

Read 'awl' about it

The Lockdown Newsletter from

The Cannock Chase Shed



Issue No. 22

Submissions and suggestions to Bob Mason at:

shednewsletter@virginmedia.com

Saturday April 10th 2021

In This Issue....

- Shed news
- Meet the Committee / Shed Media/Could You
- Answers to Last Puzzles/Quiz/Humour
- Spot the Difference
- Project
- Your Toolkit

If you see me talking
to myself,

I'm having
a staff meeting.

Shed News

Cannock Chase Shed Zoom Webchats

These are still taking place at **10.30 am each Monday**

Committee meetings are held on Tuesdays

(for committee members only)

If you'd like to drop in, please contact Barry (barrykjames@yahoo.com) who will help you to get set up, and send you an invitation to join the meeting.

Check our webpage...

...for information about our Shed, updates about reopening and back issues of the newsletter.

We are on Facebook...

Remember we have a Facebook page, where you can chat with friends, exchange ideas or ask for advice, as well as sharing your projects.

If you are having trouble finding the bits you need for your project, why not post a request? Another member may have just what you're looking for sitting unused in their garage, or they may know where you can get one.

If you have useful items that you are loath to throw away, why not put up a post, offering them to other members, before consigning them to the tip?

Why not post a message now? Public Group

<https://www.facebook.com/groups/383047082346303>

Official Facebook page: Private Group

<https://www.facebook.com/groups/cannockchaseshedders>

Meet the Committee

Dave Shaw	Chairman
Leslie Jukes	Deputy chairman
Barry James	Health & Safety
Avril Green	Fundraising/Secretary
Graham Johnson	Treasurer
Tim Cutler	Project Manager

Shed Media

Peter Ross	Website/Facebook Group
Bob Mason	Newsletter

Could you...



- Sort through your photos and send me a picture and a few words? – your pet, garden, favourite holiday, your most useful tool, a current or past project, a cooking success (or disaster) or favourite recipe? – Pretty much anything you like.
- send me a suggestion of something you'd like to see included in the newsletter? – anything from just a broad idea, to a finished article.
- send in a 'reader's letter'? Share an anecdote or treasured memory? Share your expertise with those who have less experience?
- Send in something else, or help in another way that I haven't even mentioned?

Answer to wordsearch 1

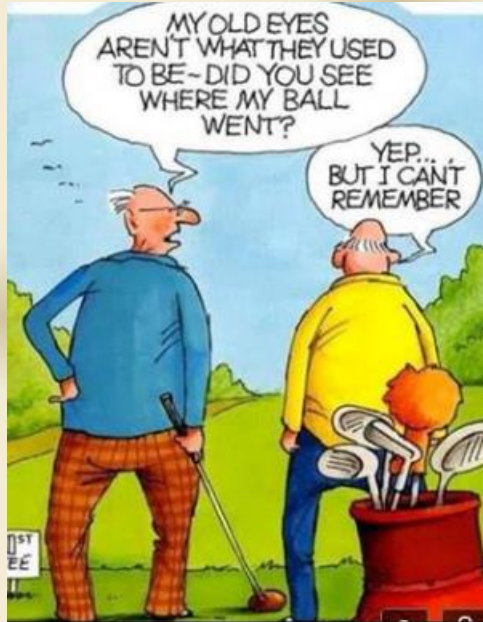


- | | |
|------------|-------------|
| SOCK | DOG |
| HAIRCUT | PAINTWORK |
| LAGER | WORK |
| COAT | SOUP |
| UNDERSEAL | TORCH |
| UMBRELLA | BEDROOM |
| KNIFE | TELEVISION |
| CHEST | CUP |
| STOCKINGS | TOWEL |
| DESK | BATH |
| LADDER | BATHROBE |
| HOUSEPLANT | STEPLADDER |
| HOUSE | GARAGE |
| VEGETABLES | PICNICTABLE |
| CAT | HAMPER |

SPEAK IN SUCH A WAY
THAT OTHERS LOVE TO
LISTEN TO YOU.

