

## **“Winston Churchill’s Toyshop”**

Only four years ago did I learn that the premises from which, as a schoolboy, I nicked a couple of Blacker bombard anti-tank missiles and a box of L-delay fuses was "Winston Churchill's Toyshop", the UK's premier weapons experimental station in WW2. I wrote to the BBC suggesting they make a documentary: their response was: *The BBC* **“does not accept ideas for programmes of a documentary or factual nature”** so I decided to put together my own Powerpoint presentation. The title is arrived at in that when becoming PM Churchill knew of the massive War Office red tape; to by-pass this he appointed himself Minister of Defence and created just one Department – MD1 located at Whitchurch just north of Aylesbury. To run it he appointed Millis Jefferis who was known to him since 1939 as a brilliant inventor. The department was to be under Churchill's direct control via Lord Cherwell and over 50 weapons were invented which went into service (I attach a schedule of some of these). An example of the rightness of Churchill's thinking was that when the authorities sought to obstruct production of the sticky bomb Churchill issued a note: "make 1,000,000 sticky bombs –WSC" I have carried out a week of research at the Nuffield library in Oxford reading the papers passing between Churchill and Cherwell – fascinating stuff and the source of much information for my talk.

James Tuck was a very important member of the team: he was a nuclear scientist who had an especial expertise in the shaping of charges. I was amazed to see his drawings for the anti-submarine bomb: just 4 ounces of plastic explosive and 8 ounces of TNT would penetrate the hull of a submarine. The Americans specifically asked for Tuck to go to Los Alamos because of the knowledge developed at MD1 into shaped charges. In his book, “Most Secret War”, RV Jones, the eminent wartime British scientist, says the Americans told him that without Tuck **“it is doubtful whether the 1945 atomic bombs could have been exploded”**. An extract from Los Alamos National CV for James L Tuck reads:

“At that time, the research on the implosion process for the atomic bomb was encountering grave problems at Los Alamos and Tuck, becoming known for this outstanding experiment, was asked by Los Alamos scientists, through Churchill, to join them which he did in early 1944. There he made a **significant contribution to the first implosion weapon by devising an explosive lens.**”

Giving the presentation for the Friends of Stoke Mandeville hospital raised £5,000. After presenting it at the Gurkha Museum Gerald Davies there wrote: **“I would like to thank you on behalf of Winchester’s Military Museums for the tremendous lecture you gave last Thursday. I have had numerous telephone calls from members of the audience saying how much they had enjoyed it.”**

The National Army Museum at Chelsea said they would like me to repeat the talk and three MOD weapons experts in the audience e-mailed to say they were **“enthralled with what they heard”** – it is such an untold story and I manage to find some humour too. I have at last persuaded an independent Television production company to make a documentary and filming is in progress now. They have even commissioned an explosives company to “print” some bombs for the programme.

## **Some Toyshop Weapons**

Blacker Bombard or spigot mortar	Limpet mine
Water bomb (Rhine)	Great Eastern Bridge laying tank
L-Delay fuze	Tank plough for mine removal
“A” bomb for aircraft application	“Kangaroo” aerial bomb
PIAT anti-tank gun	“Kangaroo 3” mortar
The J”JW” Johnny Walker bomb or bobber	“Kangaroo” mine
Hedgehog anti-submarine device	“Puffball” airborne straffing device
Acoustic delay mine	Mine trigger devices
Wreckage clearance mine	One –man submarine
“J” bomb incendiary	Clamshell mines
Camouflet railway mine	Hollow charge shells and bombs
“Sticky” bomb	Hollow charge capital ship bomb
“Pull” booby trap	Hollow charge anti-submarine
bomb	
“Push” booby trap	Hollow charge anti-tank rounds
“Release” booby trap	Hollow charge rockets
The universal switch	4.5”” naval gun with poultice round
Anti-personnel device	7.5”tank mounted demolition gun
Anti-personnel alarm device	“Beehive” steel penetration device
Anti- left device for mines	

## **“The Sky at Night”**

### **Serious astronomy from the Crendon Observatory - with a laugh**

In another guise I give an astronomy talk concerning my observatory and various astronomical topics of contemporary interest both amateur and professional.

I developed a passion for Deep Space astronomy and have built a state of the art observatory adjoining my house. Sir Patrick Moore filmed a whole Sky at Night programme at The Crendon Observatory and asked me to write a book about it in his astronomy series. It is published by Springer and entitled "My Heavens". I am a Fellow of the Royal Astronomical Society.

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