TOOLS –
Secret Men's Business Revealed

Learn what happens in the Toolshed.

A DIY Guide to unravelling the mysteries of using tools to do things for you!

By: Toni Martin
- Handy female tradesperson

Table of Contents

Introduction

Fewer than half the men on this planet know any more than the average woman about tools. Tools are a total mystery to a very large number of men. They are just as intimidated at the prospect of changing a tyre as many women are.

There is, however, a belief that all men have some knowledge of tools – enough to get by – and that most women don't know much about tools at all.

Whether this is universally true or not, this booklet may be of help to you when the time comes in your life to hang a picture or assemble a piece of flat pack furniture, etc.

This booklet won't turn you into a highly qualified tradesperson but it will help you when a "useful" man is not around! The mysterious business of what men do in the privacy of their sheds may not be completely revealed, but you may now know what they are not doing!

Tools you need to get you through life

If you wander through a large hardware store you can easily be intimidated by the range of tools you will inevitably see. Don't be put off by this. In reality you only need about 8 tools to do 90% of everyday tasks*. The rest of those tools in the store are either variations of the same thing or specialised tools that you need not concern yourself with.

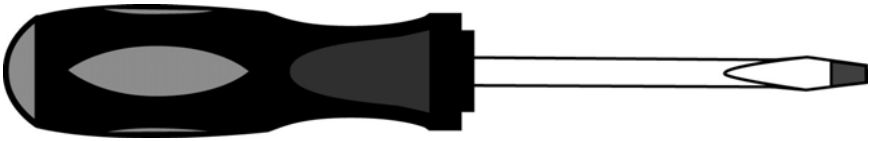
The kit you have purchased gives you all the basic tools you need, apart from an electric drill.

* This booklet is limited to "tasks", rather than "projects". A project is for example, building a student desk from scratch. A task on the other hand is hanging a picture on the wall or putting the heel back on your shoe.

Screwdrivers

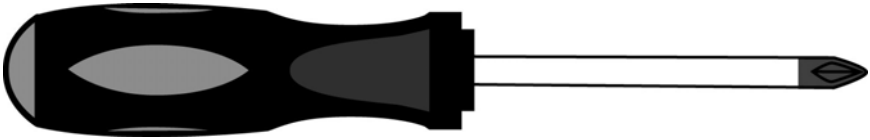
This is the most common tool you will need. You probably already have one or two. At a basic level they come in two types and each two sizes to be useful.

Type 1. Flat Bladed



This is the original type and simply has a flat blade which is inserted into a screw with a corresponding slot. They have largely been replaced with the Type 2 below, however you must have the type 1 screwdrivers in two sizes to be safe. They are handy if you need to do something with older furniture, or to simply lever open a tin of paint.

Type 2. “Phillips” or Cross-Head



These are for screws that have a little cross recess in the head. They are much easier to use as they tend not to slip out of the recess in the screw. You will encounter these types of screws in flat-pack self assembly furniture.

Tips when using either screwdriver

Undoing or tightening screws

Firstly, grip the screwdriver firmly and locate the end of the screwdriver completely into the recess of the screw. Be very careful is the recess looks as if it is worn. This is likely to cause the screwdriver to slip, which is annoying and might cause an injury to yourself or damage to the item you are using the tool on.

Make sure that the shaft of the screwdriver is pointing directly through the axis of the screw like fig. 1 below.

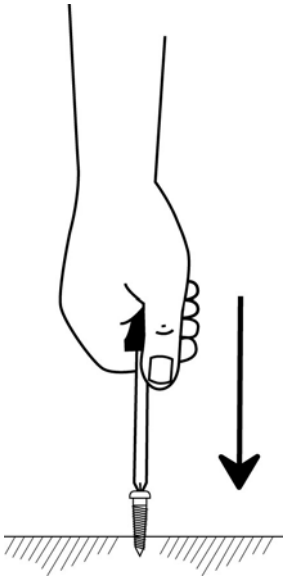


Fig. 1.

Before turning the screwdriver, put some downward pressure through the screwdriver so that the end of the screwdriver firmly remains in the recess of the screw head.