LISTEN IN SUCH A WAY
THAT OTHERS LOVE
TO **SPEAK** TO YOU

CureJoy



Answer to WSCpuzzle1

WSCpuzzle1

P	U	G	K	P	R	I	N	T	E	R	L	N	C	C
S	X	K	D	R	A	G	S	P	A	D	E	E	R	A
S	L	A	W	N	M	O	W	E	R	D	G	D	W	T
A	F	O	R	K	N	D	A	P	I	B	O	R	I	Q
R	E	S	U	O	H	D	R	I	B	B	D	A	O	B
G	V	S	R	E	P	P	I	N	S	D	W	G	D	A
A	R	E	M	A	C	L	L	A	T	E	M	U	E	L
G	R	A	S	S	C	U	T	T	I	N	G	S	H	L
E	K	I	B	R	O	T	O	M	W	O	O	D	S	O
J	G	W	R	H	E	L	I	C	O	P	T	E	R	N
S	Y	E	N	G	O	H	E	G	D	E	H	N	I	T
I	P	H	O	N	E	N	A	L	P	S	A	S	F	G
D	R	E	T	T	E	L	S	W	E	N	H	X	Y	L
N	A	R	E	T	U	P	M	O	C	U	V	Q	C	I
N	L	A	T	H	E	L	E	S	I	H	C	U	E	Q

BALLON
CAR
COMPUTER
GARDEN
HEDGEHOG
IPHONE
METAL
OIL
SHED
SPADE

BIRDHOUSE
CAT
DOG
GRASS
HELICOPTER
LATHE
MOTORBIKE
PLANE
SHOE
TIN

CAMERA
CHISEL
FORK
GRASSCUTTINGS
IPAD
LAWNMOWER
NEWSLETTER
PRINTER
SNIPPERS
WOOD

The Computer Swallowed Grandpa

The computer swallowed grandpa.
Yes, honestly its true.
He pressed 'control' and 'enter'
And disappeared from view.

It devoured him completely,
The thought just makes me squirm.
Or been eaten by a worm.

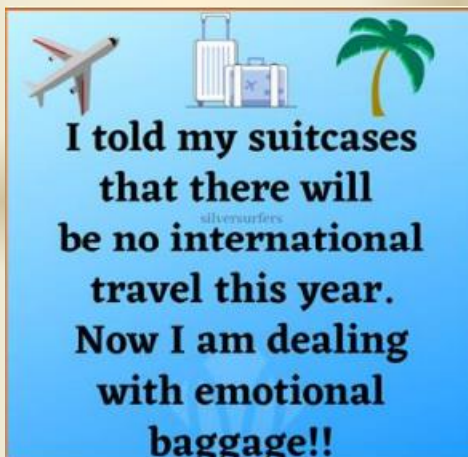
I've searched through the recycle bin
And files of every kind;
I've even used the Internet,
But nothing did I find.

In desperation, I asked Jeeves
My searches to refine.
The reply from him was negative,
Not a thing was found '! online.'

So, if inside your 'Inbox,'
My Grandpa you should see,
Please '**Copy,**' **Scan**' and '**Paste**' him
And send him back to me!



This is a tribute to all the Grandpas who have been fearless and learned to use the computer..... They are the greatest!!!





We are not aging, we are ripening to perfection.



Male Golfer Quiz Answers

1	A FOND LICK	NICK FALDO
2	BYE SNOB JOB	BOBBY JONES
3	CLAMMY TRUNK	MARK MCNULTY
4	PEARLY GRAY	GARY PLAYER
5	TOWELED WOES	LEE WESTWOOD
6	A NUKED DOLL	LUKE DONALD
7	ACES LAYUP	PAUL CASEY
8	CARRIAGE IS GO	SERGIO GARCIA
9	ALPINE TOUR	IAN POULTER
10	I'D WORST EGO	TIGER WOODS
11	RESCUED FLOP	FRED COUPLES
12	HELP I'M IN LOCKS	PHIL MICKELSON
13	SWEATY PARENT	PAYNE STEWART
14	TWOFOLD MEMO YET	TOMMY FLEETWOOD
15	GRIM EMOTION CLONE	COLIN MONTGOMERIE
16	A WINO MOANS	IAN WOOSNAM
17	GASTRIC UNREST	CURTIS STRANGE
18	SONS HUNT DIJON	DUSTIN JOHNSON
19	SNEER LIE	ERNIE ELS
20	WALK SAD NINNY	LANNY WADKINS
21	ATOMS TOWN	TOM WATSON
22	INJURE TOSS	JUSTIN ROSE
23	A YANK TRIMMER	MARTIN KAYMER
24	GRACED WELL MEMO	GRAEME MCDOWELL
25	ENERGISE FOOT	RETEIF GOOSEN

There are 9 differences between the 2 pictures... Can you find them all?
Hay 9 diferencias entre las 2 imágenes... ¿Las puedes encontrar?



