrading the xanthate moiety, thereby entrapping the agents in a protective matrix.

Capsulage par fixation/299

Encapsulation of biologically active compositions provides a shield against hostile environments, improves safety in handling, and slows the release of such compounds to the surrounding medium. Highly volatile liquids are protected against losses by evaporation. Encapsulation also provides protection against decomposition from exposure to ultraviolet light. Write: NTIS.

PAT-APPL-6-132 451

Light-Scattering Disc Collector/299

Filed April 1, 1980, by the Department of the Air Force. A light-scattering disc collector member useable in converting a classical (coherence-dependent) microdensitometer to a linear (mode) microdensitometer that is coherence-independent. The member is made of material that is transmissive, non-absorbing, and high scattering as to light, and it preferably comprises a right circular cylinder which is made opaque (such as with black paint), except for a light-transmissive entrance aperture which is located

Disque collecteur à diffusion de lumière/299

on one base of the cylinder and which is shaped as an inwardly formed hemispherical dome, and a light-transmissive exit aperture which is located on the other base of the cylinder in geometric alignment with the entrance aperture. When used to convert a classical microdensitometer to a linear microdensitometer, the light-scattering disc collector member replaces the objective of the microscope in the sensor optics assembly of the classical microdensitometer. Write: NTIS.

PAT-APPL-6-134 358

Laser Excited Molecular Beam Time and Frequency Standard/299

Filed March 27, 1980, by the Department of the Air Force. A laser excited molecular beam time and frequency standard utilizing a first electromagnetic beam at a first preselected frequency to excite a molecular beam at a first preselected point along the beam in order to produce fluorescence. A second electromagnetic beam (produced from either a different electromagnetic source than utilized to produce the

Etalon de temps et de fréquence à faisceau moléculaire excité par laser/299

first beam or produced from a portion of the first beam) at a second preselected frequency excites the molecular beam at a second preselected point along the beam to produce fluorescence. By locking the frequency of the first and second electromagnetic beams to specific resonant frequencies, a time and frequency standard can be produced. Write: NTIS.

PAT-APPL-6-136 210

Field Test Unit for Windscreen Optical Evaluation/299

Filed April 1, 1980, by the Department of the Air Force. The invention is directed to an optical apparatus used to analyze the deleterious optical effects of a windscreen or other transparent body when it is inserted into the path of observation. Optical distortion is measured by noting its effect on a precision pattern projected through the transparent body. The multiple imaging phenomenon appears in the same projected pattern and is generally characterized by asymmetrically distributed images of the fundamental pattern. By polarizing an unpatterned beam of light, and projecting it through the same transparent body, the optical sensor in the apparatus records the birefringence characteristics of the body. To analyze distortion and mul-

Dispositif d'essai sur le terrain pour l'évaluation optique des pare-brise/299

tipple imaging a beam of light, with the pattern of interest superimposed, is projected through the transparent body to a focus on a retro-reflective screen. A segment of the returning beam is redirected after it again passes through the transparent body, with the new direction being substantially aligned to the axis of an optical sensor. Pattern images and variations in the pattern shape correspond directly to the characteristics of the transparent body. Birefringence is analyzed by polarizing the light beam prior to its first pass through the transparent body. The retro-reflected beam reaching the optical sensor contains a spatial distribution of color corresponding to the birefringence characteristics of the transparent body. Write: NTIS.

PAT-APPL-6-140 529

Symmetrical 1:1 Photographic Objective Lens/299

Filed April 15, 1980, by the Department of the Air Force. A symmetrical 1:1 photographic objective lens system of the Double Gauss type wherein negative lens elements are symmetrically disposed on both sides adjacent the stop, each negative element being a cemented doublet comprising a double convex negative and a positive lens ele-

Objectif photographique 1:1 symétrique/299

ments. A cemented doublet positive lens component is next positioned at the outside of each of the negative elements and a single positive lens is positioned at the outside of each of the inner positive lens components. Write: NTIS.

PAT-APPL-6-140 530

Cable Protection from Rodents/299

Filed April 15, 1980, by the Department of the Air Force. A protective sheath for use over a buried fibre optic cable wherein a plurality of spikes extend radially outward from an outer jacket which covers the fibre optic cable bundle surrounded by an inner jacket. The inner jacket, outer jacket and spikes are fabricated of a plastic composite

Protection de câbles contre les rongeurs/299

material produced by polymerization which can be molded, extruded or cast into a suitable spiked shape. The cable is thereby protected from chewing or gnawing rodents that may be burrowing in the vicinity and would be discouraged from attacking the fibre optic cable. Write: NTIS.

PAT-APPL-6-140 551

Intrusion Detection System Having Look-Up Sensor Instrumentation for Intrusion Range and Altitude Measurements/299

Filed April 15, 1980, by the Department of the Air Force. Range and elevation measurement ambiguities in upward looking intruder detection systems are eliminated by look-up sensor instrumentation that utilizes monostatic and bistatic radar principles. Intruder detection systems that have the capability of monitoring the air space over the perimeter of an area to be protected and that employ radar ranging techniques and guided wave sensor generate only limited or ambiguous intrusion event information. This ambiguity is eliminated by utilizing a transmitter and receiver

Système de protection à capteurs "vers le haut" pour la mesure de la distance et de l'altitude/299

at one end of the upward looking sensor and a second receiver at the other end. The transmitter and its associated receiver comprises a monostatic radar and the transmitter and the other receiver comprises a bistatic radar, the conventional monostatic radar measures total distance from the transmitter to an intrusion. The bistatic radar measures intrusion altitude only. The two radar outputs are differenced by a processor to determine range. Write: NTIS.

PAT-APPL-6-140 640

A Solvent Mixture for Dissolving and Removing Epoxy Resinous Compounds/299

Filed April 15, 1980, by the Department of the Air Force. A solvent solution for dissolving and removing epoxy resinous formulations. The solution is composed of a mixture of

Solvant de dissolution et d'enlèvement de composés résineux époxy/299

methanol, dichloromethane and distilled water as essential components. Write: NTIS.

PAT-APPL-6-141 500

Analysis of Lubricating Oils for Iron Content/299

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed April 18, 1980, by the Department of the Air Force. It is an object of this invention, therefore, to provide an improved method for determining the quantity of iron wear metal present in lubricating oils in both particulate and dissolved forms. Other objects of the invention are: to provide a method for conducting a rapid, on-the-spot quantitative

Dosage du fer dans les huiles de lubrification/299

test for a major wear metal contained in lubricating oils; to provide apparatus, which may be in the form of a kit, for carrying out the quantitative analysis of iron in lubricating oils; and to provide articles of manufacture which incorporate components used in the practice of the analytical method of this invention. Write: NTIS.

PAT-APPL-6-141 501

Fast Operating Switchable Operational Amplifier Driven Circuits/299

Filed April 18, 1980, by the Department of the Air Force. Faster switching speeds for switchable noise filters and faster sampling speeds for sample and hold circuits are realized by means of an operational amplifier driven circuit in which excess feedback loop gain of the operational amplifier is used to reduce the effective value of resistance in the device's capacitor charging circuit. Two operational

Circuits excités par amplificateur opérationnel à commutation rapide/299

feedback loops are used, one or the other of which is switched into the circuit to effect either an open loop or a closed loop condition. The time required to charge the device's capacitor is a function of the ratio of the operational amplifier's closed loop gain divided by its open loop gain. Write: NTIS.

PAT-APPL-6-144 465

Minimum Resolvable Contrast Measurement Device for Video Systems/299

Filed April 15, 1980, by the Department of the Air Force. This invention is directed to an apparatus for generating optical images having backgrounds of uniform and constant luminance with a nonperiodic, variable contrast pattern superimposed thereon. Two controllable intensity beams of uniform luminance are projected to a focus at the image plane. One of the beams contains a nonperiodic opaque pattern. Each beam passes through a linear polarizer, which polarizers are orthogonally oriented relative to each other. After beam splitting and interlacing, one of the two output beams formed is projected through a rotatable linear polarizer and onto an optical sensor at the image

Dispositif de mesure du contraste minimal résolvable pour systèmes vidéo/299

plane. The second split and interlaced beam is projected through a synchronized, rotatable linear polarizer, and then onto a detector assembly for measuring both background intensity and pattern contrast levels. Variations in the background intensity are sensed in the detector assembly, decoupled according to polarization and apportioned according to polarization as feedback signals to correct for drift in each of the two beam sources. Rotation of the polarizer in the optical path leading to the optical sensor changes the photometric luminance of the non-periodic pattern without altering the background luminance level. Write: NTIS.

PAT-APPL-6-149 792

Mixed Flow Augmentor Incorporating a Fuel/Air Tube/299

Filed May 14, 1980 by the Department of the Air Force. In a turbofan jet engine having a circumferentially rotatable mixer segment capable of orienting the afterburner ignitors and flameholders into the path of either the exhaust gases or by-pass air, a fuel-air transfer apparatus for capturing, transporting and the releasing of an enriched fuel-air concentration from the fuel spray bars, on the stationary structure of the jet engine, to the afterburner ignitors and flameholders rigidly attached at the rear of the rotatable segment of the mixer. The enriched fuel-air mixture is transported between a location of reliable fuel availability, through a region of highly turbulent gas flow and is

Enrichisseur de mélange carburé avec dispositif de transfert air-essence/299

thereafter released while still in an enriched concentration immediately upstream of the ignitors and flame-holders, the facilitating ignition and sustained operation of the afterburner. The transfer of the fuel-air mixture with the exhaust gases in a confining apparatus precludes the necessity for transferring fuel, by flexible attachment or other means, between the stationary jet engine structure and the rotatable segment of the mixer, upon which the ignitors and flame-holders are mounted, while insuring an appropriate fuel-air mixture for ignition and operation of the afterburner. Write: NTIS.

PAT-APPL-6-152 232

Interferometric Distance Measurement Method/299

Filed May 22, 1980 by the Department of the Air Force. An interferometric distance measurement method is disclosed which utilizes a sequence of at least two closely spaced optical wavelengths in order to achieve ambiguity resolution during the measurement procedure. In so doing, this method performs the equivalent of measuring dis-

Mesure de distance par interférométrie/299

tances at a relatively long wavelength by measuring the phase difference at two closely spaced optical wavelengths and computing the effective phase measurement at a wavelength which corresponds to the frequency difference between the two optical wavelengths measured. Write: NTIS.

