April 2014

Crosscut

Newsletter of the Witwatersrand Woodworkers' Association
PO Box 411346, Craighall, 2024, South Africa

◄ Some of the hand tools used to complete the Shaker stool – including a No.4 smoothing, No.7 jointer, No.60½ low angle block and a No.071 router plane.

Secretary : Ken Mutch ken.woodman AT gmail.com Editor: Trevor Pope tpope AT iafrica.com

Next General Club Meeting on **Wednesday, the 9th April 2014** from 18h00 at WWA clubhouse at the Living Link Hall. Peter Rendell will talk about wooden telescopes.

Next Turner's monthly meeting is on **Monday, the 7th April 2014** at 18h00 at the WWA clubhouse at the Living Link Hall. Stephen Barrett will demonstrate turning and embellishing a wooden apple.

News

February 2014 Turner's Meeting – Turning decoration by Dries Blignaut**.** Dries demonstrated the use of spiralling and chatter tools on end grain such as spinning tops or boxes. He then followed this up with coloured pens to show off the textures created by the tools. Homework – decorations similar those that Dries demonstrated.

Wood of the Month: Panga Panga – Millettia stuhlmannii is found in Eastern tropical Africa: Zimbabwe, Kenya, and Mozambique and rarely in South Africa. There are concerns that the present harvesting rates are not sustainable. It is also called Partridge wood or Patryshout. It is light in colour when harvested and darkens once cut. Hard and inclined to splinter. Observe handling precautions as splinters in skin may go septic.

Hobby-X 2014 at the Dome, Randburg. This took place from the 6th to 9th March. The WWA together with the Pretoria club demonstrated woodturning on all four days. Two Nova lathes (a DVR XP and a 1624) and At Smit's Jet 1221VS were in use. The Jet 1221 VS is a similar capacity to the Nova Comet II that the club recently bought, but the bed is more substantial, leading to lower vibration levels. (It is somewhat more expensive, but you get what you pay for.) At is showing Frans a technique using the skew on the Jet ►

◄Barries minding his toys.

Ken Mutch minding the turned item display.►

February 2014 Meeting – A talk on Grinding wheels by Steve Gibson from LTL Abrasives. LTL Abrasives is a small grinding wheel manufacturer in Randfontein (www.ltlabrasives.co.za) who specialise in custom manufacture of grinding wheels to meet specific requirements. Steve explained the general principles and types of wheels available in the marketplace and their particular specialities. He explained why different compositions were better suited to particular tasks, in particular for sharpening. The manufacturing processes rely heavily on experience and the dedication of the individuals to arrive at a quality product, in particular ensuring well balanced wheels. He showed how they balance a typical wheel.

They undertake small quantities and odd sizes – contact them on (011) 412-2920 or ltlabrasices@mweb.co.za

Please Note:

Toymakers. The toymakers meet on the first and third Mondays of every month, at 09h00 till 12h00 at the new clubhouse. Contact Eddie Marchio on 011-678-8062 or rm22 AT mweb.co.za for more information.

Wednesday Workshop. The Wednesday evening workshops are on the first and third Wednesdays of every month at the new clubhouse, from 18h00 till 20h00. Contact Grant Mackay on 082-391-9769 or mackay.grant AT gmail.com or gmackay AT worldonline.co.za for more information.

Saturday Workshop. Ken Bullivant holds a Saturday workshop at his house in Boksburg. The location is 13 Franklin Avenue, Comet, Boksburg on the first Saturday of the month from 09:00 to 12:00. They decide on an annual project and work throughout the year making it. Individual projects are discussed and problems solved. Ken also offers private lessons too. Contact Ken on 082 809 0020 if you wish to take part.