Which way to turn the screw?

Easy! To tighten a screw, turn the screwdriver clockwise looking from your end. This never changes. To unscrew, anticlockwise. Make sure to use downward pressure on the screw to ensure that the driver does not pop out. Use more downward pressure to tighten than untighten. Don't forget to keep the shaft of the screwdriver straight.

A word about "stripping"

Phillips head (Type 2) screws can easily "strip". This is the process where the screwdriver in the cross recess rotates in the screw head without the screw turning. It is very important that you avoid this as you will end up with a screw that can't be removed. The best way to avoid this is to use a screwdriver that is not worn, and is the right size for the slot. A good fit into the screw recess does not have any "give" when inserted. If you use a poorly fitting screw/screwdriver combination, you are asking for trouble.

Which size screwdrivers are best for your needs?

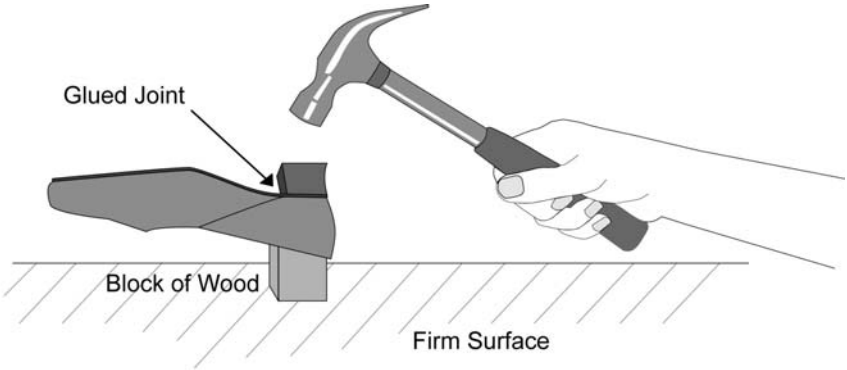
For flat bladed (Type 1) screwdrivers, you would need one that is about 4.5mm across the blade and another that is about 8mm across the blade. That will cover 90% of your requirements.

For Phillips head (Type 2) screwdrivers, you will need a No. 1 and No. 2 size. This is generally stamped somewhere on the tool unless it is supplied with other tools in a kit. You have four screwdrivers that can be your companions for life. These are the ones in your tool kit.

Hammers

Hammers have classically been used to drive nails into wood; however that task has been largely taken over by screws. A hammer, however, has many other tasks and it justifies its retention in your basic tool kit because of this.

Its main use for you will be “persuading” things to go back together or “tapping” an object to loosen it up. If, for example, you loosen the heel on your shoe, a hammer will help you put it back in place. A series of illustrations will help you do this.



Shoe Repairing Tips

To prevent the heel from coming loose again buy some glue called “contact cement” and apply it between the surfaces that have parted. Follow the instructions on the glue tube. Before gluing, make sure that any nails that might be present are straightened so that the heel will go back on straight! (See “Pliers”).

Other Hammer Uses

Even though we say that nails have been overtaken by screws, a nail can be handy. Beware! Nails can be just like men – they bend but not the way you want them to and they also can be unreliable.

The hammer supplied in your tool kit is not really heavy enough to use to construct anything substantial such as a toy box or a dog kennel, etc. It is fine for small tasks, however.

A word about plasterboard

A typical task for this hammer would be to put a nail in the wall to hold up, say, a calendar. Be warned, most internal walls in houses are NOT suitable to be nailed. Walls are usually finished in plaster or plaster board. Plaster is a fragile chalky substance commonly known found in older homes, built over 40 years ago. Plaster board is actually a sheet of plaster sandwiched between cardboard. A nail will not remain in a plaster wall at all, indeed it may dislodge a big chunk of the wall! You can drive a nail into plasterboard and the nail will remain in place but it will only hold the lightest of loads. DO NOT use a nail in the plasterboard wall to hold anything that weighs over 50grams (2 ounces).