PAT-APPL-6-152 234

Intruder Detection System Having Multiple Discrete RF Sensor Elements Illuminated by a Remote RF Transmitter/299

Filed May 22, 1980, by the Department of the Air Force. Intruder detection and tracking is achieved by a detection system that utilizes multiple discrete R.F. energy receiving sensors and a remote RF transmitter that illuminates the sensors either simultaneously or in a prescribed time sequence. The sensors are preferably leaky coaxial cable elements that encompass resources to be protected. The

Réseau de protection à éléments récepteurs discrets multiples soumis au rayonnement d'une antenne émettrice RF à distance/299

presence of an intruder in the vicinity of a leaky coaxial cable modifies its R.F. field providing a change in the received power that is processed by R.F. receiver and indicating circuits to produce an alarm. Intruder event information is also displayed as a function of sensor location to provide intruder tracking capability. Write: NTIS.

PAT-APPL-6-002 140

High-Temperature, High-Pressure Bonding of Nested Tubular Metallic Components/299

Filed January 9, 1979, by the Department of Energy. A tool is described for effecting high-temperature, high-compression bonding between the confronting faces of nested, tubular, metallic components. In a typical application, the tool is used to produce tubular target assemblies for irradiation in nuclear reactors or particle accelerators. The target assembly comprising a uranium foil and an aluminum-alloy substrate. The tool is composed of graphite. It comprises a tubular restraining member in which a mechanically expandable tubular core is mounted to form an annulus. The components to be bonded are mounted in nested relation in the annulus. The expandable core is formed of individually movable, axially elongated segments whose outer faces cooperatively define a cylindrical pressing surface and whose inner faces cooperatively define two opposed,

Liaison à haute température et sous haute pression d'éléments tubulaires métalliques nichés/299

inwardly tapered, axial bores. Tapered rams extend into the bores. The loaded tool is mounted in a conventional hot-press provided with evacuation means, heaters for maintaining its interior at bonding temperature, and hydraulic cylinders for maintaining a selected inwardly directed pressure on the tapered rams. With the hot-press evacuated and the loaded tool at the desired temperature, the cylinders are actuated to apply the selected pressure to the rams. The rams in turn expand the segmented core to maintain the nested components in compression against the restraining member. These conditions are maintained until the confronting faces of the nested components are joined in a continuous, uniform bond characterized by high thermal conductivity. Write: DOE.

PAT-APPL-6-005 264

Thermochemical Cycles for the Production of Hydrogen/299

Filed January 22, 1979, by the Department of Energy. Two-step processes for the preparation of hydrogen are described: $\text{CrCl}_3(\text{g}) \rightleftharpoons \text{CrCl}_2(\text{g}) + \frac{1}{2}\text{Cl}_2(\text{g})$ and $\text{CrCl}_2(\text{s}) + \text{HCl}(\text{g}) \rightleftharpoons \text{CrCl}_3(\text{s}) + \frac{1}{2}\text{H}_2(\text{g})$; $\text{UCl}_4(\text{g}) \rightleftharpoons \text{UCl}_3(\text{g}) + \frac{1}{2}\text{Cl}_2(\text{g})$ and $\text{UCl}_3(\text{s}) + \text{HCl}(\text{g}) \rightleftharpoons \text{UCl}_4(\text{s}) + \frac{1}{2}\text{H}_2(\text{g})$; and $\text{CaSO}_4(\text{s}) \rightleftharpoons \text{CaO}(\text{s}) + \text{SO}_2(\text{g}) + \frac{1}{2}\text{O}_2(\text{g})$ and $\text{CaO}(\text{s}) + \text{SO}_2(\text{g}) + \text{H}_2(\text{g}) \rightleftharpoons \text{CaSO}_4(\text{s}) + \text{H}_2(\text{g})$.

Cycles thermochimiques pour production d'hydrogène/299

sub 2 O(l) implies $\text{CaSO}_4(\text{s}) + \text{H}_2(\text{g})$. The high temperature available from solar collectors, high temperature gas reactors or fusion reactors is utilized in the first step in which the reaction is endothermic. The efficiency is at least 60% and with process heat recovery, the efficiency may be increased up to 74.4%. An apparatus for carrying out the process in conjunction with a fusion reactor, is described. Write: DOE.

PAT-APPL-6-005 942

Process for Purifying Geothermal Steam/299

Filed January 24, 1979, by the Department of Energy. Steam containing hydrogen sulfide is purified and sulfur recovered by passing the steam through a reactor packed with activated carbon in the presence of a stoichiometric amount of oxygen which oxidizes the hydrogen sulfide to elemental sulfur which is adsorbed on the bed. The carbon

Purification de la vapeur géothermique/299

can be recycled after the sulfur has been recovered by vacuum distillation, inert gas entrainment or solvent extraction. The process is suitable for the purification of steam from geothermal sources which may also contain other noncondensable gases. Write: DOE.

PAT-APPL-6-008 622

Method of Manufacturing a Niobium-Aluminum-Germanium Superconductive Material/299

Filed February 1, 1979, by the Department of Energy. A method for manufacturing flexible Nb sub 3 (Al,Ge) multifilamentary superconductive material in which a sintered porous Nb compact is infiltrated with an Al-Ge alloy. It is deformed and heat treated in a series of steps at successively higher temperatures preferably below 1000 exp 0 C during the heat treatment, cladding material such as copper can be applied to facilitate a deformation step pre-

Méthode de fabrication d'un matériau supraconducteur au niobium-aluminium-germanium/299

ceding the heat treatment and can remain in place through the heat treatment to serve as a temperature stabilizer for the superconductive material produced. These lower heat treatment temperatures favor formation of filaments with reduced grain size and with more grain boundaries which in turn increase the current-carrying capacity of the superconductive material. Write: DOE.

PAT-APPL-6-009 622

System and Method for Charging Electrochemical Cells in Series/299

Filed February 6, 1979, by the Department of Energy. A battery charging system capable of equalizing the charge given each individual cell at a selected full charge voltage includes means for regulating charger current to increase current at a constant rate until a bulk charging level is achieved or until any cell reaches a safe reference voltage. A system controller then begins to decrease the charging rate as long as any cell exceeds the reference voltage until an equalization current level is reached. At this point, the

Système et méthode de charge de cellules électrochimiques en série/299

system controller activates a plurality of shunt modules to permit shunting of current around any cell having a voltage exceeding the reference voltage. Leads extending between the battery of cells and shunt modules are time shared to permit alternate shunting of current and voltage monitoring without the voltage drop caused by the shunt current. After each cell has at one time exceeded the reference voltage, the charging current is terminated. Write: DOE.

PAT-APPL-6-009 624

High Temperature Concrete Composites Containing Organosiloxane Crosslinked Copolymers/299

Filed February 6, 1979, by the Department of Energy. High temperature polymer concrete composites comprising about 10 to 30% by weight of a liquid monomer mixture is described. It consists essentially of an organosiloxane polymer crosslinked with an olefinically unsaturated monomer selected from the group consisting of styrene, methyl methacrylate, trimethylolpropane trimethacrylate, triallyl cyanurate, n-phenylmalimide, divinyl benzene and

Composés de béton haute température contenant des copolymères organosiloxanes à liaisons croisées/299

mixtures thereof. About 70 to 90% by weight of an inert inorganic filler system containing silica sand and portland cement, Fe sub 2 O sub 3, carbon black or mixtures thereof. Optionally a free radical initiator such as di-tert-butyl peroxide, azobisisobutyronitrile, benzoyl peroxide, lauryl peroxide and other organic peroxides are used to initiate crosspolymerization of the monomer mixture in the presence of the inorganic filler. Write: DOE.

PAT-APPL-6-018 198

Improvements in Geothermal Electric Power and Silica Production/299

Filed March 6, 1979, by the Department of Energy. Electricity is generated from hot geothermal solution by extracting heat therefrom, mineral solids which form in a so cooled geothermal solution are separated to recover minerals and facilitate reinjection of the solution into the ground. The separated solids are treated to recover silica

Amélioration de l'obtention de silice et d'électricité géothermique/299

by addition of an acid (amorphous silica precipitates) or a base (other minerals precipitate and soluble silicates are formed which are subsequently precipitated by acid neutralization). If desired, after silica is separated, other minerals can be separated and recovered. Write: DOE.

PAT-APPL-6-021 292

Passive Environmental Temperature Control System/299

Filed March 16, 1979, by the Department of Energy. Passive environmental heating and cooling systems are described,

Système passif de régulation de la température ambiante/299

which utilize heat pipes to transmit heat to or from a thermal reservoir. In a solar heating system, a heat pipe is

utilized to carry heat from a solar heat absorber plate that receives sunlight, through a thermal insulation barrier, to a heat storage wall, with the outer end of the pipe which is in contact with the solar absorber being lower than the inner end. The inclining of the heat pipe assures that the portion of working fluid, such as Freon, which is in a liquid phase will fall by gravity to the outer end of the pipe, thereby

assuring diode action that prevents the reverse transfer of heat from the reservoir to the outside on cool nights. In a cooling system, the outer end of the pipe which connects to a heat dissipator, is higher than the inner end that is coupled to a cold reservoir, to allow heat transfer only out of the reservoir to the heat dissipator, and not in the reverse direction. Write: DOE.

PAT-APPL-6-021 293

Generating End Plug Potentials in Tandem Mirror Plasma Confinement by Heating Thermal Particles So as to Escape Low Density End Stopping Plasmas/299

Génération de potentiels bouchons d'extrémité dans le confinement plasmatique miroir tandem par chauffage de particules thermiques pour qu'elles s'échappent des plasmas d'arrêt d'extrémité de faible densité/299

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed March 16, 1979, by the Department of Energy. The invention provides a method and apparatus for raising the potential of a magnetic mirror cell by pumping charged particles of the opposite sign of the potential desired out of the mirror cell through excitation, with the pumping being done by an externally imposed field at the bounce frequency of the above charged particles. These pumped simple mirror cells then provide end stoppering for a

center mirror cell for the tandem mirror plasma confinement apparatus. For the substantially complete pumping case, the end plugs of a tandem mirror can be up to two orders of magnitude lower in density for confining a given center mirror cell plasma than in the case of end plugs without pumping. As a result the decrease in recirculating power required to keep the system going, the technical state of the art required, and the capital cost are all greatly lowered. Write: DOE.