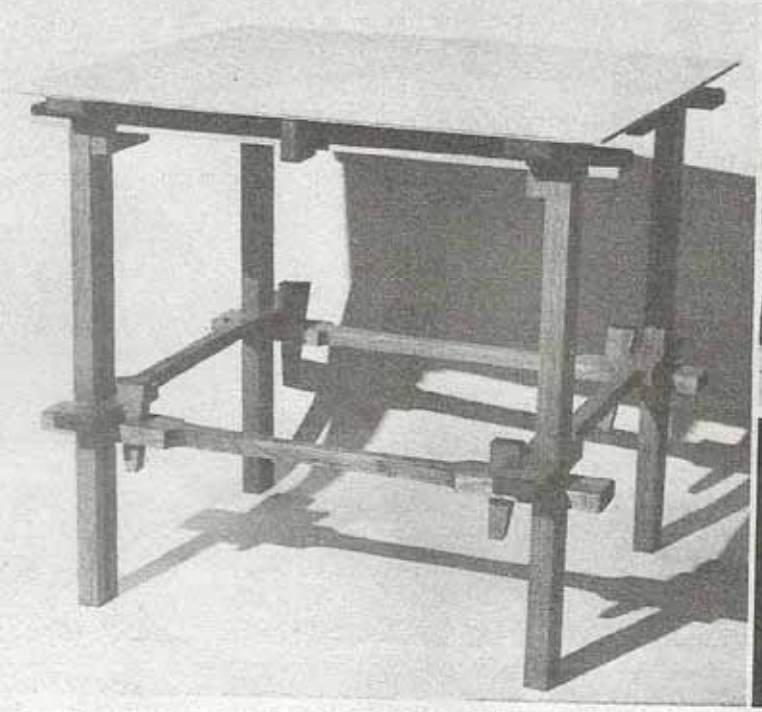
For sale:

Drum Sander - hardly used and in perfect condition for sale. Price (New) R7795.00 My price: R4990.00 onco. Please contact Ari at 072-462-6255

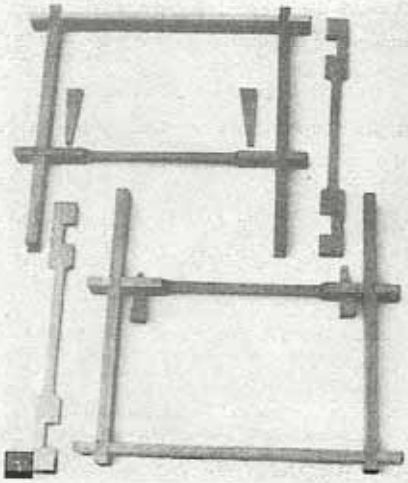
Inca planer (pictured below) available free with or without the stand to anyone who has a use for it. It has no motor but is otherwise complete. The planer bed is about 25cm wide. Contact Alan Beadle at 084 445 3435.

Knock-down Table Plans

As promised, the plans for the Knock-down table that Ken Bullivant showed at the January 2014 Meeting are reproduced below. The weight bearing capacity was tested by the author at 13 stone, which is about 83 kg.



KNOCK-DOWN EFFICIENCY in a lightweight table



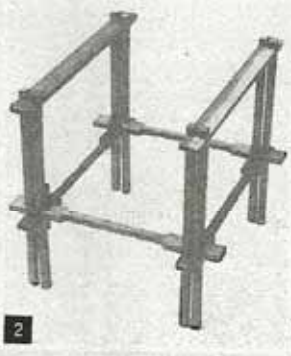
1. Side frames, end rails and wedges.
2. Completed underframe without top.
3. Wedged K.D. system jointing.
4. View of jointing from under table.
5. Proving the load-to-weight ratio.

