

Issue 69 www.wrti.org.uk

# Inventique®

The newsletter of Wessex Round Table of Inventors August 2006

**18-21 October BRITISH INVENTION SHOW [www.britishinventionshow.com](http://www.britishinventionshow.com)**

## Dyson school for Bath

INNOVATION CENTRE 'BOOST FOR ENGINEERS'

**I**NVENTOR and entrepreneur James Dyson plans to set up a new style of school aimed at encouraging young people to consider engineering careers.

The Dyson School of Design Innovation in Bath will be a state school for 2,500 youngsters aged 14 to 18. Half the estimated £22m costs will come from the James Dyson Foundation, the rest from the government.

The school's design will feature prototypes from sponsors such as Airbus, Rolls-Royce and Formula One's Williams Racing in its atrium to inspire students.

Mr Dyson said: "If we want to continue in the footsteps of Brunel,

to innovate and engineer exciting and useful products, we need to start with education."

He added: "Our choice now is either to see Britain's jobs of tomorrow vanish to Mumbai or Shanghai or to educate the next generation in the skills of invention and business-building.

"The idea is to give children an introduction to engineering and to excite them as to what engineering can do."

He said a survey had suggested two thirds of young people would have liked to have studied engineering at GCSE level had they been offered the chance. ■

● [www.dyson.co.uk](http://www.dyson.co.uk)

**Next WRTI meeting  
WEDNESDAY 13 SEPTEMBER**

**WRTI meeting (guest speaker to be confirmed) and 'Inventors Clinic'.  
Room HC 017, Herbert Collins Building, Southampton Solent University, commencing at 6.30pm.  
Visitors welcome.**

● **Non-members wishing to attend should e-mail [secretary@wrti.co.uk](mailto:secretary@wrti.co.uk) or telephone 01420 562 378.  
Map: [www.streetmap.co.uk](http://www.streetmap.co.uk) (SO14 0RP)  
[www.wrti.org.uk/events](http://www.wrti.org.uk/events)**

### WRTI membership fees

Subscriptions for WRTI membership are now due. Cheques for £30 payable to WRTI should be sent to Mike Wright, Sorrento, Limes Close, Bramshott, Liphook, Hants GU30 7SL. It is also possible to pay on-line via PayPal ([treasurer@wrti.co.uk](mailto:treasurer@wrti.co.uk)) or by standing order. Student membership is free. ■

### THE SHELL SPRINGBOARD FUND,

which gives a cash boost to small businesses with a product or service that helps to reduce greenhouse gas emissions, is now open. SMEs may be able to benefit from awards of between £20,000 and £40,000 which become available in early 2007.

Your product or service must reduce greenhouse gases, be innovative and commercially viable, and you must be a sole trader or a company employing fewer than 250 people. The application deadline is 10 November 2006. ■

● [www.shellspringboard.org](http://www.shellspringboard.org)



**Calling all inventors! We're on the look-out for the next great undiscovered British invention to feature in a brand new prime-time show on Sky one, in association with Vodaphone.**

**If you think you've come up with the best thing since sliced bread, and want to win the chance to see your idea turned into a business reality, then contact the 'Next Big Idea' team on 01273 224800 or email us at [thenextbigidea@ricochet.co.uk](mailto:thenextbigidea@ricochet.co.uk) with your invention idea and a photograph.**

**We are waiting to hear from you...**

**RICOCHET**

Wessex Round Table of Inventors meet at 6.30pm on the second Wednesday of each month at Southampton Solent University, East Park Terrace SO14 0RP

## VIEW FROM THE CHAIR

WE AT THE WRTI congratulate our hosts, Southampton Solent University, on the inauguration of their first Chancellor, Sir Alan West, who as commander of HMS Ardent in the Falklands War and later First Sea Lord, gained a unique personal experience of protecting the UK.

In his inaugural speech to the University, Sir Alan emphasised the need for the UK to defend itself – not through physical means, but economically and intellectually against the growing economies of the developing world, adding that part of his role as chancellor was to foster innovation from “students who are capable of real independence of mind”.