PAT-APPL-6-022 894

Production of Field-Reversed Mirror Plasma with a Coaxial Plasma Gun/299

Production d'un plasma miroir à champ inversé à l'aide d'un canon plasmatique coaxial/299

Filed March 22, 1979, by the Department of Energy. The use of a coaxial plasma gun to produce a plasma ring which is directed into a magnetic field so as to form a field-reversed plasma confined in a magnetic mirror. Plasma thus pro-

duced may be used as a target for subsequent neutral beam injection or other similarly produced and projected plasma rings or for direct fusion energy release in a pulsed mode. Write: DOE.

PAT-APPL-6-022 897

Pre-Treatment for Molybdenum or Molybdenum-Rich Alloy Articles to Be Plated/299

Prétraitement en vue de leur placage d'éléments en molybdène ou en alliage à forte teneur en molybdène/299

Filed March 22, 1979, by the Department of Energy. A method is described for etching a molybdenum or molybdenum-rich alloy surface to promote the formation of an adherent bond with a subsequently deposited metallic plating. In a typical application, the method is used as a

pre-treatment for surfaces to be electrolessly plated with nickel. The pre-treatment comprises exposing the crystal boundaries of the surface by anodizing the surface in acidic solution to form a continuous film of gray molybdenum oxide and removing the film. Write: DOE.

PAT-APPL-6-025 503

Polymer Concrete Composites for the Production of High Strength Pipe and Linings in High Temperature Corrosive Environments/299

Composés polymériques de béton pour la fabrication de tuyaux et de revêtements à haute résistance dans les milieux corrosifs à haute température/299

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed March 30, 1979, by the Department of Energy. High temperature corrosive resistant, non-aqueous polymer concrete composites are described. They comprise about

12 to 20% by weight of a water-insoluble polymer binder polymerized in situ from a liquid monomer mixture consisting essentially of about 40 to 70% by weight of styrene, about 25 to 45% by weight acrylonitrile and about 2.5 to

7.5% by weight acrylamide or methacrylamide and about 1 to 10% by weight of a crosslinking agent. This agent is selected from the group consisting of trimethylolpropane trimethacrylate and divinyl benzene; and about 80 to 88% by weight of an inert inorganic filler system containing silica sand and portland cement, and optionally Fe sub 2 O

sub 3 or carbon black or mica. A free radical initiator such as di-tert-butyl peroxide, azobisisobutyronitrile, benzoyl peroxide, lauryl peroxide, other organic peroxides and combinations thereof to initiate crosspolymerization of the monomer mixture in the presence of said inorganic filler. Write: DOE.

PAT-APPL-6-027 689

High Temperature Chemically Resistant Polymer Concrete/299

Filed April 6, 1979, by the Department of Energy. High temperature chemically resistant, non-aqueous polymer concrete composites consist of about 12 to 20% by weight of a water-insoluble polymer binder. The binder is polymerized in situ from a liquid vinyl-type monomer or mixture of vinyl containing monomers such as triallylcyanurate, styrene, acrylonitrile, acrylamide, methacrylamide, methylmethacrylate, trimethylolpropane trimethacrylate and divinyl benzene. About 5 to 40% by weight of a reactive

Béton polymérique chimiquement résistant à haute température/299

inorganic filler selected from the group consisting of tricalcium silicate and dicalcium silicate and mixtures containing less than 2% free lime, and about 48 to 83% by weight of silica sand/ and a free radical initiator such as di-tert-butyl peroxide, azobisisobutyronitrile, benzoyl peroxide, lauryl peroxide, other organic peroxides and combinations to initiate polymerization of the monomer in the presence of the inorganic fillers are used. Write: DOE.

PAT-APPL-6-030 044

Method and Apparatus for Timing of Laser Beams in a Multiple Laser Beam Fusion System/299

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed April 13, 1979, by the Department of Energy. The optical path lengths of a plurality of comparison laser beams directed to impinge upon a common target from different directions are compared to that of a master laser beam by using an optical heterodyne interferometric detection technique. The technique consists of frequency shifting the master laser beam and combining the master beam with a first one of the comparison laser beams to produce a time-varying heterodyne interference pattern which is detected by a photodetector to produce an AC electrical signal indicative of the difference in the optical path

Méthode et appareil de synchronisation des faisceaux lasers dans un réacteur de fusion multifaisceaux/299

lengths of the two beams which were combined. The optical path length of this first comparison laser beam is adjusted to compensate for the detected difference in the optical path lengths of the two beams. The optical path lengths of all of the comparison laser beams are made equal to the optical path length of the master laser beam by repeating the optical path length adjustment process for each of the comparison laser beams. In this manner, the comparison laser beams are synchronized or timed to arrive at the target within $\pm 1 \times 10^{-12}$ second of each other. Write: DOE.

PAT-APPL-6-030 974

Decomposition of Silane on Tungsten or Other Materials/299

Filed April 18, 1979, by the Department of Energy. This invention relates to hydrogenated amorphous silicon produced by thermally decomposing silane (SiH sub 4) or other gases comprising H and Si, from a W or foil heated to a temperature of about 1400 to 1600 exp 0 C, in a vacuum of about 10- exp 6 to 10- exp 4 torr. A gaseous mixture is formed of atomic hydrogen and atomic silicon. The gase-

Décomposition du silane sur du tungstène ou sur d'autres matériaux/299

ous mixture is deposited onto a substrate independent of and outside the source of thermal decomposition. Hydrogenated amorphous silicon is formed. The presence of an ammonia atmosphere in the vacuum chamber enhances the photoconductivity of the hydrogenated amorphous silicon film. Write: DOE.

PAT-APPL-6-033 088

Process for Treating Weldments/299

Filed April 25, 1979, by the Department of Energy. The tensile ductility and impact strength of weldments of nickel-based and stainless steel alloys are improved to that of the unaffected base metal by subjecting the weldments

Traitement de pièces soudées/299

to an elevated temperature at an isostatic pressure for a period of time sufficient to render the material in the weld more homogeneous. Write: DOE.

PAT-APPL-6-037 247

Method of Forming Single Crystal of Beta Silicon Carbide/299

Filed May 9, 1979, by the Department of Energy. A method of growing single crystals of beta SiC from solution using molten lithium as a solvent for polycrystalline SiC feed

Méthode de formation de cristaux simples de carbure de silicium bêta/299

material. Reasonable growth rates are accomplished at temperatures in the range of about 1330 exp 0 C or about 1500 exp 0 C. Write: DOE.

PAT-APPL-6-039 527

Improved Method and Apparatus for Electrostatically Sorting Biological Cells/299

Filed May 16, 1979, by the Department of Energy. An improved method of sorting biological cells in a conventional cell sorter apparatus includes generating a fluid jet containing cells to be sorted, measuring the distance between the centers of adjacent droplets in a zone thereof defined at the point where the fluid jet separates into discrete droplets, setting the distance between the center of a droplet in said separation zone and the position along said

Meilleure méthode de triage électrostatique des cellules biologiques/299

fluid jet at which the cell is optically sensed for specific characteristics to be an integral multiple of said center-to-center distance, and disabling a charger from electrically charging a specific droplet if a cell is detected by the optical sensor in a position wherein it will be in the neck area between droplets during droplet formation rather than within a predetermined distance from the droplet center. Write: DOE.

PAT-APPL-6-040 810

Chemical Vapor Deposition of Sialon/299

Filed May 21, 1979, by the Department of Energy. A laminated composite and a method for forming the composite by chemical vapor deposition are described. The composite includes a layer of sialon and a material to which the layer is bonded. The method includes the steps of ex-

Dépôt en phase gazeuse du sialon/299

posing a surface of the material to an ammonia containing atmosphere; heating the surface to at least about 1200 exp 0 C; and impinging a gas containing N sub 2, SiCl sub 4, and AlCl sub 3 on the surface. Write: DOE.

PAT-APPL-6-047 444

Fe-Based Long Range Ordered Alloys/299

Filed June 11, 1979, by the Department of Energy. Malleable long range ordered alloys with high critical ordering temperatures exist in the V(Co,Fe) sub 3 and V(Co,Fe,Ni) sub 3 system. The composition comprising by weight 22 to 23% V, 35 to 50% Fe, 0 to 22% Co and 19 to 40% Ni with an electron density no greater than 8.00. Excellent high temperature properties occur in alloys having composi-

Alliages ordonnés à long terme à base de fer/299

tions comprising by weight 22 to 23% V, 35 to 45% Fe, 0 to 10% Co, 25 to 35% Ni; 22 to 23% V, 28 to 33% Ni and the remainder Fe; and 22 to 23% V, 19 to 22% Co and the remainder Fe. The alloys are fabricable by casting, deforming and annealing for sufficient time to provide ordered structure. Write: DOE.

PAT-APPL-6-047 445

Coated Woven Materials and Method of Preparation/299

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed June 11, 1979, by the Department of Energy. Coating of woven materials so that not only the outer surfaces are coated has been a problem. Now, a solution to that problem is by coating with materials, with metals or with pyrolytic carbon. Materials are deposited in Chemical Vapor

Matériaux tissés enduits et méthode de préparation/299

Deposition (CND) reactions using a fluidized bed so that the porosity of the woven materials is retained and the tiny filaments which make up the strands which are woven (including inner as well as outer filaments) are substantially uniformly coated. Write: DOE.

PAT-APPL-6-047 597

Silicon-Nitride and Metal Composite/299

Composé de métal et de nitrure de silicium/299

Filed June 11, 1979, by the Department of Energy. A composite and a method for bonding the composite are described. The composite includes a ceramic portion of silicon nitride, a refractory metal portion and a layer of MoSi sub 2 indirectly bonding the composite together. The method includes contacting the layer of MoSi sub 2 with a surface of the silicon nitride and with a surface of the

metal; heating the layer to a temperature below 1400 exp 0 C; and, simultaneously, compressing the layer such that the contacting is with a pressure of at least 30 MPa. This composite overcomes useful life problems in the fabrication of parts for a helical expander for use in power generation. Write: DOE.

PAT-APPL-6-048 332

Method of Winning Aluminum Metal from Aluminous Ore/299

Méthode d'extraction de l'aluminium du minerai alumineux/299

Filed June 14, 1979, by the Department of Energy. Aluminous ore such as bauxite containing alumina is blended with coke or other suitable form of carbon and reacted with sulfur gas at an elevated temperature. For handling, the ore and coke can be extruded into conveniently sized pellets. The reaction with sulfur gas produces molten aluminum sulfide which is separated from residual solid reactants and impurities. The aluminum sulfide is further increased in temperature to cause its decomposition or sublimation,

yielding aluminum subsulfide liquid (A1S) and sulfur gas that is recycled. The aluminum monosulfide is then cooled to below its disproportionation temperature to again form molten aluminum sulfide and aluminum metal. A liquid-liquid or liquid-solid separation, depending on the separation temperature, provides product aluminum and aluminum sulfide for recycle to the disproportionation step. Write: DOE.