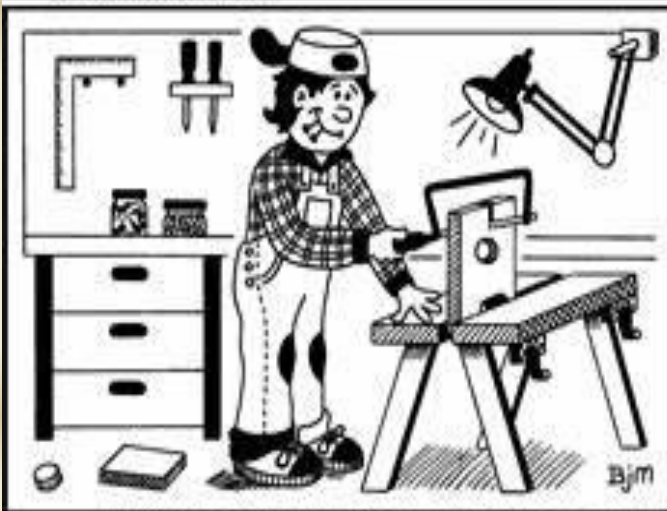
Can You Spot the Differences?

There are 15 differences. Can you spot at least 10?



ComParrot
by Bonnie J. Malcolm

Can you spot 12 differences between these pictures?



Solution: 1. Carpenter's side pocket is missing. 2. Light bulb in lamp is missing. 3. Drawer handle is missing. 4. Chest pocket is colored in. 5. Top of hat is colored in. 6. Elbow on lamp arm is colored in. 7. Pant cuff is colored in. 8. Hole in board has moved down. 9. Tall jar has moved. 10. Screwdrivers have moved. 11. Bottom drawer is narrower. 12. Carpenter square is longer.

Project:

Wooden Airplane Swing (no I did not make it)



Make it!
Child's Airplane Swing Tutorial

Amazing!!!

I had seen a version of this on a photography blog and I swooned over it for days.

I knew that I could make one similar if I could just find the time to sit down and sketch it all out. It is really pretty straight forward once you break it down into sections; body, wings, tail. To make it here is what you will need to buy:

- 1- 2x4x8
- 1- 1x8x8
- 1- 1x6x10
- 1" dowel, 6-8 inches long

Box of 2" Outdoor screws

A handful of 1 1/4" outdoor screws

1- 3" lag screw for prop (plus a few washers)

20' +/- rope

1- 3" eye screw

4- 3" long eye lag bolts, plus washers. (mine were 5" and way too long)

2 rope clips

Plus finishing materials like sandpaper, glue, and paint.

Then for a rough idea of all the cuts, see below. I found it very nice/easy to mark out most of my cuts before I started, including most of the curves. I so wish I knew how to use SketchUp so that I could share more details with you.

Body:

- 1-2×4 @ 36" (tapered to back)
- 2- 1×8 @ 36" (tapered to back, rounded at front bottom)
- 1- 1×6 @ 30.5" (seat)

Tail:

- 1- 1×6 @ 12" (rounded ends)
- 1 – 1×4 @5" (rounded top)

Wings:

- 2- 1×6 @ 30" (rounded ends)
- 2- 2×4 @8 1/8" (spacer boards)
- Handle bar cut from scrap 1×6 with hole for 1" dowel/handle.

Propeller:

cut from 1×3 scrap

The very first and most thought consuming cut I did was the body cut. The body is made up of a 2×4 sandwiched between two 1×8's. Then it is later topped with a 1×6 for the seat. So cut your 2×4 and 2 1×8's all to 36" long. Then on each 1×8, mark a curve for the front (I used my ice cream pail lid). Then from the other end of the board measure down 3.5" from the top and make a mark. Then measure 23" from the back toward the front and make a mark. Use a straight edge and connect the marks to give you the angle cut. Cut that with a circular saw and use a jig saw on the front curve. Here is a very poor photo to give you a rough idea of what the heck I am talking about.



Next I would suggest clamping the two curved body pieces together and sanding them equally smooth (because if anyone is like me... my jig saw cuts can be a little wonky!).

Then the three main body pieces are ready to be attached together, like so, with glue and screws. (yet again, dog photo bomb)



Next I moved onto the wings. I cut two 30" lengths from my 1x6 and rounded the ends with jig saw, using an ice cream pail lid as my circle guide. For the wings I also needed two 2x4x8 1/8 to act as spacers/connectors. I also used a piece of 1x6 with a curved shape for the handle bar area. No guide on how to cut... I just kind of "wung it". ****Important**** attach this to the top wing from underneath. The 2x4's can either be attached with pocket holes or screwed through the 1x6's. After lots of sanding it looked like this...