In his keynote address to the WRTI in July, Trevor Baylis – speaking in his role as the club’s patron – also sounded a cautionary note about the threat from the new economies, and is convinced that “the collective creative strength generated by lone inventors across the UK is still an untapped economic resource”. Trevor and his colleagues set up Baylis Brands to help inventors get their ideas developed, but also see the education system as the place to nurture creativity.

Trevor believes that if schools teach art and inspire creative endeavour and artistic talent through the study of other artists’ work, there is no reason why they should not be able to teach invention in the same way – and thereby encourage youngsters to feel that creativity, innovation and invention is a normal, mainstream activity (which in turn can only be to this nation’s economic benefit).

Our patron is perplexed and frustrated that such a fundamentally obvious truism cannot be introduced to all schools and colleges within the UK. Perhaps the WRTI can start working with Southampton Solent University on this admirable idea during Sir Alan’s reign?

Sincerely,  
Richard

**RICHARD LITTLE, WRTI Chairman**

**INVENTORATOR** Graham Thomson

# Design protector

PATENT PLAN’S ROUTE FROM CONCEPTUAL IDEA TO INNOVATIVE DESIGN TO MANUFACTURED PRODUCT

**G**OOD INDUSTRIAL design and patent protection are at the heart of successful innovative design. At Patent Plan, we take client companies, entrepreneurs and lone inventors down a logical innovative design path to help make their products internationally successful at a reasonable cost. The service caters for small companies, universities and private inventors with limited funds who are unsure of the commercial value of their idea.

We study an idea and inject analysis, market and consumer values, functionality, aesthetics and ergonomics into it, then integrate the concept with appropriate materials, engineering and production methods to produce truly creative, internationally marketable yet sustainable solutions. What we *don’t* do is cut corners.

Patent Plan has assisted clients with inventions in sectors such as agriculture, automotive, catering, communication, computing, construction, DIY, gardening, packaging, marine, medical, security, and toys and games.

Clients are referred to us by personal recommendation or business sources, including Business Link – for whom we are an approved supplier – the DTI, enterprise agents, innovation centres, universities and patent agents.

## Way to go

There are two principal routes to making money out of a new product: you can licence the idea to another company in return for a royalty, or you can start a business around your idea. Both routes involve risk – and sadly there is no guarantee of success.

To minimise that risk, there are two key tasks you can undertake before making a substantial

financial commitment: patent your idea, and develop a working prototype. The team at Patent Plan have many years’ experience in patent application and early-stage innovation development, and can offer a standard of service usually only enjoyed by large organisations.

## Why is a patent required?

A patent is a monopoly granted to an inventor to prevent another person copying his or her idea. This monopoly is granted for a number of years in return for the inventor making the workings of an invention known to the public.

Patent Plan can assist you in the initial filing of a patent application. Your first move is to telephone us for a free and personal discussion about your idea and your objectives for commercialising it. We will discuss your invention with you in confidence, and a fixed fee will be agreed (usually between £300-£600). We will then prepare the description and drawings – usually within 14 days – and return them to you with the required official form for signing and forwarding to the Patent Office, who will normally send you your filing number and date within 14 days.

Your invention can then be designated ‘patent pending’. ■

**Next month: our 6-stage prototype service**

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● *Graham Thomson is industrial design director at Patent Plan.*

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# LICENSING YOUR PRODUCT

SHOULD INVENTORS USE A COMMERCIAL AGENT, OR A DISTRIBUTOR?

In the last few articles we have looked at how to protect your business and intellectual property rights, writes *Dr Rosanna Cooper*. We should now turn to the means of licensing your products.

The crucial question is whether to use a commercial agent or a distributor. I will start by focusing on the legal issues surrounding the use of commercial agents, and follow this by dealing with the distribution of your products.

## Commercial agents

Many commercial agents and their principals fall foul of the laws governing commercial agency simply because they are unaware of their existence. Commercial agency arrangements are governed by the Commercial Agents (Council Directive) Regulations 1993, which came about primarily to protect commercial agents.

The thinking behind this was that commercial agents generally tend to build up goodwill for principals and, therefore, if the agency agreement is terminated and this is not due to the default of the commercial agent, the agent would have to be compensated (see our recent update on breach of commercial agency agreements at [http://www.rtcoopers.com/commercial\\_agency\\_agreement.php](http://www.rtcoopers.com/commercial_agency_agreement.php)).