PAT-APPL-6-050 379

Thermochemical Cyclic System for Splitting Water and/or Carbon Dioxide by Means of Cerium Compounds and Reactions Useful Therein/299

Système à cycle thermochimique pour séparation de l'eau et/ou du dioxyde de carbone au moyen de composés de cérium et réactions utiles pour ce faire/299

Filed June 20, 1979, by the Department of Energy. A thermochemical cyclic process for producing hydrogen from water comprises reacting ceric oxide with monobasic or dibasic alkali metal phosphate to yield a solid reaction product, oxygen and water. The solid reaction product, alkali metal carbonate or bicarbonate, and water, are reacted to yield hydrogen, ceric oxide, carbon dioxide and trialkali metal phosphate. Ceric oxide is recycled. Trialkali metal phosphate, carbon dioxide and water are reacted to

yield monobasic or dibasic alkali metal phosphate and alkali metal bicarbonate, which are recycled. The cyclic process can be modified for producing carbon monoxide from carbon dioxide by reacting the alkali metal cerous phosphate and alkali metal carbonate or bicarbonate in the absence of water to produce carbon monoxide, ceric oxide, carbon dioxide and trialkali metal phosphate. Carbon monoxide can be converted to hydrogen by the water gas shift reaction. Write: DOE.

PAT-APPL-6-052 180

Delta Ferrite-Containing Austenitic Stainless Steel Resistant to the Formation of Undesirable Phases Upon Aging/299

Acier inoxydable austénitique contenant du ferrite delta résistant à la formation de phases indésirables en vieillissant/299

Filed June 26, 1979, by the Department of Energy. Austenitic stainless steel alloys containing delta ferrite, such as are used as weld deposits, are protected against the transformation of delta ferrite to sigma phase during

aging by the presence of carbon plus nitrogen in a weight percent 0.015 to 0.030 times the volume percent ferrite present in the alloy. The formation of chi phase upon aging is controlled by controlling the Mo content. Write: DOE.

PAT-APPL-6-052 278

Thermal Decomposition of Silane to Form Hydrogenated Amorphous Si./299

Filed June 26, 1979, by the Department of Energy. Hydrogenated amorphous silicon is produced by thermally decomposing silane (SiH sub 4) or other gases comprising H and Si, at elevated temperatures of about 1700 to 2300

Décomposition thermique du silane pour former du silicium amorphe hydrogéné/299

exp 0 C, in a vacuum of about 10 exp -8 to 10 exp -4 torr. A gaseous mixture is formed of atomic hydrogen and atomic silicon. The gaseous mixture is deposited onto a substrate to form hydrogenated amorphous silicon. Write: DOE.

PAT-APPL-6-092 102

Polymer Alloy Blood Compatible Surface and Method of Making Same/299

Filed November 7, 1979, by the Department of Health, Education, and Welfare. A blood contacting layer and a blood contacting interface consisting of a solvent cast polyurethane alloyed with a filler-free silicone rubber. In the above, the alloy interface comprises an interpenetrating polymer network consisting of polyurethane and filler-free silicone rubber at the molecular level. The process or method of making the layer consists of preheating a metal mold such as an aluminum mold and filling it with a wax. After the wax form is removed, polished and cleaned, it is dipped first in

Alliage polymérique hématophile et méthode de fabrication/299

a filler-free silicone rubber which is cured. It is then dipped in segmented polyurethane with curing of 150F for about one hour to evaporate the polyurethane solvent. Multiple dips are utilized up to 5 or 7 for implementing the polyurethane. The form containing both silicone rubber and polyurethane is finally cured for a day or 24 hours at about 150F and the wax form is removed. Finally, the silicone rubber lining is removed, leaving the binary alloy blood contacting surfaced polyurethane sac. Write: NTIS.

PAT-APPL-6-094 814

Homocysteine Thiolactone Perchlorate and a Method of Making Same/299

Filed November 16, 1979, by the Department of Health, Education, and Welfare. Homocysteine thiolactone perchlorate is prepared from the corresponding homocysteine thiolactone hydrochloride and optimally about two equivalents of perchloric acid as reactants. The product perchlorate salt is soluble in organic solvents, whereas other

Perchlorate thiolactone homocystéine et méthode de fabrication/299

known salts such as the hydrochloride are only water soluble. This property is thought to influence the growth effect of the perchlorate salt in animals, such as rabbits, and to influence the unique effect of the perchlorate salt on the growth of malignant tumours in animals, such as mice. Write: NTIS.

PAT-APPL-6-100 496

N-Acetyl-Cysteine Protects Against Cardiac Damage from Subsequently-Administered Cardio-Toxic Anthracycline in Cancer Therapy/299

Filed December 5, 1979, by the Department of Health, Education, and Welfare. The cardiac damage, occurring after treatment with an anthracycline, such as adriamycin, is

N-acétylcystéine protégeant contre les défaillances cardiaques lorsque administré avant un anthracycline cardio-toxique de traitement du cancer/299

prevented when N-acetyl-cysteine is orally administered about one hour prior to the treatment with the anthracycline. Write: NTIS.

PAT-APPL-6-101 074

Nuclease-Resistant Hydrophilic Complex of Polyribonucleosinic-Polyribocytidylic Acid/299

Filed December 7, 1980, by the Department of Health, Education, and Welfare. A nuclease-resistant hydrophilic complex of polyribonucleosinic-polyribocytidylic acid, poly-L-lysine and carboxymethylcellulose, and injectable preparations thereof in a pharmaceutically acceptable aqueous

Complexe hydrophile résistant aux nucléases de l'acide polyribonucleosinique-polyribocytidylique/299

carrier such as saline solution. When administered to a human or non-human primate host, the complex is effective in inducing the synthesis in such host of antiviral levels of interferon. Write: NTIS.

PAT-APPL-6-104 806

L-Acetyl Carnitine Infusion to Prevent Glucose and Fatty Acid Oxidation During Myocardial Ischemia, Anoxia, and Other Diseases/299

Filed December 18, 1979, by the Department of Health, Education, and Welfare. The invention provides a method of preventing the accumulation of the toxic products of glucose and fatty acid metabolism during myocardial ischemia and other diseases by infusing L-acetyl carnitine

Infusion de L-acétylcarnitine pour prévenir l'oxydation du glucose et des acides gras pendant des maladies telles l'ischémie myocardique et l'anoxie/299

or its racemic mixture with D-acetyl carnitine into the body in a dosage of about from 20 to 40 milligrams per kilogram of body weight. The L-acetyl carnitine may be used to replace glucose or fatty acids in situations where the body needs a quick source of energy. Write: NTIS.

PAT-APPL-6-126 108

Absorbed Dose Water Calorimeter/299

Filed February 29, 1980, by the Department of Health, Education, and Welfare. The present invention relates to a device for determining radiation dose and, more particu-

Dosimètre calorimétrique à eau/299

larly, to a standard dose measuring device against which other types of dosimeters may be calibrated. Write: NTIS.

PAT-APPL-6-129 982

Steel Wire Pressure Aesthesiometer/299

Filed March 11, 1980, by the Department of Health, Education, and Welfare. This invention relates to neurological test apparatus, and more particularly to sensory response

Esthésiomètre à pression à fil de fer/299

testing equipment for use in the assessment of abnormal sensory patterns such as those associated with leprosy neuritis and similar diseases. Write: NTIS.

PAT-APPL-6-130 562

Process for the Preparation of Phosphonoacetic Acid/299

Filed March 14, 1980, by the Department of Health, Education, and Welfare. Phosphonoacetic acid can be prepared by the hydrolysis of trialkylphosphonoacetates in refluxing

Procédé de préparation de l'acide phosphonoacétique/299

aqueous hydrochloric acid. Following the reflux period, the bulk of the aqueous hydrochloric acid is removed from the reaction mixture by distillation. Write: NTIS.

PAT-APPL-6-139 236

Hepatitis B Immune Globulin Used to Inactivate Hepatitis B Virus in Injectable Biological Products/299

Filed April 11, 1980, by the Department of Health, Education, and Welfare. The utilization of hepatitis B immune globulin as a preparation for preventing transmission of the hepatitis B virus (HBV) by injectable biologics, by incubation of the injectable biologics and hepatitis B immune globulin together in vitro prior to administration to patient.

Globuline d'immunisation à l'hépatite B utilisée pour inactiver le virus de l'hépatite B dans les produits biologiques injectables/299

The hepatitis B immune globulin is utilized in a dosage of 5 ml and in a preferred titer of 1 to 100,000. The titer may vary to a range of 1 to 100 concentration with an intermediate range of 1 to 1,000; ranging down to 1 to 100,000. Also there may be used other immune globulins such as immune serum globulin (ISG). Write: NTIS.

PAT-APPL-6-141 676

Microtome with Refrigerant Container for Cooling Paraffin Blocks During Sectioning/299

Filed April 18, 1980, by the Department of Health, Education, and Welfare. This invention relates to microtomes of the type provided with means to cool the tissue block, and more particularly to a microtome including a cooling appa-

Microtome à réservoir de réfrigérant pour le refroidissement des blocs de paraffine pendant la coupe/299

ratus which provides constant uniform cooling of a tissue-containing paraffin block during cutting and which employs a conveniently renewable cooling agent. Write: NTIS.

PAT-APPL-6-141 764

Illuminated Surgical Instrument/299

Filed April 21, 1980, by the Department of Health, Education, and Welfare. The present invention relates to an illuminated retractor or speculum, and more particularly to a surgical retractor or speculum or the like having an im-

Instrument chirurgical lumineux/299

proved functional configuration and provided with means for illuminating the interior of a natural body cavity or a cavity formed by incision or a wound. Write: NTIS.

PAT-APPL-6-144 043

Optical Sensor of Plasma Constituents/299

Filed April 28, 1980, by the Department of Health, Education, and Welfare. The invention relates to devices for measuring the concentration of specific constituents in

Doseur optique des constituants de plasmas/299

blood in the body, or in other complex fluid media. Write: NTIS.