Lastly (well, almost last), I cut the seat board from a 1×6 at 30.5" long. I rounded the front end slightly less than I did the wings. Next time I will make the curve even slightly less.

The propeller is cut from a 1×3 scrap. It could really be cut from just about any size board you have laying around. I just kind of drew it on and cut it out with the jig saw. It is attached to the 2×4 in the front, after painting. Use a few washers to help keep it free to spin.

Then it is time to assemble! I started by attaching my tail with two screws and glue. Then I attached the seat board. And lastly I attached the wing section. For this I screwed two 1 1/4" screws per side from under the wing into the seat, and two 2" screws per side through the bottom wing into the 1×8 body boards (I really hope that all makes sense).



Then it is time for finishing. Sand sand sand. Sand over all edges nice and rounded to protect the little ones. Fill screw holes with wood filler. And paint with a quality exterior paint.

Now to hang it can get a bit complicated and this was another spot where it took a lot of thought. I may play around with other hanging ideas for my next one. See image for a little help on how to feed your rope. I used a scrap piece of 24" pressure treated pine for my little up top board (I don't know what that should be called. An anchor board maybe??). This board acts as a connecting point and has 3 eye lags, 2 pointing down and 1 pointing up. The one that points up is where the rope is connected from the tree or swing set. And the two that point down are to help guide the rope. Rope clips (in the photos I used rope to tie/hold because I did not realize I would need them) help hold the rope together at each eye lag to prevent the ropes



from slipping, thus keeping the airplane level.

****Disclaimer****

Why yes, I did hang this from a dog leash. LOL... do NOT try this at home!

I had no other way to hang it without my hubby's help... after all, I'm just a girl! 😊

****End disclaimer****

NOTE- This photo shows only one eye bolt in the anchor board. I have redone this. Use TWO bolts so that the swing hangs from two points in the tree. Otherwise, your airplane will fly wildly out of control. 😊



If hanging from a swing set, this setup needs to be tweaked. Do not use a 2x4 anchor board. Instead, install chain quick links just above the rope clips. You can then attach the quick links directly to your swingset hardware. This way is actually much easier and probably a little cheaper.

Wow! That was wordy! I hope that this little tutorial can help others make their own versions. The cost should be around \$40 depending on what materials you have on hand.

What child wouldn't want one? This airplane was made as a gift for my nephew but my 3 year old is really in love so I am pretty sure this won't be the last one!

Oh I almost forgot to add... this could be modified into a rocking airplane soooo easily!!! I would change the 1x8 to a 1x12 and change the angles on the body cuts. That would be so fun for a baby/toddler.