## ROSANNA COOPER CLARIFIES THE LEGAL POSITION FOR INVENTORS AND ENTREPRENEURS

At RT Coopers, our commercial lawyers have advised on numerous cases where principals do not know the law and find themselves having to compensate an agent – which usually means paying out large sums of money – because they have breached the regulations.

### Who is a commercial agent?

According to the regulations, a commercial agent is “a self-employed intermediary who has continuing authority to negotiate the sale or purchase of goods on behalf of another person (the ‘principal’), or to negotiate and conclude the sale or purchase of goods on behalf of and in the name of that principal”. Note that the regulations do not apply to the provision of services.

Many businesses use agency arrangements, where one party (acting as a principal) engages the

other (often referred to as a commercial agent) to solicit orders for goods from customers. The agent finds the contracts and the principal normally concludes them, which allows the principal to develop a new or existing market through the agent.

### Who is the principal?

It is often the case that a principal would be either a manufacturer or supplier of goods. The principal appoints a commercial agent to act on his or her behalf and pays the agent a commission. The agent is meant to devote effort, skill and expenditure in making the agency arrangement work.

There are a number of restrictions imposed by the regulations upon an agency arrangement. If the parties have not taken steps to enter into an agency agreement and there is a dispute between them, they may find that they are in breach of the regulations and the principal may have to compensate the agent.

If no agency agreement is in place and there is a dispute, it would first have to be established whether an agency arrangement existed; evidence would then be required to prove each other's case. ●

**Next month: Agency agreements**

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● *Dr Rosanna Cooper is a partner at RT Coopers, a commercial law firm focusing on inventors and business start-ups.*

(RTC)  
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## HUMORESQUE

Anyone with several hundred dollars spare to pay in official filing fees to the US Patent Office in Alexandria, Virginia, can now file for patent on more or less anything, it seems. Thus Colleen Giles and La'Mont Carmen of Columbus, Ohio, have applied for a patent on an idea which may well look new to the official examiners simply because no one else has had the chutzpah to file for it (US 2005/0057034).

Their Consensual Sex Agreement Kit is intended “to allow willing participants of a sexual encounter to contractually agree to certain terms before a sexual relationship”. So there is “a contractual understanding of the sexual relationship before and after the encounter,” and “parties engaged in a sexual encounter may do so without the worry of unspoken debt”. The kit includes a book which lays down the rules of encounter, a contract to sign with “notice of satisfactory completion” and an ID card to stop people impersonating others.

It is far from clear how anyone could be caught infringing such a patent, or indeed how this could be proved in court. Interesting, though, to find the US government charging fees to grant a patent that helps people to trade in sex. ■

Source: *New Scientist* magazine, 28 May'05

# GEORGE'S WOOD

I'VE ALWAYS called it "George's wood" because George invented it. But it's made from glass-fibre reinforced plastic. Or carbon-fibre. Or Kevlar...

Thirty years ago, George Jeronimidis came to the University of Reading's engineering department to work with Jim Gordon, author of *The New Science of Strong Materials*. His project was to understand why wood was tougher than it should have been according to the current understanding, based on the friction generated as the wood fibres were pulled apart. He discovered a new mechanism of fracture toughening.

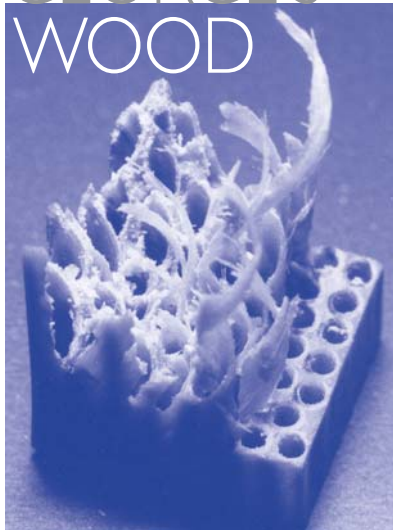
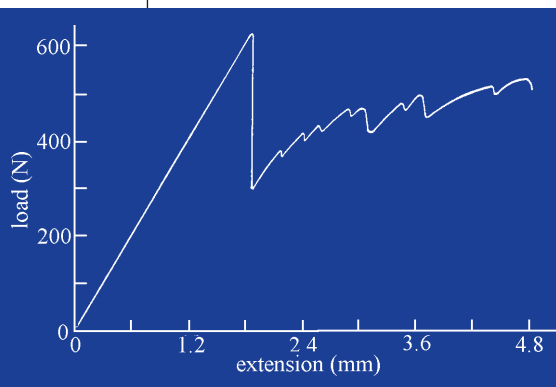
### Not many people know that...