PAT-APPL-6-148 491

Apparatus and Method For Continuous Countercurrent Extraction and Particle Separation/299

Filed May, 1980, by the Department of Health, Education, and Welfare. The invention relates to continuous countercurrent extraction devices and to continuous particle separation devices, and more particularly to an elution method

Appareil et méthode pour extraction à contre-courant et séparation des particules en continu/299

and apparatus for continuous countercurrent chromatography and blood separation using a rotating coiled tube or conduit in an acceleration field. Write: NTIS.

PAT-APPL-6-145 209

Fully Plasma-Sprayed Compliant Backed Ceramic Turbine Seal/299

Filed April 30, 1980, by NASA. To maintain the minimum operating clearances between the blade tips and the lining of a high pressure turbine, a low temperature easily decomposable material, such as a polymer, in powder form is blended with a high temperature oxidation resistant metal powder. The two materials are simultaneously deposited on a substrate formed by the turbine casing. Alternately, the polymer powder may be added to the metal powder during plasma spraying. A ceramic layer is then deposited directly onto the metal-polymer composite. The polymer additive mixed with the metal is then completely volatilized

Joint d'étanchéité pour turbine à renforcement de céramique conforme réalisé par pulvérisation plasmique/299

to provide a porous layer between the ceramic layer and the substrate. Thermal stresses are reduced by virtue of the resulting porous structure which affords a cushion effect. By using plasma spraying for depositing both the powders of the metal and polymer material, as well as the ceramic powder, no brazing is required. Write: NASA, Lewis Research Center, 21000 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113.

PAT-APPL-6-157 150

Diesel Engine Catalytic Combustor System/299

Filed June 6, 1980, by NASA. A low compression turbocharged diesel engine is described in which the turbocharger can be operated independently of the engine to power auxiliary equipment. Fuel and air are burned in a catalytic combustor to drive the turbine wheel of the turbine section which is initially caused to rotate by the starter motor. By opening a flapper valve, compressed air from the blower section is directed to the catalytic combustor when it is heated and expanded, serving to drive the turbine wheel and also to heat the catalytic element. To

Système de combustion catalytique pour moteur diesel/299

start the engine, one valve is closed, combustion is terminated in the catalytic combustor, and another valve is then opened to utilize air from the blower for the air driven motor. When the engine starts, the constituents in its exhaust gas react in the catalytic element and the heat generated provides additional energy for the turbine section. Write: NASA, Lewis Research Center, 21000 Brookpark Road, Cleveland, Ohio 44135 and send a copy of your initial correspondence to Canadian Consulate, Illuminating Building, 55 Public Square, Cleveland, Ohio 44113, U.S.A.

PAT-APPL-6-145 107

Heat Sealable, Flame and Abrasion Resistant Coated Fabric/299

Filed April 30, 1980, by NASA. A flexible, lightweight air impermeable coated fabric was developed to replace the flame retardant neoprene coated nylon fabric used as the micrometeorite protection layer in the intravehicular thermometeorite garment. The elastometric compositions are comprised of thermoplastic polyurethane polymer and flame retarding amounts of a filler selected from decabromodiphenyloxyde and antimony oxide in a 3:1 weight ratio, and decabromodiphenyloxyde, antimony oxide, and ammonium polyphosphate in a 3:1:3 weight

Tissu enduit thermoscellable résistant à la flamme et à l'abrasion/299

ratio. The compounds were dissolved at about 40% solids in tetrahydrofuran. Films cast from the solution were dried and bonded to the fabric under heat and pressure at 400 F, 30 psi with 10 sec dwell time. Either heat or dielectric sealing procedures can be used. Write: NASA, Lyndon B. Johnson Space Center, Mail Code: AM, Houston, Texas 77058 and send a copy of your initial correspondence to Canadian Consulate, 2001 Bryan Tower, Suite 1600, Dallas, Texas 75201.

PAT-APPL-6-145 206

Cavity-Backed, Micro-Strip Dipole Antenna Array/299

Filed April 30, 1980, by NASA. A flush mounted, microwave band antenna for high performance aircraft and space vehicles is disclosed. Features of the cavity-backed microstrip antenna include: (1) low cost construction; (2) microstrip elements in orthogonal dipole arrangement and (3) circular polarized sum and difference radiation patterns. The micro-

Réseau de doublets microstrip à alimentation par cavités/299

strip antenna elements are fed through quadrature hybrids proceeded by a comparator hybrid. Write: NASA, Lyndon B. Johnson Space Center, Mail Code: AM, Houston, Texas 77058 and send a copy of your initial correspondence to Canadian Consulate, 2001 Bryan Tower, Suite 1600, Dallas, Texas 75201.

PAT-APPL-6-145 272

Photoelectric Detection System/299

Filed April 30, 1980, by NASA. A photoelectric beam system for the detection of the arrival of an object at a discrete station wherein artificial light, natural light, or no light may be present is described. A signal generator turns a signal light on and off at a selected frequency. When the object in question arrives on station ambient light is blocked by the object and the signal light is reflected onto a photoelectric sensor having a delayed electrical output and of the same frequency as the signal light. Outputs from both the signal source and the photoelectric sensor are fed to inputs of an exclusively OR detector which provides as an

Dispositif de détection photoélectrique/299

output the difference between them. The difference signal is a small width pulse occurring at the frequency of the signal source. This signal is distinguished from those responsive to sunlight, darkness, or 120 Hz artificial light by filter means. In this fashion, An object presence is thereby established. Write: NASA, Marshall Space Flight Center, Mail Code: CC01, Huntsville, Alabama 35812 and send a copy of your initial correspondence to Canadian Consulate General, 900 Coastal States Building, 260 Peachtree Street, Atlanta, Georgia 30303, U.S.A.

PAT-APPL-6-145 208

Heating and Cooling System/299

Filed April 30, 1980, by NASA. An apparatus capable of cyclic heating and cooling of a test specimen undergoing fatigue testing is disclosed. Cryogenic fluid is passed through a block clamped to the specimen to cool the block and the specimen. Heating cartridges penetrate the block to heat the block and the specimen to very hot temperatures. Control apparatus is provided to alternately activate the cooling and heating modes to effect cyclic heating and

Dispositif de chauffage et de refroidissement/299

cooling between very hot and very cold temperatures. The block is constructed of minimal mass to facilitate the rapid temperature change thereof. Write: NASA, Langley Research Center, Mail Code: 279, Hampton, Virginia 23665 and send a copy of your initial correspondence to Canadian Consulate, 3 Parkway Building, Suite 1310, Philadelphia, Pennsylvania 19102, U.S.A.

PAT-APPL-6-150 040

Coherently Pulsed Laser Source/299

Filed May 15, 1980, by NASA. An electronically controllable apparatus is described which modulates a continuous

Source à laser pulsé cohérent/299

wave laser beam so as to produce an output beam consisting of coherent 'pulses' that are electronically control-

lable as to both pulse repetition rate and pulse width. The apparatus includes two acoustic devices positioned so that the laser beam passes through them in sequence, and an apparatus for passing sound waves through the devices to frequency shift the laser radiation as well as to diffract it. Each acoustic device generates sound waves containing a group of frequencies which result in spaced pulses. The

spreading of a laser beam which emanates from the first acoustic device is countered by the second acoustic device to produce a collimated, coherently pulses, laser beam. Write: Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code: 180-601, 4800 Oak Grove Drive, Pasadena, California 91103.

PAT-APPL-6-150 115

Solar-Heated Fluidized Bed Gasification System/299

Système de gazéification sur lit fluidisé chauffé au solaire/299

Filed May 15, 1980, by NASA. A solar-powered fluidized bed gasification system for gasifying carbonaceous material is disclosed. The system includes a solar gasifier which is heated by fluidizing gas and steam. Energy to heat the gas and steam is supplied by a high heat capacity refractory honeycomb which surrounds the fluid bed reactor zone. The high heat capacity refractory honeycomb is heated by solar energy focused on the honeycomb by solar concentrator through solar window. The fluid bed reaction zone is also heated directly by thermal contact to the high heat capacity ceramic honeycomb with the walls of the fluidized

bed reactor. Provisions are also made for recovering and recycling catalysts used in the gasification process. A back-up furnace is provided for start-up procedures and for supplying heat to the fluid bed reaction zone when adequate supplies of solar energy are not available. Write: Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code: 180-601, 4800 Oak Grove Drive, Pasadena, California 91103 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014, U.S.A.

PAT-APPL-6-154 725

Hermetic Seal for a Shaft/299

Joint d'arbre étanche/299

Filed May 30, 1980, by NASA. An hermetic seal for a linear rod with a portion projected axially through a port in a wall for a pressure chamber and supported for omnidirectional motion. The seal is characterized by a resilient, impervious, cylindrical body concentrically and integrally fixed to a shaft comprising a linear ordered array of annular flutes. A section integrally fixed to the wall of the chamber and concentrically related to the port comprises a second linear ordered array of annular flutes. A third section interposed

between the first and second sections and integrally in coaxial alignment with them comprises an annular ordered array of linear flutes concentrically related to the shaft, which allows axial, angular, and pivoted motion of the rod. Write: Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code: 180-601, 4800 Oak Grove Drive, Pasadena, California 91103 and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014, U.S.A.

PAT-APPL-6-154 726

Stark Effect Spectrophone for Continuous Absorption Spectra Monitoring/299

Spectrophone à effet Stark pour monitoring continu par absorption du spectre/299

Filed May 30, 1980, by NASA. A Stark effect spectrophone is provided with a pulsed or continuous wave laser for monitoring the constituents of an unknown gas. The laser beam is directed through windows of a closed cell while the unknown gas to be monitored is caused to flow continuously through the cell between electric field plates disposed in the cell on opposite sides of the beam path through the cell. The plates are so disposed as to be divergent, e.g., flat plates at an oblique angle relative to each other, or plates shaped according to a mathematical function, so that with constant voltage applied across the plates there is a variation in electric field strength along the beam path. Discrete energy absorption sensors are

positioned at field strength points of interest. When a beam is passed through the cell, energy absorbed by the gas then present in the cell will increase gas pressure and temperature at each point along the beam path according to the spectral lines of the constituents of the gas for the particular field strengths at those points. This increase is sensed at each point simultaneously while modulating the absorption of the beams energy by the gas sample in the cell. Write: Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code: 180-601, 4800 Oak Grove Drive, Pasadena, California 91103, and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014, U.S.A.