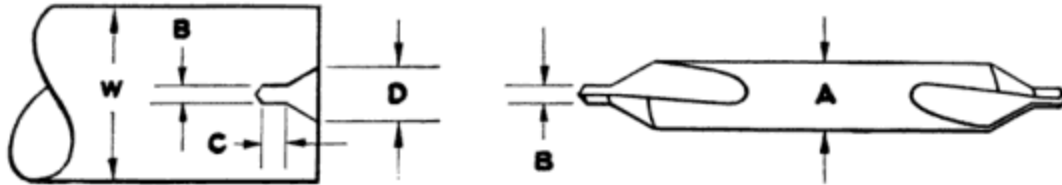
Your Toolkit

DRILL CHART

SIZE	DEC.	MM	SIZE	DEC.	MM	SIZE	DEC.	MM	SIZE	DEC.	MM
80	0.0135	0.343	41	0.0960	2.438	3	0.2130	5.410	15/32	0.4688	11.908
79	0.0145	0.368	40	0.0980	2.489	7/32	0.2188	5.558	31/64	0.4844	12.304
1/64	0.0156	0.396	39	0.0995	2.527	2	0.2210	5.613	1/2	0.5000	12.700
78	0.0160	0.406	38	0.1015	2.578	1	0.2280	5.791	33/64	0.5156	13.096
77	0.0180	0.457	37	0.1040	2.642	A	0.2340	5.944	17/32	0.5312	13.492
76	0.0200	0.508	36	0.1065	2.705	15/64	0.2344	5.954	35/64	0.5469	13.891
75	0.0210	0.533	7/64	0.1094	2.779	B	0.2380	6.045	9/16	0.5625	14.288
74	0.0225	0.572	35	0.1100	2.794	C	0.2420	6.147	37/64	0.5781	14.684
73	0.0240	0.610	34	0.1110	2.819	D	0.2460	6.248	19/32	0.5938	15.083
72	0.0250	0.635	33	0.1130	2.870	1/4	0.2500	6.350	39/64	0.6094	15.479
71	0.0260	0.660	32	0.1160	2.946	E	0.2500	6.350	5/8	0.6250	15.875
70	0.0280	0.711	31	0.1200	3.048	F	0.2570	6.528	41/64	0.6406	16.271
69	0.0292	0.742	1/8	0.1250	3.175	G	0.2610	6.629	21/32	0.6562	16.667
68	0.0310	0.787	30	0.1285	3.264	17/64	0.2656	6.746	43/64	0.6719	17.066
1/32	0.0312	0.792	29	0.1360	3.454	H	0.2660	6.756	11/16	0.6872	17.455
67	0.0320	0.813	28	0.1405	3.569	I	0.2720	6.909	45/64	0.7031	17.859
66	0.0330	0.838	9/64	0.1406	3.571	J	0.2770	7.036	23/32	0.7188	18.258
65	0.0350	0.889	27	0.1440	3.658	K	0.2810	7.137	47/64	0.7344	18.654
64	0.0360	0.914	26	0.1470	3.734	9/32	0.2812	7.142	3/4	0.7500	19.050
63	0.0370	0.940	25	0.1495	3.797	L	0.2900	7.366	49/64	0.7656	19.446
62	0.0380	0.965	24	0.1520	3.861	M	0.2950	7.493	25/32	0.7812	19.842
61	0.0390	0.991	23	0.1540	3.912	19/64	0.2969	7.541	51/64	0.7969	20.241
60	0.0400	1.016	5/32	0.1562	3.967	N	0.3020	7.671	13/16	0.8125	20.638
59	0.0410	1.041	22	0.1570	3.988	5/16	0.3125	7.938	53/64	0.8281	21.034
58	0.0420	1.067	21	0.1590	4.039	O	0.3160	8.026	27/32	0.8438	21.433
57	0.0430	1.092	20	0.1610	4.089	P	0.3230	8.204	55/64	0.8594	21.829
56	0.0465	1.181	19	0.1660	4.216	21/64	0.3281	8.334	7/8	0.8750	22.225
3/64	0.0469	1.191	18	0.1695	4.305	Q	0.3320	8.433	57/64	0.8906	22.621
55	0.0520	1.321	11/64	0.1719	4.366	R	0.3390	8.611	29/32	0.9062	23.017
54	0.0550	1.397	17	0.1730	4.394	11/32	0.3438	8.733	59/64	0.9219	23.416
53	0.0595	1.511	16	0.1770	4.496	S	0.3480	8.839	15/16	0.9375	23.813
1/16	0.0625	1.588	15	0.1800	4.572	T	0.3580	9.093	61/64	0.9531	24.209
52	0.0635	1.613	14	0.1820	4.623	23/64	0.3594	9.129	31/32	0.9688	24.608
51	0.0670	1.702	13	0.1850	4.699	U	0.3680	9.347	63/64	0.9844	25.004
50	0.0700	1.778	3/16	0.1875	4.763	3/8	0.3750	9.525	1	1.0000	25.400
49	0.0730	1.854	12	0.1890	4.801	V	0.3770	9.576			
48	0.0760	1.930	11	0.1910	4.851	W	0.3860	9.804			
5/64	0.0781	1.984	10	0.1935	4.915	25/64	0.3906	9.921			
47	0.0785	1.994	9	0.1960	4.978	X	0.3970	10.084			
46	0.0810	2.057	8	0.1990	5.055	Y	0.4040	10.262			
45	0.0820	2.083	7	0.2010	5.105	13/32	0.4062	10.317			
44	0.0860	2.184	13/64	0.2031	5.159	Z	0.4130	10.490			
43	0.0890	2.261	6	0.2040	5.182	27/64	0.4219	10.716			
42	0.0935	2.375	5	0.2055	5.220	7/16	0.4375	11.113			
3/32	0.0938	2.383	4	0.2090	5.309	29/64	0.4531	11.509			

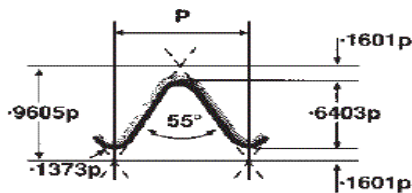
DIMENSIONS OF CENTER HOLES [LATHE WORK]

[LATHE WORK]