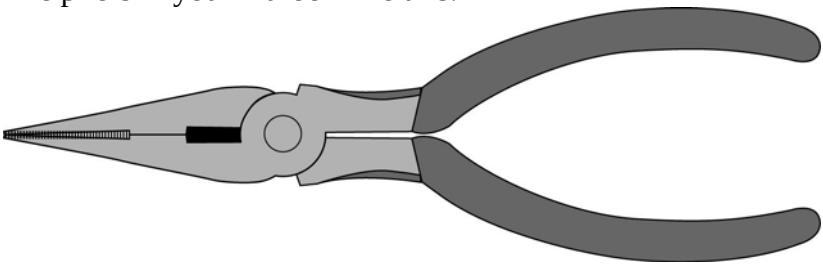
Other surfaces

You can ‘drive’ a nail into any part of the wall that is made out of wood. This includes the frame of a door (“architrave”) or the back of a door itself. You can then hang heavier loads, but not a lot.

Tip: Avoid nails.

Pliers

The pliers in your kit look like this:



They are really just a mechanical extension of your fingers. You can grip things tighter with pliers due to the mechanical leverage of the handles.

Uses for pliers

- To pull bent nails out or straighten them.
- To twist wires together
- To hold things together until the glue sets or a screw is placed to hold something permanently.

They are not to be used to undo bolts or nuts, but can be used to hold a nut while its corresponding screw is screwed into place. They are also good for picking things up that have fallen into a narrow gap or holding something that is too hot to hold yourself.

Other tools in the kit

Shears (Scissors)

These are basically heavy duty scissors. They can cut things like a leather belt that is too long or heavy rubber, etc. The serrated part in the middle can grip round objects and turn them if they are too tight to turn by hand.

“Tape” measure

Do we really need to tell you what this does? They differ from a dressmaker’s tape measure in that the metal ‘tape’ will stand vertically for about 60cm (2 feet) of its length so you can measure above your head. Try it!

Adjustable spanner

This tool enables you to undo nuts and bolts. It’s very handy if you have to dismantle/assemble a bed frame, for example. A lot of outdoor furniture also has nuts and bolts that sometimes need to be tightened.

Metal cutting saw

This has a thin flexible blade called a hacksaw blade. There is a tool called a hacksaw and it is a full size version of the mini version in this kit. You can use this saw to cut off a screw or nail sticking out of a wall or piece of furniture, etc. (The head might be broken off and you can not get a screwdriver on it). The thin flexible blade enables you to cut it off flush.

Do not extend the blade out of the handle too far as the blade will flex excessively and break with a snap!

Specific common tasks

Perhaps the most useful thing you can do yourself is to make a secure anchor point in a wall to mount a large painting, mirror, etc. We will show you how to do this!

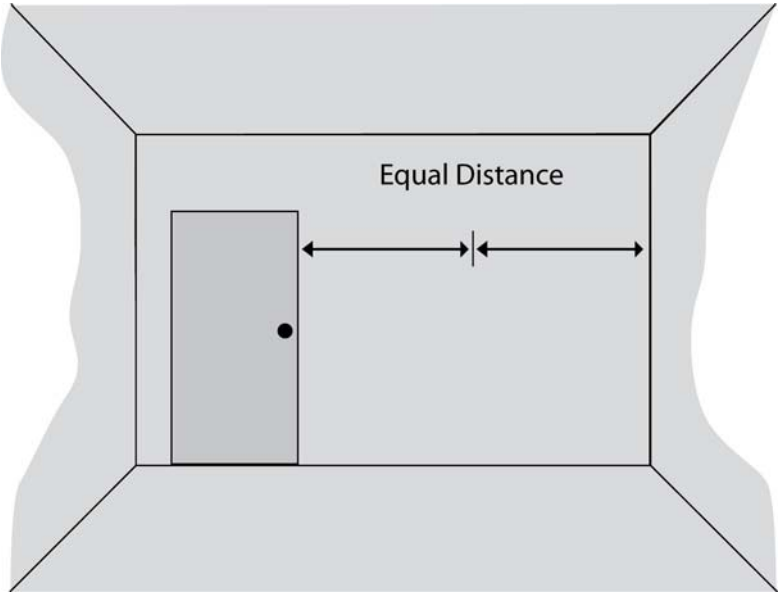
First, establish what sort of wall you have. As said previously, if the house/apartment is over 40-50 years old the wall is probably brick with a coating of plaster. If the house/apartment is younger the wall probably is plaster board. A well known brand in Australia and New Zealand is Gyprock. In America it is called “dry wall”.