PAT-APPL-6-163 840

An Improved Head for High Speed Spinner Having a Vacuum Chuck/299

Filed June 27, 1980, by NASA. A head for a high-speed spinner is characterized by a cylindrical body adapted to be mounted at the distal end of a vertically oriented drive shaft. A vacuum chuck having an upwardly facing chamber is circumscribed by an annular surface for receiving a silicon chip. An ordered array of low-pressure cavities is defined about the periphery of the body and is connected with the chamber via radially extended bores for trans-

Tête améliorée pour spinner grande vitesse à mandrin sous vide/299

lating low pressures to the chamber as the head is angularly displaced. A pressure differential is thus established across the chip for securing it to the head. Write: Monte F. Mott, Patent Counsel, NASA Resident Legal Office, Mail Code: 180-601, 4800 Oak Grove Drive, Pasadena, California 91103, and send a copy of your initial correspondence to Canadian Consulate General, 510 West Sixth Street, Los Angeles, California 90014, U.S.A.

PAT-APPL-6-109 940

Miniaturized Scan Within a Pulse Sonar/299

Filed April 1, 1980, by the Department of the Navy. An improvement for a sonar is provided wherein the improvement includes a line array of N listening transducer elements, each listening element being capable of receiving an acoustic signal and outputting a corresponding electrical signal. A plurality of beamformers is provided wherein each beamformer has an input and an output, the input of each beamformer receiving the output from each listening element. A switching device is interconnected between the

Scanner miniature intégré à un sonar à impulsions/299

listening elements and the beamformers for alternately switching the outputs of the listening elements to each beamformer between two modes, one mode being a predetermined order and the other mode being an inversion of the predetermined order. With this arrangement only half the normal number of beamformers is required, thereby significantly reducing the weight and size of the sonar. Write: Department of the Navy.

PAT-APPL-6-137 045

Laser Beam Linear Adjustable Integrating Mirror/299

Filed April 3, 1980, by the Department of the Navy. An adjustable linear integrating mirror for producing spatially uniform beam areas of high power lasers. The mirror is formed by a plurality of thin solid rectangular blocks made of a highly reflective metal with one thin face ground to a flat mirror finish. The blocks are assembled one upon the other with their mirror faces in alignment and held together at their ends by strips of spring steel. Wedge-shaped spacers are inserted between their free ends opposite the mirrored face to produce small angular rotations of each

Miroir intégrateur linéaire ajustable pour faisceau laser/299

mirrored block. The spring steel should have sufficient tension to secure the wedges in place; however, if necessary, clamps may be used to hold the back ends together to secure the wedges in place. The angular setting of the mirrored blocks will determine the amount of overlay of the reflected laser beam. Fine tuning for a specific overlay may be performed by varying the depth of the wedges which varies the angular setting of each mirrored block section. Write: Department of the Navy.

PAT-APPL-6-141 076

Temperature Stabilization Circuit for Charge Coupled Photodiode Array/299

Filed April 17, 1980, by the Department of the Navy. A temperature compensating circuit for a Charge Coupled Photodiode array which monitors a composite video output signal from a video processor and generates an error signal proportional to the square wave resulting from an unbalanced condition. The error signal is used to generate bias

Circuit de stabilisation de la température pour réseau de photodiodes à transfert de charge/299

voltages which are applied to the Charge Coupled Photodiode array and a degenerative feedback loop is formed which nulls the error signal and automatically balances the array odd and even video outputs. Write: Department of the Navy.

PAT-APPL-6-142 794

Localized Anodic Thinning/299

Filed April 22, 1980, by the Department of the Navy. A protective mask and a method of localized anodic thinning to

Amincissement anodique localisé/299

prevent excessive thinning of an epitaxial layer in the forming of a field effect transistor. A moat exposing the epi-

taxial layer is provided in the protective mask surrounding a device pattern or group of patterns to be formed in the epitaxial layer by anodic thinning. During the thinning process, the area of the epitaxial layer exposed by the moat

becomes fully depleted and cuts off current into the region surrounded by the moat and prevents excessive thinning of the epitaxial layer under the design pattern. Write: Department of the Navy.

PAT-APPL-6-143 562

Semiconductor Composition/299

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed April 25, 1980, by the Department of the Navy. A variable temperature method for the preparation of single and multiple epitaxial layers of single-phase (e.g., face-centered cubic), ternary lead chalcogenide alloys (e.g., lead cadmium sulfide, $(\text{Pb sub 1-w Cd sub w}) \text{a (S) sub 1-a}$ wherein w varies between zero and fifteen hundredths, inclusive, and $a = 0.500 + \text{ or } - 0.003$), deposited upon substrates of barium fluoride, BaF_2 , maintained in near thermodynamic

Composé semiconducteur/299

equilibrium with concurrently sublimated lead alloy and chalcogenide sources. During preparation, the temperature of the substrate is varied, thereby providing an epilayer with graded composition and predetermined electrical and optical properties along the direction of growth. This growth technique can be used to produce infrared lenses, narrowband detectors, and double heterojunction lasers. Write: Department of the Navy.

PAT-APPL-6-143 694

Graded Gap Semiconductor Detector/299

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed April 25, 1980, by the Department of the Navy. A variable temperature method for the preparation of single and multiple epitaxial layers of single-phase (e.g., face-centered cubic), ternary lead chalcogenide alloys (e.g., lead cadmium sulfide, $(\text{Pb sub 1-w Cd sub w}) \text{a (S) sub 1-a}$ wherein w varies between zero and fifteen hundredths, inclusive, and $a = 0.500 + \text{ or } - 0.003$), deposited upon substrates of barium fluoride, BaF_2 , maintained in near thermodynamic

Détecteur semiconducteur à couche de caractéristiques graduelles/299

equilibrium with concurrently sublimated lead alloy and chalcogenide sources. During preparation, the temperature of the substrate is varied, thereby providing an epilayer with graded composition and predetermined electrical and optical properties along the direction of growth. This growth technique can be used to produce infrared lenses, narrowband detectors, and double heterojunction lasers. Write: Department of the Navy.

PAT-APPL-6-143 695

Growth Technique for Preparing Graded Gap Semiconductors and Devices/299

Price per copy from NTIS: PC U.S. \$6.00/MF U.S. \$3.50, filed April 25, 1980, by the Department of the Navy. A variable temperature method for the preparation of single and multiple epitaxial layers of single-phase (e.g., face-centered cubic), ternary lead chalcogenide alloys (e.g., lead cadmium sulfide, $\text{pb sub 1-w cd sub w (s) sub 1-a}$ wherein w varies between zero and fifteen hundredths, inclusive, and $a = 0.500 + \text{ or } - 0.003$), deposited upon substrates of barium fluoride, BaF_2 , maintained in near thermodynamic

Technique de croissance pour dispositifs et semiconducteurs à couche de caractéristiques graduelles/299

equilibrium with concurrently sublimated lead alloy and chalcogenide sources. During preparation, the temperature of the substrate is varied, thereby providing an epilayer with graded composition and predetermined electrical and optical properties along the direction of growth. This growth technique can be used to produce infrared lenses, narrowband detectors, and double heterojunction lasers. Write: Department of the Navy.

PAT-APPL-6-147 440

Self-Contained Backflush/Start System for Suction LFC Undersea Vehicle/299

Filed May 7, 1980, by the Department of the Navy. A clean start backflush system provides a mode of operation in a suction laminar flow control (LFC) vehicle in which low speed propulsion and backflush through surface apertures are simultaneously generated. The propulsion assists the

Système autonome de démarrage/refoulement pour véhicule sous-marin à LFC par aspiration/299

transition from an at-rest state to the desired high-speed travel, while backflush in the low-speed regime ensures that ocean particles are not captured at the entrance to the flush suction slots. Write: Department of the Navy.

PAT-APPL-6-148 649

Borescope Guide/299

Filed May 12, 1980, by the Department of the Navy. An assemblage of tubular members for channeling, and thereby guiding, the fiber optic cable of a borescope into the recesses of an aircraft engine. A relatively flexible portion is topped by a rigid portion that is capped by a handle. The portions are removable housed in a larger tube that has a

Guide pour lunette d'alésage/299

curved lower portion to provide direction to the flexible tube and optic cable. The borescope cable is extended down through the handle and out the flexible portion, and can be maneuvered by turning the handle. Write: Department of the Navy.

PAT-APPL-6-149 051

TiNi Base Alloy Shape Memory Enhancement Through Thermal and Mechanical Processing/299

Filed May 12, 1980, by the Department of the Navy. A process for improving the shape change memory properties of a titanium-nickel base alloy by (1) heat treating the alloy to convert the TiNi phase to CsCl (B2)-type crystal structure, (2) cold working the alloy to increase the micro-twinning,

Amélioration des caractéristiques de reprise de la forme d'alliages à base de TiNi par traitement thermique et mécanique/299

and finally (3) thermal cycling the alloy through the transition temperature range (TTR) while a load is applied in order to improve the orientation of the micro-twins. Write: Department of the Navy.

PAT-APPL-6-150 874

Semiconductor Laser Alignment Device/299

Filed May 19, 1980, by the Department of the Navy. A semiconductor laser alignment device for aiming a laser light beam, broadcast by a weapon, along an optical light path such that the laser light beam is in alignment with the aiming direction of the weapon at a target which is located a predetermined distance from the weapon. The semiconductor laser alignment device comprises a tubular housing attached to the barrel of the weapon, a laser diode located

Dispositif semiconducteur d'alignement de faisceau laser/299

within the tubular housing for broadcasting the laser light beam, and a projecting lens for collimating the laser light beam broadcast by the laser diode. Zeroing means connected to the laser diode positions the laser diode such that the laser light beam broadcast by the laser diode is in alignment with the line of sight of the weapon. Write: Department of the Navy.

Licensing Opportunities Through the Foundation of Osaka Science and Technology Center, Japan

The following technologies are offered for manufacture under license in Canada. When requesting additional information, please quote the reference number. Write: International Department, The Foundation of Osaka Science and Technology Center, 1-8-4, Utsubo Hommachi, Nishi-ku, Osaka, Japan and send a copy of your initial correspondence to Commercial Division, Embassy of Canada, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japan.