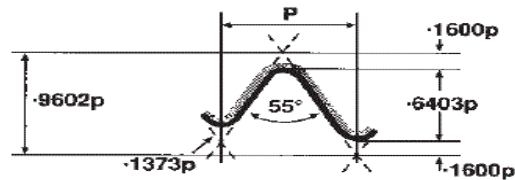


DIAMETER OF WORK		DRILL AND COUNTERSINK DIMENSIONS			
FROM	TO	A	B	C	D
3/16"	7/32"	1/8"	3/64"	1/16"	5/64"
1/4"	11/32"	1/8"	3/64"	1/16"	3/32"
3/8"	17/32"	13/64"	1/16"	5/64"	1/8"
9/16"	25/32"	15/64"	5/64"	3/32"	3/16"
13/16"	1 3/32"	3/10"	3/32"	3/32"	1/4"
1 1/8"	1 15/32"	7/16"	5/32"	5/32"	5/16"
1 1/2"	1 31/32"	7/16"	5/32"	5/32"	3/8"
2"	2 31/32"	1/2"	7/32"	3/16"	7/16"
3"	3 31/32"	5/8"	7/32"	7/32"	1/2"
4"	And Over	5/8"	7/32"	7/32"	9/16"

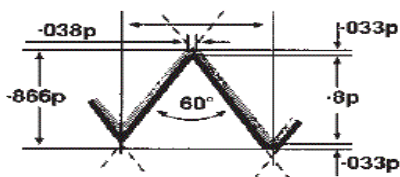
POPULAR SCIENCE MONTHLY SHOP DATA



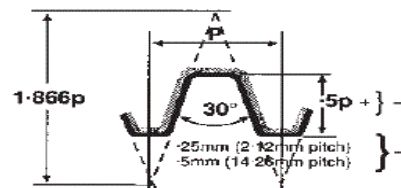
B.S.W.



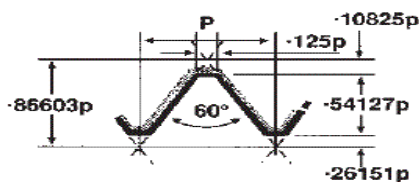
B.S.P.T. (I.S.O. TAPER PIPE)