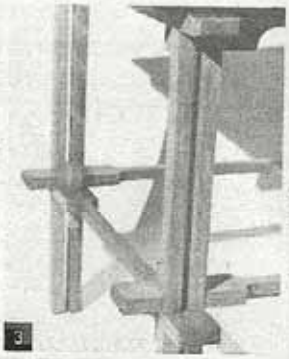
By G. CORBETT

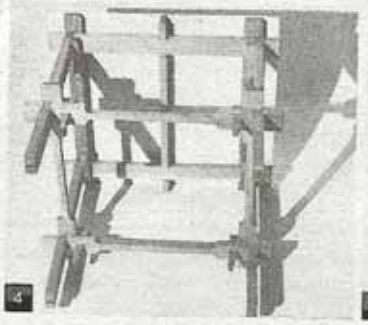
ON READING THROUGH SOME BACK NUMBERS of this magazine, I came across the editorial of the November '75 issue in which the Editor was summarizing the findings of a research organization. Their study concerned the number in our population who carry out their own home improvements. Here I quote: "one in ten assemble his or her own furniture and nine per cent are engaged in some form of advanced woodwork . . . 92 per cent use a hammer, 92 per cent use a screwdriver and 75 per cent own wood chisels. So it seems that we should do a little more on knock-down furniture!"

Such a challenge I could not resist, so I set out to design a system making use of the basic tools mentioned above. The design had to be such that the finished item could be taken apart, no joints were to be glued and it was also to be different from the usual knock-down (K.D.) systems to which we are accustomed.

Another challenge which I set myself was also incorporated at the same time—that was