Hanging a picture on a “plaster on brick” wall

A little tricky, but you can do it.

Unfortunately you are going to need more tools but they are good tools to have.

Before that, make sure that you are certain where you want the hanging point to be. With your tape measure, establish a vertical imaginary line to ‘centre’ the picture on the proposed wall. For example, most walls have a doorway on the left or right of the wall. If you simply hung the picture in the middle of the wall, it would be closer to the door. It is better to centre from the inside door edge to the other end of the wall. It depends on the size of what you want to hang. You may even have several paintings to hang. See illustration below.

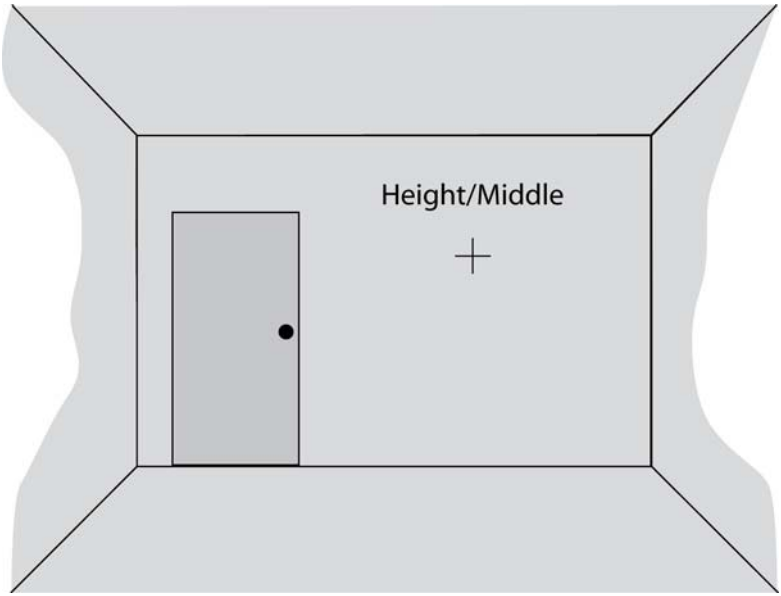


There is no need to draw a vertical line; a dot with a pencil will suffice. Make the dot on the wall in a place which will ultimately be covered by the picture.

The height depends on a number of things: - Whether there is furniture below where the picture will be; how big the picture is; and how big the room is.

A good way to work it out is to hold the picture against the wall and get one arm around the back. You will need to get your finger to locate the hanging wire and find its centre. Take part of the load of the painting with this finger so that the wire forms and upside-down ‘V’. Then, with the help of a friend (or two) lift the painting to a height that you think is appropriate. Most people like to look up slightly at a painting but straight at the centre of, say, a mirror.

When you have found the right spot, transfer your finger to that part of the wall. That is the height of where you will be fixing the anchor. With a bit of luck, it should not be too far from where you marked the middle of the wall. See the picture below.



The “height” point will need to shift left or right to intersect the imaginary middle line. Mark that point with a pen or pencil. This technique is the same for all walls.

In order to complete the plaster/brick wall job, you will need at least four more things:
- An electric (mains or cordless) drill
- A masonry drill bit. ¼” or 6mm
- A special wall plug (green in colour)
- A screw, No. 8 self tapper, cheese head 45-50mm long.

After the tool kit you now have, the next best tool is a drill. You can of course borrow a cordless drill which will pay for itself on many occasions. A cordless drill will have all the power you need for most applications.
In order to actually make the hole in the plaster/brick you will also need a drill bit. It must be a masonry type. Unless you are hanging a huge painting a 6mm bit will suffice. You can buy one in any hardware store. This bit will correspond with a special plastic wall

plug which will be green in colour. You may have to buy a packet of them, but they are cheap. Various lengths are available but you will need about 40mm long ones. Longer rather than shorter.