Wood is made of tubes arranged in parallel up and down the stem (we knew that), and has cellulose nanofibres arranged helically in the cell walls (we knew that as well). These nanofibrils wind in the same direction throughout the tree (we also knew that), and when you break wood in tension along the wood cells you get splinters (and that).

George put these facts together with observations and maths, and made models of wood from tubes of glass fibres wound around a piece of 1mm nylon monofilament, which he impregnated with resin and cured. He then removed the nylon core and glued the tubes together (*top*).

Experiments showed that when

**Below: Force deflection curve of a single spirally wound tube. The initial failure, followed by a number of minor failures, gives a curve rather like a ductile metal, showing yield and post-yield ductility. But the components from which the tube is made are both brittle.**



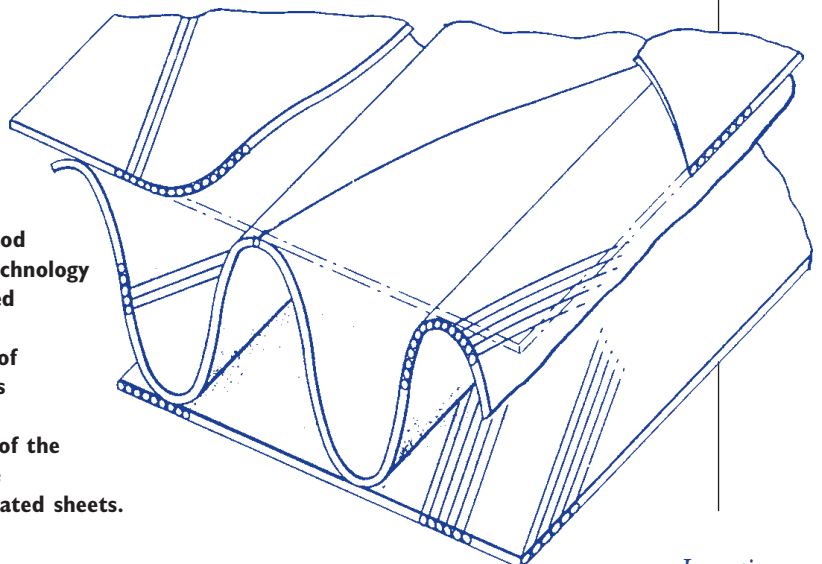
**Above: A fractured sample of George's Wood, showing sections of the tubes (right) and the way in which they break (left), producing curling segments of the tube walls which resemble the splinters from wood.**

the glass fibres were wound at a 15° angle to the long axis of the tube, the material was very tough when broken in bending. Individual tubes broken in tension failed first by buckling inwards, then the resin between the glass fibres cracked, leaving the glass unbroken. This allowed the glass to reorientate slightly and the tube to stretch a little further. Thus the tube showed an almost ductile behaviour (*below left*).

*Julian F V Vincent is Professor of Biomimetics at the University of Bath. Biomimetics is the concept of taking ideas from nature and implementing them in another technology, such as computing, design or engineering.*

● **Professor Julian Vincent, Centre for Biomimetic & Natural Technologies**  
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[www.bath.ac.uk/Departments/Eng/biomimetics](http://www.bath.ac.uk/Departments/Eng/biomimetics)

**Right: Another version of George's Wood using the technology of corrugated cardboard. The groups of parallel lines indicate the orientation of the fibres in the pre-impregnated sheets.**



**In accordance with Professor Vincent's commitment to the principles of Open Access, the ideas presented here are freely available. In demand as a lecturer and consultant to industry, he welcomes consultation or research enquiries by companies and entrepreneurs.**

This method of putting a bulk material together took a long time, so George, Jim and colleague Richard Chaplin developed another method, based on corrugating sheets of pre-impregnated sheets with the glass fibres oriented parallel to each other (*below*). This was much cheaper, and under impact was five times tougher, weight-for-weight, than wood, steel, aluminium, chipboard, or anything else they could measure.