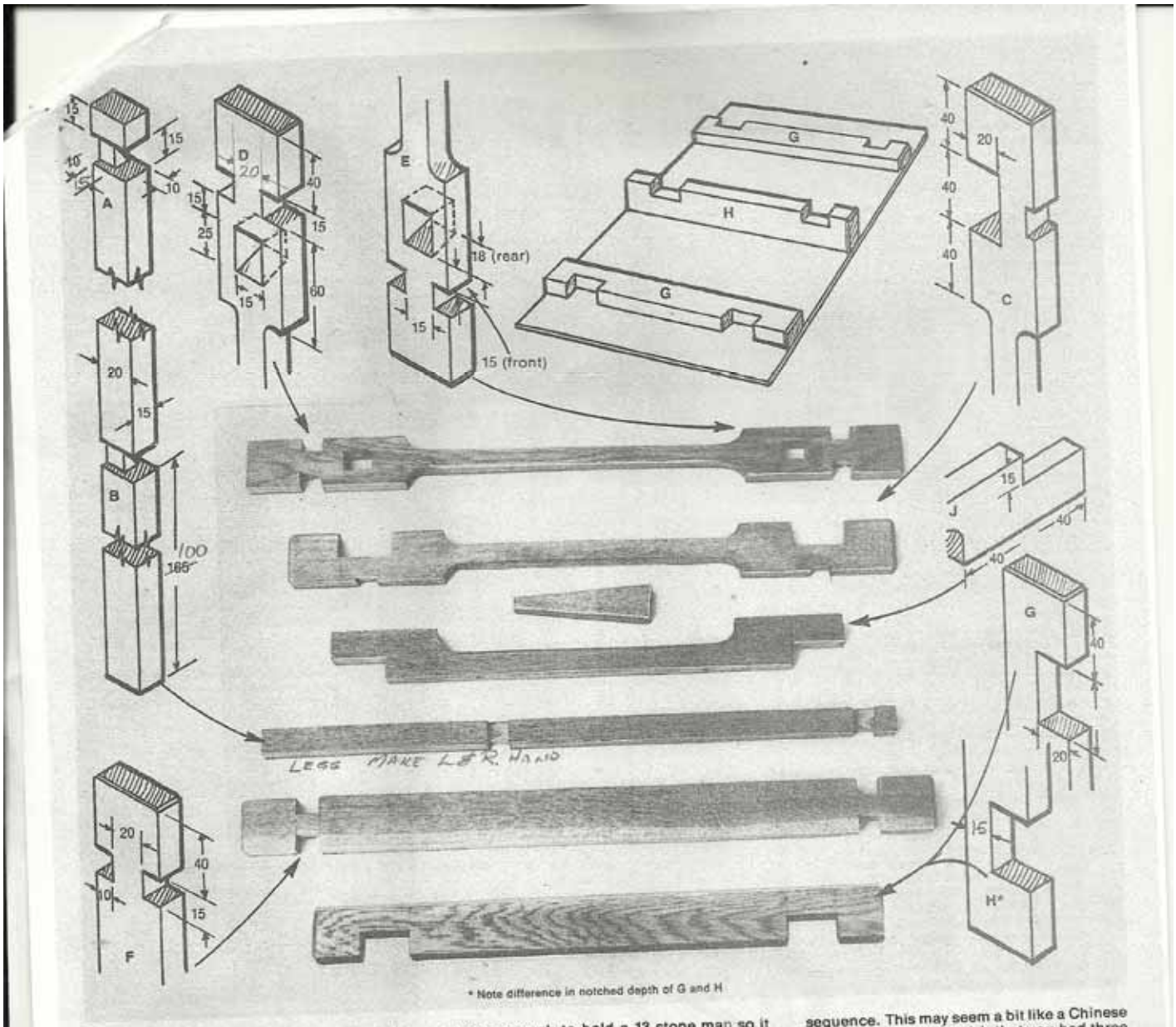




CUTTING LIST

A+B	Legs	8 off	460	by	20	by	15mm
C	Bottom rails	2 off	460	by	40	by	15mm
D+E	Bottom cross rails	2 off	660 ~~500~~	by	40	by	15mm
F	Top rails	2 off	660 ~~500~~	by	40	by	15mm
	Wedges	4 off	100	by	25	by	15mm
G	Stretchers under top	2 off	460	by	40	by	15mm
H	Middle stretcher	1 off	460	by	40	by	15mm
J	Top retaining battens	2 off	380	by	40	by	15mm
	Table top	1 off	~~500~~	by	460	by	16mm

EXSISTING



* Note difference in notched depth of G and H

to design the lightest possible structure that would bear the weight of a full-grown adult, of say 13 stone, sitting on it for a quarter of an hour. You may ask why the time factor? This is because wood "creeps" with time; if you don't believe this then you ought to examine some old half-timbered houses to see how much the beams have moved under their load.

The idea of testing the structure by getting an adult to sit on it was really to ensure that it was strong enough, especially in view of the fact that I was to make it as light as possible.

The piece of furniture which ultimately was designed to these specifications was a small table, and when weighed (upside down on the kitchen scales) it came to a mere 6¼ lb. This meant that a 13 stone man sitting on the table gave me a load-to-weight ratio of 13 stone (182 lb) divided by 6¼ lb, resulting in a ratio of 1 to 28. And I challenge you to better that!

Weight was kept down by making the table top from 4mm ply. Well, why not? It was strong enough to hold a 13 stone man so it should hold up to afternoon tea and cream cakes!

Obviously mortise and tenon joints could not be used because I was not allowing myself to use glue on the framing joints otherwise it would not have been knock-down. As a result I invented a new joint which I am breaking a bottle of champagne over and calling "the wedged K.D. system joint".

Again to reduce the total weight of the structure, rails were thinned down in the middle; this is still consistent with maintaining strength and rigidity.

The main point about constructing this table, or indeed any other project using this system of jointing, is that accuracy in marking out and cutting the joints is essential—a loose or badly fitting joint can not be compensated for by glue.

As far as the actual putting together of the pieces is concerned, there is very little to say. It is merely a question of fitting the component parts together in a logical sequence. This may seem a bit like a Chinese puzzle and you may wish that you had three hands—but, with a little patience, it can be done.

The only other point I should like to draw your attention to is the method of fixing the plywood top to the frame. Do this on assembly. In other words when all the underframe has been completed and put together, then smear some glue on the top three cross rails, place the top in position and cramp up. The plywood top will then have three cross members permanently glued to its underside, but this does not really contravene the K.D. principle. When it is dismantled it is not a structure but lies flat enough to pile the legs and rails on top, making a very small, neat package.

So get to work and let's hear your load to weight ratios. You should be able to better mine because there was still plenty of strength and rigidity to spare. Even though this may have been something of a practical exercise, I did not test my table to destruction with a 20 stone man!