Manufacturing technology for cast polyamide resins/299

This technology concerns the manufacture of cast polyamid resins (monomer cast nylon) by anionic polymerization of caprolactam. The basic technology of this process is to polymerize anhydrous or substantially anhydrous lactams of more than a five membered ring such as ϵ -caprolactam, lauryl lactam, etc. under the presence of anionic polymerization catalyst and polymerization activator. Polymerization activator such as triallylisocyanurate is liquid at room temperature and has good chemical stability and low toxicity to human beings. Thus it is safer and easier to process than other polymerization activator being used today. The monomer cast nylon to be obtained by this process has high tenacity, stands against high temperature, has high crystallinity and is easy to process by machining. It may be applied not only to a wide range of usages as an engineering plastic but also it finds various applications in food industries where product safety is particularly demanded, as it is white in color (no dyes nor pigments are added) and has excellent characteristics. Examples of applications are gears, bearings, rolls, cyclon cleaners, friction boards, bushings, buckets, etc. Reference No. M14-1 (6-53).

Hydraulic shearer/299

This shearer can be easily installed adjacent to a refuse incinerator or to any existing plant at low cost. It is usually installed adjacent to the refuse pit of incinerators in order to feed the shredded bulky refuse into the incinerator together with other refuse. Being driven by hydraulic pressure, this unit causes less noise, vibration and dust, and shows smaller power consumption. A series of cutting processes can be performed automatically by means of the electric controlling device. Reference No. TA1-4 (14-34).

Shredder (Swing-hammer type)/299

This shredder reduces all kinds of municipal bulky refuse and industrial wastes into fragments of adequate sizes.

Possibilités d'acquisition de licences par l'intermédiaire du Foundation of Osaka Science and Technology Center, Japon

Les techniques suivantes sont proposées pour la fabrication sous licence au Canada. Lors de la demande de renseignements supplémentaires, veuillez citer le numéro de référence. Écrire à: International Department, The Foundation of Osaka Science and Technology Center, 1-8-4, Utsubo Hommachi, Nishi-ku, Osaka, Japon et faire parvenir une copie de votre correspondance initiale à l'Ambassade du Canada, Division commerciale, 3-38 Akasaka 7 — Chome, Minato-ku, Tokyo 107, Japon.

Technologie de fabrication de résines polyamides de moulage/299

La technologie a trait à la fabrication de résines polyamides de moulage (nylon monomérique de moulage) par polymérisation anionique du caprolactame. Essentiellement, le procédé consiste à polymériser des lactames anhydres ou presque anhydres de plus d'un cycle à cinq membres comme le ϵ -caprolactame, le lactame de lauryle, etc. en présence d'un catalyseur et d'un activant de polymérisation. L'activant, tel le triallylisocyanurate, est liquide à température ambiante, est d'une bonne stabilité chimique et est peu toxique pour l'homme. Il est donc moins dangereux et de maniabilité plus grande que les autres activateurs aujourd'hui utilisés. Le nylon de moulage ainsi obtenu est d'une grande ténacité, d'une bonne tenue à haute température, d'une grande cristallinité et d'usinage facile. Il peut non seulement servir à la fabrication de pièces mécaniques mais aussi trouver une foule d'usages dans l'industrie alimentaire où la protection de la santé est de rigueur, puisqu'il est blanc (sans ajout de teintures ou de pigments) et présente d'excellentes caractéristiques. Exemples d'application: engrenages, roulements, galets, nettoyeurs cyclones, surfaces de frottement, coussinets, godets, etc. Référence n° M14-1 (6-53).

Cisaille hydraulique/299

Cette cisaille peut être facilement installée à côté d'un incinérateur à ordures ou de toute autre usine existante, à peu de frais. Elle est d'ordinaire installée à côté du foyer d'un incinérateur pour faciliter la manutention des gros produits à déchiqueter dans l'incinérateur avec les autres ordures. Elle est entraînée par pression hydraulique ce qui réduit le bruit, la vibration et la poussière et diminue la consommation d'énergie. On peut effectuer une série de coupes automatiquement au moyen d'un dispositif de commande électrique. Référence n° TA1-4 (14-34).

Déchiqueteuse (à marteau mobile)/299

Cette déchiqueteuse réduit les ordures municipales encombrantes et les déchets industriels en fragments de

Metal pieces may be recovered as valuables, and inflammable refuse is disposed by incineration. Final disposal of the nonflammable materials are utilized as composts or deposition for reclaiming lands. The structure and shredding mechanism of this machine include massive circular rotary discs with staggered swing-hammer arrangement which provides shredding across entire width of unit. The casing, which as a unique shape, is equipped with impact-blocks furnishing partial cutter-bars, four-stage cutter-bars and a discharge chute of refuse. The company can also provide a specially designed shredder equipped with grate bars instead of cutter bars. Discs and hammers rotating at high speed give impact force to the refuse against the impact-blocks and further exert multiple shearing and shredding actions repeatedly with relation to the cutter bars or grate bars. Reference No. TA1-5 (14-35).

Vertical type slurry pumps/299

This slurry pump is unique in construction. A centrifugal pump is connected directly with a wide-use motor or a canned motor to put a gas chamber between the above pump and the motor in a vertical direction. The gas shut tightly in the gas chamber obstructs the pump fluid to touch with such a shaft seal like a gland packing or a mechanical seal, consequently no trouble with the shaft seal. Therefore, the pump can deal with fluid containing slurry the same as pure fluid. This pump is also popular among users as the pump for crystalline fluid, suspensoid fluid, high-temperature fluid and liquid metal in various fields e.g. chemical industry, petroleum industry, food industry, etc. Especially the pump with the canned motor is the most suitable to dangerous, poisonous or expensive fluid, and indispensable to pollution control because of its perfect leak-proof. Reference No. TE1-4 (14-36).

Ball type flow meter/299

This ball type flow meter which is able to measure both instantaneous flow rate and integrated flow volume, is based on the principle that the detecting coil wound on the permanent magnet detects rotation frequency of the ball which rotates at speed in proportion to quantity of flow in the volute casing. Its construction therefore, is extremely simple. The ball type flow meter does not have such faults as a gear type or root type one which shows considerable pressure loss and damage by slurry. This ball type flow meter is usable to fluid containing slurry, suspensoid fluid, corrosive fluid and the like, and has wide applications, e.g. continuous measuring, automatic recording, process control, etc. by combining with other devices. Reference No. TE1-5 (15-9).

Operation supervisory apparatus for electric rotary machine/299

This operation supervisory apparatus for an electric rotary machine (TRG: TEIKOKU ROTARY GUARDIAN) is simply

dimension appropriée. Les pièces métalliques peuvent être récupérées si nécessaire et les ordures combustibles sont détruites par incinération. Pour les matériaux non combustibles, on les détruit en les utilisant comme compost ou comme matériau de remplissage dans les projets d'assèchement. La construction et le mécanisme de déchiquetage de cette machine sont indiqués ci-dessous. Des disques rotatifs circulaires et un dispositif de marteaux mobiles décalé assurent le déchiquetage sur toute la largeur de l'appareil. La trémie qui a une forme particulière est équipée de blocs d'impact qui comportent des barres de coupe partielle, des barres de coupe à quatre étages et une glissière de décharge pour les ordures. La compagnie peut aussi fournir une déchiqueteuse spéciale équipée de grilles au lieu de barres de coupe. Les disques et marteaux tournent à haute vitesse et heurtent les ordures avec une force considérable contre les blocs d'impact. Ils exercent également différentes actions de déchiquetage et de coupe en relation avec les barres de coupe et les barres à grille. Référence n° TA1-5 (14-35).

Pompe à boue de type vertical/299

Cette pompe à boue est un modèle de construction unique. Elle est constituée d'une pompe centrifuge reliée directement à un moteur universel ou en moteur enfermé pour constituer une chambre à gaz entre la pompe du dessus et le moteur dans le sens vertical. Le gaz est enfermé dans la chambre à gaz et empêche le fluide de la pompe de toucher le joint de l'arbre, comme un joint à compression ou un joint mécanique, de façon à ne pas abîmer ce joint. La pompe peut donc traiter les boues contenues comme un fluide ordinaire. Cette pompe est très populaire parmi les utilisateurs de fluides cristallins, de fluides à suspensions, de fluides à haute température et de métaux liquides dans différents domaines: industrie chimique, industrie pétrolière, industrie alimentaire, etc. La pompe avec moteur enfermé est particulièrement appropriée pour les fluides dangereux, toxiques ou à fort coefficient de dilatation. Elle est indispensable pour le contrôle de la pollution à cause de son étanchéité. Référence n° TE1-4 (14-36).

Débitmètre à bille/299

Ce débitmètre de type à bille peut mesurer le débit instantané ou le volume et il est basé sur un enroulement de détection sur un aimant permanent qui mesure la fréquence de rotation de la bille qui tourne à une vitesse proportionnelle au débit dans la volute, la construction est donc extrêmement simple. Le débitmètre à bille ne présente pas les défauts des modèles à engrenages de type Root qui ont souvent des pertes de pression considérables et sont susceptibles d'être abîmés par les boues. Ce débitmètre peut être utilisé pour des fluides contenant de la boue, des fluides à suspensions, des fluides corrosifs ou d'autres fluides similaires et il peut être utilisé dans divers domaines exemple: mesure continue, enregistrement automatique, contrôle de procédés, etc., en combinaison avec d'autres dispositifs. Référence n° TE1-5 (15-9).

Dispositif de surveillance des opérations pour machine rotative électrique/299

Ce dispositif de surveillance des opérations pour machine électrique (TRG: TEIKOKU ROTARY GUARDIAN) est tout

composed of a pair of detecting coils and a voltmeter. The detecting coils are wound on the stator coil of the said machine, and the voltmeter indicates the output signal from the detecting coils. TRG has surprising ability to detect electrical defects of the said machine (e.g. phase-failure, short-circuit, faults of winding and reverse rotation) and mechanical defects (e.g. wear and tear of bearings, eccentricity of rotar, and off-set rotation). TRG, therefore, makes a great contribution to the improvement of the security and reliability of the said machine and its system. TRG can always superintend the electric rotary machine either on the spot or at a distance by the signal of green (normal), yellow (caution) and red (danger) indicated on the voltmeter. An alarm circuit, an interlock circuit and the like in addition to TRG will make the supervision operation automatic. This TRG is now used for most of this manufacturer's canned motors and also for power generators made by other heavy electric machinery manufacturers. Reference No. TE1-6 (15-10).

simplement composé d'une paire de bobines de détection et d'un voltmètre. Les bobines de détection sont enroulées autour du stator de la machine et le voltmètre indique le signal de sortie des bobines de détection. Le dispositif TRG peut détecter les effets électriques de la machine (exemple: déphasage, court-circuit, rupture dans l'enroulement et rotation inversée) et les défauts mécaniques (usure des paliers, exentricité du rotor et dérèglement). Le dispositif TRG est donc particulièrement utile pour l'amélioration de la sécurité et de la fiabilité de la machine et du système. Il peut surveiller une machine rotative électrique sur place ou à distance au moyen d'un signal vert (normal), jaune (avertissement), rouge (danger), qui apparaît sur le voltmètre. Un circuit d'alarme, un circuit d'interverrouillage et d'autres dispositifs semblables s'ajoutent au TRG pour rendre la surveillance du fonctionnement automatique. Ce dispositif est actuellement utilisé par la plupart des fabricants de moteurs enfermés et des génératrices électriques fabriquées par les autres fabricants de machinerie électrique lourde. Référence n° TE1-6 (15-10).