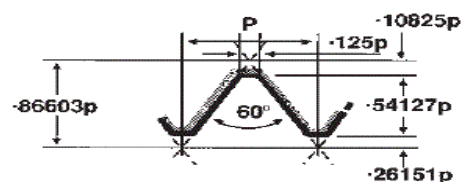
U.S. PIPE TAPER



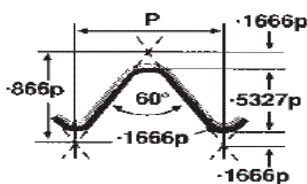
TRAPEZIODAL



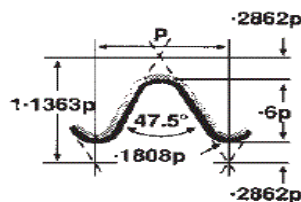
I.S.O. UNIFIED



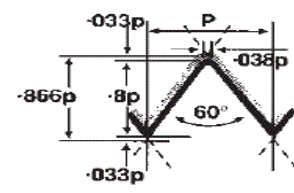
I.S.O. METRIC



B.S. CYCLE

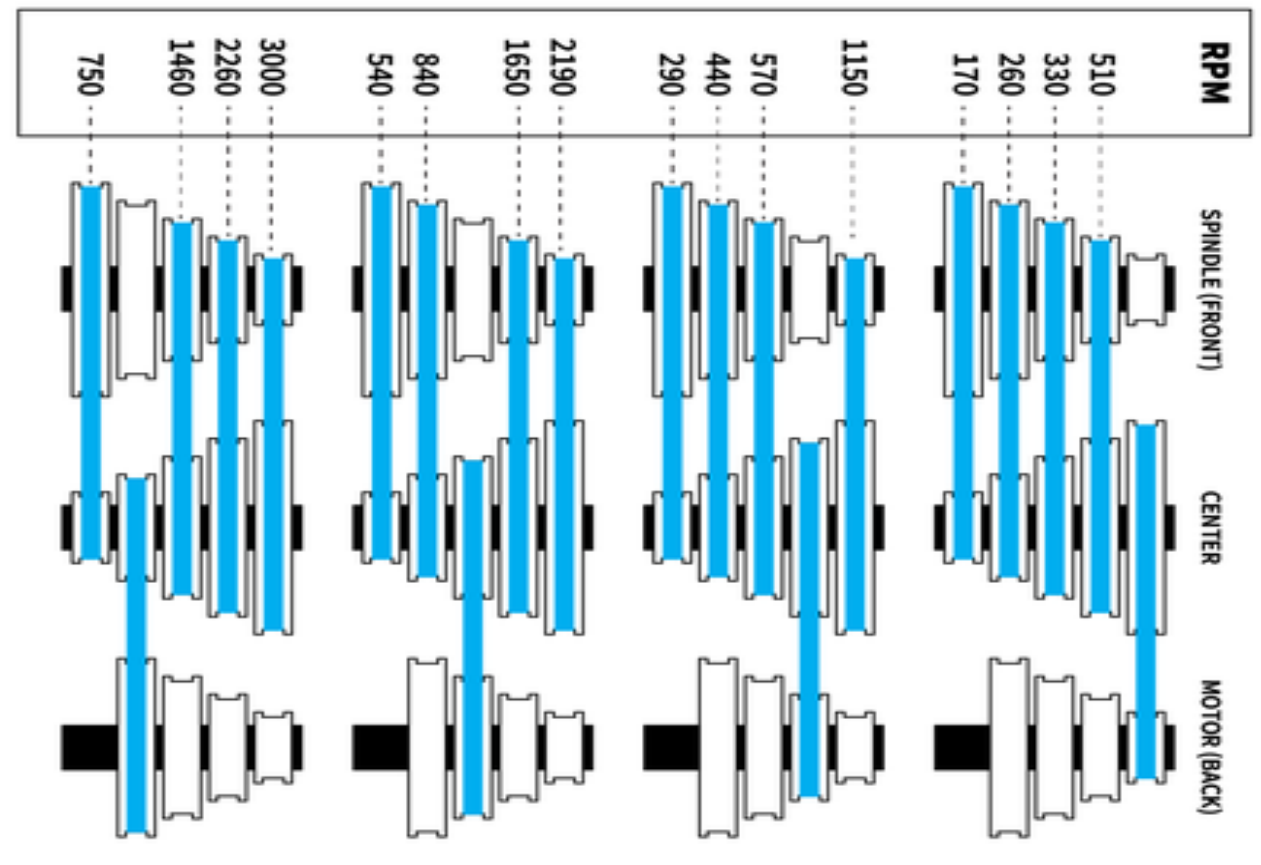


B.A.



U.S. PIPE STRAIGHT

Accessory	Softwood	Hardwood	Acrylic	Brass	Aluminum	Steel
Twist Drill Bits						
1/16" - 3/16"	3000	3000	2260	3000	3000	3000
1/4" - 3/8"	3000	1460	2190	1150	2260	1150
7/16" - 5/8"	1460	840	1460	840	1460	540
1 1/16" - 1"	840	510	NR	440	1150	330
Brad-Point Bits						
1/8"	1650	1150	1460	NR	NR	NR
1/4"	1650	1150	1460	NR	NR	NR
3/8"	1650	840	1460	NR	NR	NR
1/2"	1650	840	1150	NR	NR	NR
5/8"	1650	540	840	NR	NR	NR
3/4"	1460	260	840	NR	NR	NR
7/8"	1150	260	540	NR	NR	NR
1"	1150	260	260	NR	NR	NR
Forstner Bits						
1/4" - 3/8"	2260	750	NR	NR	NR	NR
1/2" - 5/8"	2260	540	260	NR	NR	NR
3/4" - 1"	1460	540	260	NR	NR	NR
1 1/8" - 1 1/4"	1150	260	260	NR	NR	NR
1 3/8" - 2"	540	260	NR	NR	NR	NR
Hole Saws						
1" - 1 1/2"	540	330	NR	260	260	NR
1 5/8" - 2"	540	260	NR	170	260	NR
2 1/8" - 2 1/2"	260-540	NR	NR	170	260	NR
Spade Bits						
1/4" - 1/2"	2190	1460	NR	NR	NR	NR
5/8" - 1"	1650	1460	NR	NR	NR	NR
1 1/8" - 1 1/2"	1460	1150	NR	NR	NR	NR



TAPPING CHART

UNC		
TAP SIZE	TPI	DRILL SIZE mm
No. 3	48	2.10
No. 4	40	2.35
No. 5	40	2.65
No. 6	32	2.85
No. 8	32	3.50
No. 10	24	3.90
No. 12	24	4.50
1/4"	20	5.10
5/16"	18	6.60
3/8"	16	8.00
7/16"	14	9.40
1/2"	13	10.80
9/16"	12	12.20
5/8"	11	13.50
3/4"	10	16.50
7/8"	9	19.50
1"	8	22.25
1.1/8"	7	25.00
1.1/4"	7	28.00
1.3/8"	6	30.75
1.1/2"	6	34.00
1.3/4"	5	39.50
2"	4.5	45.00