You now have your dot on the wall where the 6mm hole will go. Fasten the masonry bit in the drill. Get the lender or the shop to show you how to do this).

Hold the drill steadily and operate the trigger. Make sure the drill is operating in a clockwise direction when viewed from behind. The drill will go through the soft chalky plaster very quickly and then it will encounter the brick behind. It is possible the drill will keep going with little resistance. This means that you are drilling into the mortar (a type of cement) between the bricks. This is not really a problem, simply drill in about 60mm and pull the drill out. You can then gently tap in (with your hammer!) the green plug. Tap it in so that it goes below the surface of the wall by about 3-5mm.

If you hit brick (which is most likely) the resistance to the drill will be considerable. The masonry drill will take several minutes to go 40mm or so into the brick. Take several goes if you get tired. You will get there.

Once you have completed this blow the dust out of the hole – close your eyes! And insert the green plug. Tap the plug to just below the surface of the wall.

The hard part is over. Next, get your screw and screw it into the little hole in the centre of the green plug. Keep screwing until the head of the screw is about 10mm clear of the wall. The hanging wire will be captured by the head of this screw.

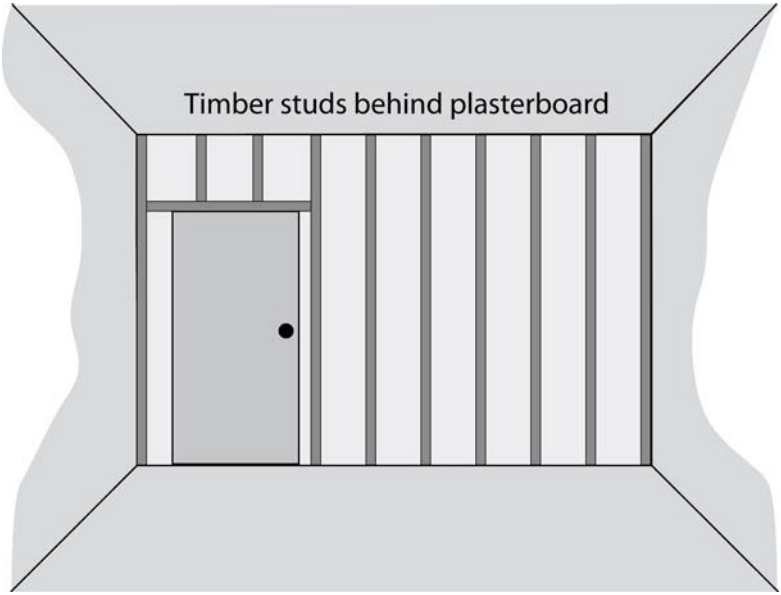
Get out the vacuum cleaner and put the kettle on. Hang the painting and admire both the artist's skill and your own!

Hanging a picture on a plasterboard wall

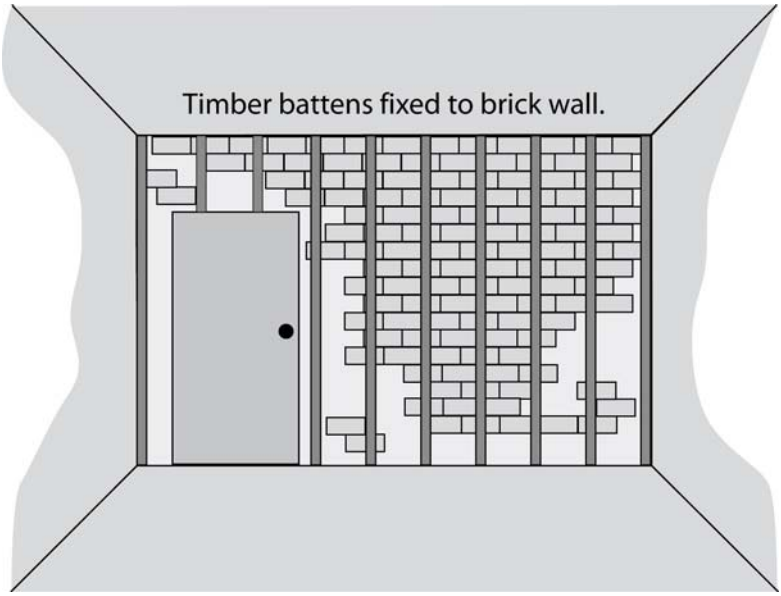
When the plaster board house was built it was clad with the plaster board in one of two ways. The board was either nailed or glued to studs (!) which are vertical bits of timber (generally) going from floor to ceiling (picture 1 below). If the wall was brick instead of studs, smaller bits of timber called battens were attached to the brick and the plasterboard was attached to the battens (picture 2 below). Either way, there is an air gap behind the plasterboard.