International Invention and Technology Licensing Exhibitions 1981/82

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

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Wiener Stadthalle
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IWI INVENTORS EXPO '81
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IENA 81
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Expositions internationales sur la réglementation des inventions et des techniques, 1981-1982

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

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November 6-13, 1981

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Chiyoda-ku, Tokyo, Japan
November 10-14, 1981

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INVENTIONS AND NEW TECHNIQUES
Palais des Expositions
Genève, Suisse
November 27-December 6, 1981

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Président
Secrétariat, Salon International des Inventions
8, rue du 31-Décembre
CH-1207, Genève, Suisse
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EUREKA 30TH WORLD INVENTIONS EXHIBITION
Rogier Expo Centre
Brussels, Belgium
November/December 1981

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Centre International Rogier
Rue du Progrès
1000 Brussels, Belgique
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TRX FAIR 1982
Sydney, Australia
Date to be announced

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150 Queen Street
Melbourne, Victoria 3000, Australia
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TECH TRANSFAIR '82 (Biennial)
Royal Netherlands Industries Fair
Utrecht, Holland
May 1982

Mr. B. Pauwels
Royal Netherlands Industries Fair
P.O. Box 8500
3503 RM Utrecht, Holland
Tel: (030) 914-914 Telex: 47132

INVEX '82 Exhibition (Biennial)
Exhibition Center
Brno, Czechoslovakia
October 1982

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Bibliography

Inventors Assistance Program/299

The Innovation Centres at the University of Waterloo, Waterloo, Ontario and the École Polytechnique, Montreal, Quebec, administer the Inventors Assistance Program. Under this program, developed in response to a need for a service to the independent inventor, thorough feasibility studies are conducted on both the technical aspect and the marketability of the inventions. For a nominal fee, a report is provided to the inventor commenting on the safety, patentability, marketability, and profitability of the product as well as its impact on society and the environment. Additional information may be obtained by contacting:

Waterloo Innovation Centre
University of Waterloo
Waterloo, Ontario
N2L 3G1

Quebec Industrial
Innovation Centre
École Polytechnique
P.O. Box 6079, Station "A"
Montreal, Quebec
H3C 3A7

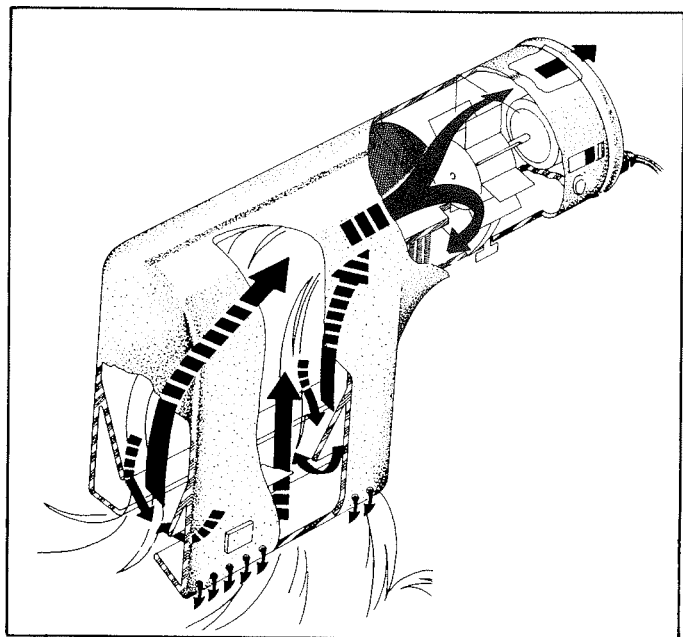
Bibliographie

Programme d'aide aux inventeurs/299

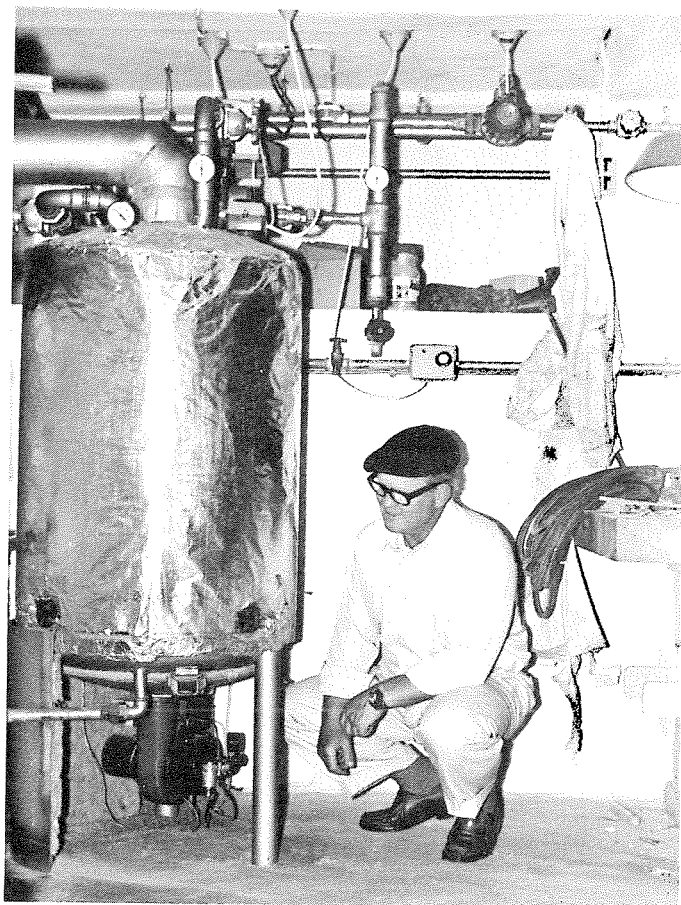
La gestion du Programme d'aide aux inventeurs est confiée aux centres d'innovation de l'Université de Waterloo (Ontario) et de l'École polytechnique (Montréal, Québec). Dans le cadre de ce programme, mis sur pied pour répondre aux besoins des inventeurs indépendants, des experts font des analyses de faisabilité poussée portant sur les aspects techniques et les possibilités de commercialisation des inventions. Moyennant des frais symboliques, l'inventeur reçoit un rapport sur la sécurité, les possibilités de protection par brevet, le potentiel commercial et les espérances de profit de son produit ainsi que sur son impact sur la société et l'environnement. On peut obtenir de plus amples renseignements aux adresses suivantes:

Centre d'innovation de
Waterloo
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École polytechnique
C.P. 6079, Succ. A
Montréal (Québec)
H3C 3A7



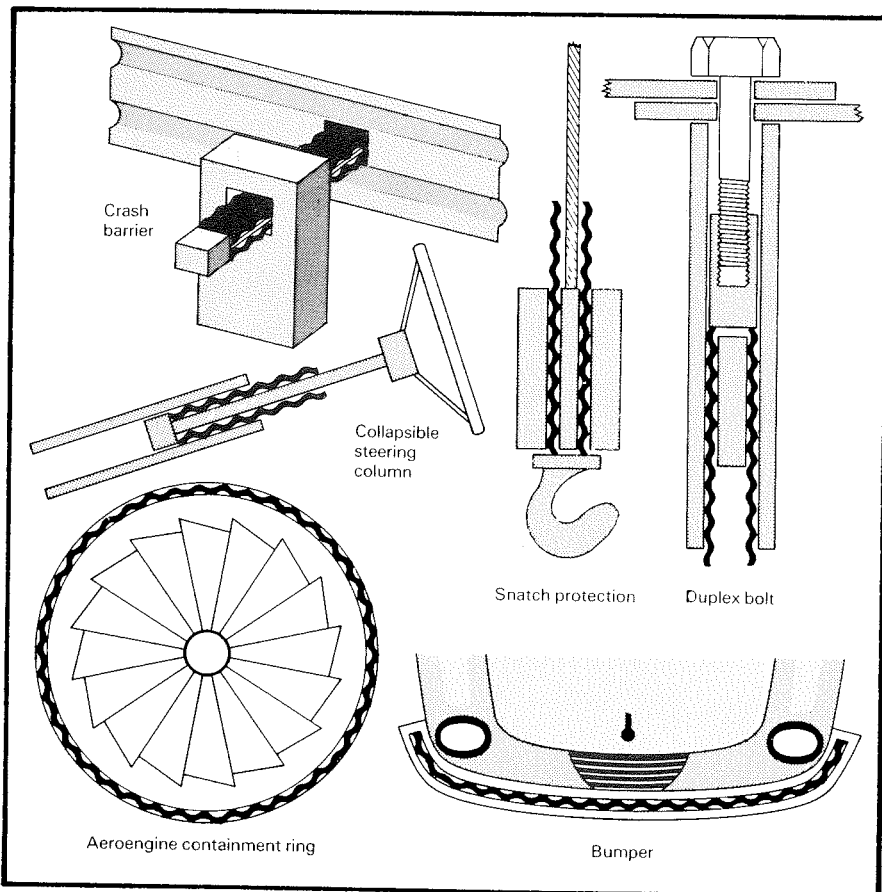
Hair Styling Device (See page 5) ▲
Appareil de coiffure (voir page 5)



Boiler (See page 7) ▶
Chaudière (voir page 7)

Damage Tolerant Structures (See page 6) ▶
Protection des structures susceptibles de dommages (voir page 6)

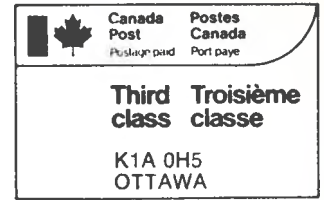
Self Storing Outdoor Grill (See page 9) ▼
Gril d'extérieur repliable (voir page 9)





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

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



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