Metric (ISO) Coarse		
TAP SIZE	PITCH mm	DRILL SIZE mm
M3	0.50	2.50
M3.5	0.60	2.90
M4	0.70	3.30
M4.5	0.75	3.80
M5	0.80	4.20
M6	1.00	5.00
M7	1.00	6.00
M8	1.25	6.80
M10	1.50	8.50
M12	1.75	10.30
M14	2.00	12.00
M16	2.00	14.00
M18	2.50	15.50
M20	2.50	17.50
M22	2.50	19.50
M24	3.00	21.00
M27	3.00	24.00
M30	3.50	26.50
M33	3.50	29.50
M36	4.00	32.00
M39	4.00	35.00
M42	4.50	37.50
M45	4.50	40.50

BSW		
TAP SIZE	TPI	DRILL SIZE mm
1/16"	60	1.20
3/32"	48	1.85
1/8"	40	2.55
5/32"	32	3.20
3/16"	24	3.70
7/32"	24	4.50
1/4"	20	5.10
5/16"	18	6.50
3/8"	16	7.90
7/16"	14	9.30
1/2"	12	10.50
9/16"	12	12.10
5/8"	11	13.50
11/16"	11	15.00
3/4"	10	16.25
13/16"	10	18.00
7/8"	9	19.25
15/16"	9	20.75
1"	8	22.00
1.1/8"	7	24.75
1.1/4"	7	28.00
1.3/8"	6	30.25
1.1/2"	6	33.50

BSPT		
TAP SIZE	TPI	DRILL SIZE mm
1/16"	28	6.40
1/8"	28	8.40
1/4"	19	11.20
3/8"	19	14.75
1/2"	14	18.25
3/4"	14	23.75
1"	11	30.00
1.1/4"	11	38.50
1.1/2"	11	44.50
2"	11	58.00
2.1/2"	11	71.00

BSPP		
TAP SIZE	TPI	DRILL SIZE mm
1/16"	28	6.80
1/8"	28	8.80
1/4"	19	11.80
3/8"	19	15.25
1/2"	14	18.75
5/8"	14	21.00
3/4"	14	24.50
7/8"	14	28.25
1"	11	30.75
1.1/4"	11	39.50
1.1/2"	11	45.00
1.3/4"	11	51.00
2"	11	56.75

UNF		
TAP SIZE	TPI	DRILL SIZE mm
No. 3	56	2.15
No. 4	48	2.40
No. 5	44	2.70
No. 6	40	2.95
No. 8	36	3.50
No. 10	32	4.10
No. 12	28	4.70
1/4"	28	5.50
5/16"	24	6.90
3/8"	24	8.50
7/16"	20	9.90
1/2"	20	11.50
9/16"	18	12.90
5/8"	18	14.50
3/4"	16	17.50
7/8"	14	20.40
1"	12	23.25
1.1/8"	12	26.50
1.1/4"	12	29.50
1.3/8"	12	32.75
1.1/2"	12	36.00

Metric (ISO) Fine		
TAP SIZE	PITCH mm	DRILL SIZE mm
M3	0.35	2.65
M4	0.50	3.50
M5	0.50	4.50
M6	0.75	5.25
M7	0.75	6.25
M8	1.00	7.00
M10	1.25	8.80
M12	1.25	10.80
M14	1.50	12.50
M16	1.50	14.50
M18	1.50	16.50
M20	1.50	18.50
M22	1.50	20.50
M24	2.00	22.00
M27	1.50	25.50
M30	1.50	28.50
M32	1.50	30.50
M33	2.00	31.00

BSF		
TAP SIZE	TPI	DRILL SIZE mm
3/16"	32	4.00
7/32"	28	4.60
1/4"	26	5.30
5/16"	22	6.80
3/8"	20	8.30
7/16"	18	9.70
1/2"	16	11.10
9/16"	16	12.70
5/8"	14	14.00
11/16"	14	15.50
3/4"	12	16.75
7/8"	11	19.75
1"	10	22.75
1.1/8"	9	25.50
1.1/4"	9	28.50
1.3/8"	8	31.50
1.1/2"	8	34.50

BA		
TAP SIZE	PITCH mm	DRILL SIZE mm
No. 0	1.00	5.10
No. 1	0.90	4.50
No. 2	0.81	4.00
No. 3	0.73	3.40
No. 4	0.66	3.00
No. 5	0.59	2.65
No. 6	0.53	2.30
No. 7	0.48	2.05
No. 8	0.43	1.80
No. 9	0.39	1.55
No. 10	0.35	1.40
No. 11	0.31	1.20
No. 12	0.28	1.05
No. 13	0.25	0.98
No. 14	0.23	0.80