If you have a stud type wall, you can locate a stud behind the plasterboard which will make the job easy but locating a stud can be tricky so we will ignore this process in this instance.

Locate where you want your anchor point to be in the same way as the plaster/brick method. Drill a small hole (or hammer in a nail and pull it out again with your pliers). On most occasions the nail or drill will go “straight through” with little resistance. This is the air gap mentioned previously. If the drill or nail encounters something it means that you have probably struck a stud or a batten – which is wood. If this is the case lucky you, you can screw your screw straight into it. You may have to drill a small hole into the wood first. If you have just hit air, then you need a thing called a plasterboard fixing anchor.



Picture 1 – Timber Studs



Picture 2 – Timber Battens

You can also buy these in any hardware store. They generally come in packets of 2 or 3. They look like an exaggerated screw with really big screw threads. You can get them in plastic or metal and they are fantastic for this sort of job. They are not even expensive.

When you get back to your wall pull one out of the packet. Inside the pocket will also be a small screw and perhaps a washer with a hook on the bottom. When you look closely at the exaggerated screw you will see that it has a sharp blade like thing at its point. Get out your big Phillips screwdriver from your tool box. You will find that this screwdriver neatly fits into the head of the exaggerated screw. All that you have to do now is screw the thing into the little hole you have already made into the wall. Keep turning rigorously. The screw will bite into the plasterboard and quickly embed itself. Don't stop until the head of the screw is flush with the plaster.

Then stop screwing.

You now have a "hard point" in the plaster wall which will take fairly heavy objects, say 5-8 kgs. Next get the little screw and hook washer out of the packet and screw them into the little hole in the middle of the exaggerated screw. You can hang the painting wire on the hook on the screw head. Done!

Assembling Flat Pack Furniture

Most low and medium cost furniture these days comes disassembled in flat cardboard boxes – generically called flat pack. This technique has revolutionised the furniture trade with the result that the public has a much wider choice of furniture than ever before at very reasonable prices with the added benefit that you can take the furniture straight from the store in your car.

The downside is that the quality of the assembly instructions varies from excellent to woeful. The Swedish IKEA company produces

magnificent instructions which are generally non-language based and unambiguous. Some flat pack product, particularly from Asia requires you to be pretty careful.

We recommend that you do the job with a friend – especially one that may have a good abstract imagination. A big mistake that many people make is to rush the job. Take your time – even to the point of having a glass of wine while you decipher what is going on.

All flat pack furniture relies on special fastening systems that use either an "Allen key" or a screwdriver (or both). An Allen key is basically a special screwdriver. You don't have to buy one – it will be supplied with the furniture, no matter how cheap the unit is. Unless the item is small, it is generally a good idea to assemble the furniture in the room in which it will finally reside. This means clearing the room for a workspace. Do it.

Before assembling always check to see if all the parts are there, especially all of the little metal fasteners, dowels (which are short round bits of wood), nails, glue etc.

The worst assembly instructions still have a starting point. Do not deviate from this, even if you see two bits that obviously go together. Down the track you may have to dismantle them because they have to fit inside something else!

If you are not a veteran at assembling flat pack furniture there will be a point where exasperation creeps in. It will pass and in the end you will have a useful piece of furniture, the sturdiness of which will remind you that secret men's business is not so secret anymore!

See you in the hardware store.