Recently, in Bath, we showed that a riot shield made of this material would weigh only 50% of current riot shields yet have the same performance. Or it could be used for body armour, resisting bullets and knife attack, and be a fraction of the weight of current materials giving the same protection.

Biomimetic wood can be tailored for specific purposes, made to any shape or size and, since its properties come from geometry rather than chemistry, can be made from any material with orientated fibres. ■

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ILLUSTRATIONS © UNIVERSITY OF BATH

"Changing your perception of a problem can alter your conclusion"—Anon ●

# www.wrti.org.uk

THE INVENTORS WEBSITE

**CENTRE OF EXCELLENCE** Prowess

## Nurturing growth

SUPPORTERS OF WOMEN STARTING A BUSINESS

**P**ROWESS comprises a network of affiliated organisations and individuals who support the growth of women's business ownership across the UK through the sharing of best practice, advocacy, raising awareness and by providing information.

The statistics are impressive. Each year Prowess members advise over 100,000 women intending to start or grow a businesses and support the launch of 25,000 new businesses (39% of which are owned by women), which contribute £1.5bn to the UK economy.

In addition, Prowess hosts business networking events, business development training and support to 70,000 businesses, provide over 5,000 business loans and issue 4,500 grants.

The 3rd Prowess Annual International Conference took place



in Cardiff City Hall in February, with over 300 delegates attending to discuss women's entrepreneurial activity.

Prowess publications, accessible through the organisation's website, have been produced to raise awareness of the needs of women entrepreneurs, and are designed to drive forward change and to offer an assessment of the current status of women's enterprise support.

Here can be found key statistics regarding women and entrepreneurship. Reports are available via the online research library, where browsers can find hundreds of reports categorised by theme and region. ●

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**admin@prowess.org.uk**  
**www.prowess.org.uk**

### BOOK OF THE MONTH

#### How to Get Ideas

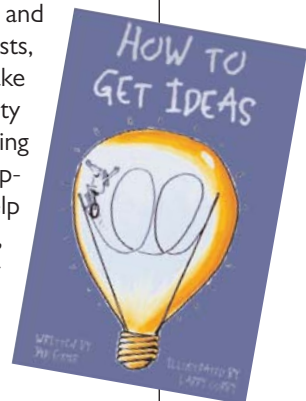
by Jack Foster

Illustrated by Larry Corby

Berrett-Koehler Publishers \$16.95

ISBN 157675006X 196 pages

First published in 1996 and still in the best-seller lists, this US title aims to take the mystery and anxiety out of the idea-generating process. It presents step-by-step guidelines to help anyone generate ideas, arguing that the reader must first condition their mind to become 'idea prone'.



### WEBSITE OF THE MONTH

#### www.manufacturingtalk.com

Updated daily, this manufacturing news source is also the home of free email newsletters where engineers and industry professionals find information from manufacturers and distributors in (take a deep breath) architecture, automation, building and construction, electronics, IT, manufacturing, machine or plant safety, scientists and laboratory, packaging, print, processing, production, security and subcontracting.

## BUSINESS LINK WESSEX INNOVATION CLINICS

**Are you thinking about developing a new product or process? Have you invented something and don't know what to do next? Through its series of free Innovation Clinics, Business Link Wessex provides confidential and impartial guidance on such subjects as investigating an innovative idea, developing a new product or process, working with universities, exploiting inventions and intellectual property rights. Innovation clinics are held in the Bournemouth, Portsmouth and Southampton regions.**

● **Advice Hotline: 08454 58 85 58** [innovation@businesslinkwessex.co.uk](mailto:innovation@businesslinkwessex.co.uk) [www.businesslinkwessex.co.uk/events](http://www.businesslinkwessex.co.uk/events)

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