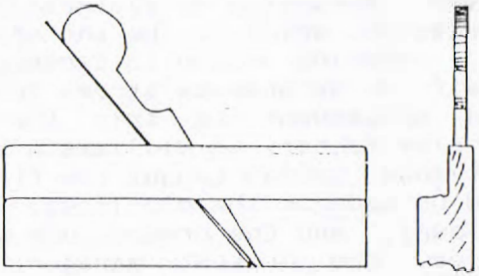
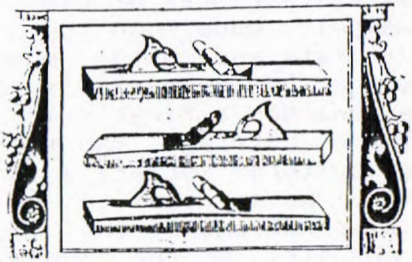
Sandhurst for two years, and then took a year's trip to England. Returning to Victoria he established a business at Creswick, which at the end of fourteen years (1873) he sold, removing again to Sandhurst, and re-establishing himself at Hargreaves street in that city. About three years subsequent to this the first portion of his extensive factory in Williamson street was erected. The experience gained taught the firm that no real progress could be made on the old lines, so they resolved to form a company, and the promptitude with which Mr. George M. Pickles, the present manager, acted enabled him to accomplish his object, and a great portion of a Government contract for rolling stock fell to his share. The buggy department has an area of over 73,000 square feet, being the largest in the colony. It is stocked with every conceivable kind of vehicle, and, if necessary, both the Melbourne and Sandhurst factories can turn out respectively six vehicles per day. The best timber is used, the principal woods being hickory, elm, bass, white-wood, and chestnut, of each of which the company have an excellent stock. In August 1885 the company purchased Messrs. W Crutch and Co's premises 5, 7, and 11 Latrobe street west, which is fitted up as a branch establishment. These premises being commodious and central are used as show-rooms, where visitors have the opportunity of inspecting carriages of every shape and style, from the buggy weighing under 100 lbs., to the family carriage with its elaborate and costly mountings, and coats of arms as prescribed by the Herald's office. The firm was, at this time, awarded a first prize in six of the seven sections of the carriage manufacturer's exhibits a the National Agricultural Society's Show at Flemington. Altogether they have received over 400 prizes, and Mr G.F. Pickles was one of the first to introduce exhibits of this industry. On the foundation of the Melbourne and Fitzroy establishments, Mr G.F. Pickles, senior, again went into harness, taking upon himself the supervision of the Sandhurst factory, having in 1882 retired from the business and handed the management to his son George M., who was born at Fitzroy in 1856, and who has now sole control of the Melbourne houses. At the Fitzroy branch every vehicle is made under his personal direction. A specialty of this firm is the patent shaft and pole attachment, invented by Mr. G.M. Pickles, which combines easy adjustment with simplicity of application, and less liability to breakage, with perfect safety, the joint being self-supporting, and there being no objectionable motion or noise.

Reference:
Victoria and its Metropolis, Volume 2, McCarron Bird and Co., Melbourne 1888.

MOULDING PLANES



Professional plane making in Britain appears to have started about 1710-1720 in London, and was marked by the presence of the maker's name on the front of the plane.The earliest records relate to Richard Elsmore, who was in business around 1713-1715, but does not appear to have continued, and Robert Wooding who qualified in 1704 and operated a plane making business under the 'sign of three plains' in Cheapside from about 1720. Wooding died in 1728 and his business was continued by his wife, Anne until about 1740 when it was taken over by John Jennion. Notable apprentices include William Cogdell (1721), John Jennion (1724), Thomas Phillipson (1728) and Robert Fitkin (1736).



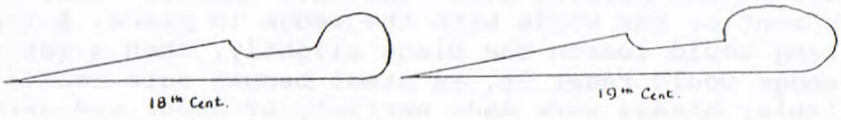
three plains

Part of John Jennion's trade card.

The stimulus for commercialisation may have come from the change in furniture style and materials, from carved and inlaid oak boards and planks to frame and panel work in walnut and mahogany(1). The latter in particular was available in long straight grained material well suited to the production of mouldings for decoration of panels. The demand for mouldings-and hence for planes-may have been a function of the large increase in urban population caused by the industrial revolution(1).Over 700 planemakers were active at one time or another over the period 1700-1960, with a peak of about 150 operating in 1860. Development of woodworking machinery in the 19th century, and the stationary steam engine for power resulted in a rapid decline in demand and production of hand moulding planes.

DESIGN & CONSTRUCTION

British planes were generally made of beech, but other hardwoods were sometimes used in Europe and America.Early planes were craftsman made and bore finishing touches that were characteristic of their makers, eg in the slope of the shoulder and the shape and number of gouge cuts at the corners. The length and height of the body was usually a little longer than later planes-9 1/2" to 10"- and the wedges were more circular at the top(see fig 1). As demand increased details were simplified and the plane dimensions became more uniform.

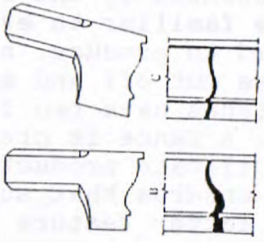


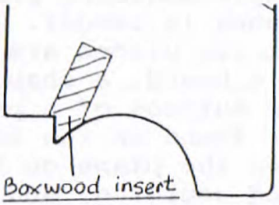
1. Development of the wedge

A relatively early refinement was insertion of a boxwood 'slip' at wear points in better quality planes.The insert was placed with the grain almost vertical so as to reduce the tendency to splitting in narrow sections eg. the quirk in beading planes. This feature appears in Cogdell planes dating from before 1750.

The early planes were designed to be used vertically on the piece in the same way as a bench plane. An early improvement was the introduction of 'spring' which required the plane to be used at an angle (see fig 2).This arrangement had two advantages:

* the side pressure exerted on the plane reduced the tendency of the plane to 'wander' off the partly cut moulding
* the mould shape was worked across the bottom of the plane rather than at an angle up the side (fig 3). This simplified the process of cutting a uniform mouth.

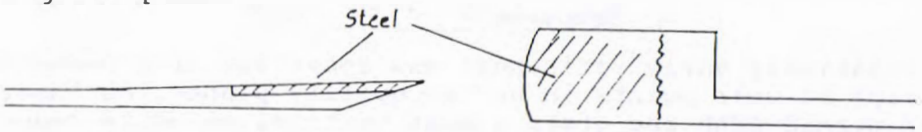




To cope with the demands of different types of wood, most moulding planes were produced in up to four blade angles. Planes intended for soft woods had their blades set at 45 degrees; this was known as the common pitch and is most

often found on planes used by carpenters (skirting, architraves and windows). Increasingly harder wood and those with pronounced figure needed steeper pitches provided by the York pitch, 50 degrees; the middle pitch, 55 degrees; and the half pitch, 60 degrees. Cabinet makers would have used the steeper pitches in which the action is more scraping than cutting and tearout is reduced.

Blades were generally laminated, with a thin piece of steel scarf welded on the end. The shapes were filed up while the metal was soft then hardened and tempered. The thickness was tapered from the tip; this gave extra support to the brittle steel and also allowed fine adjustment of the blade with the wedge in place. A tap on the tang would loosen the blade slightly, then a tap on the wedge would reset it. As steel became more readily available, blades were made entirely of steel and were no longer tapered.



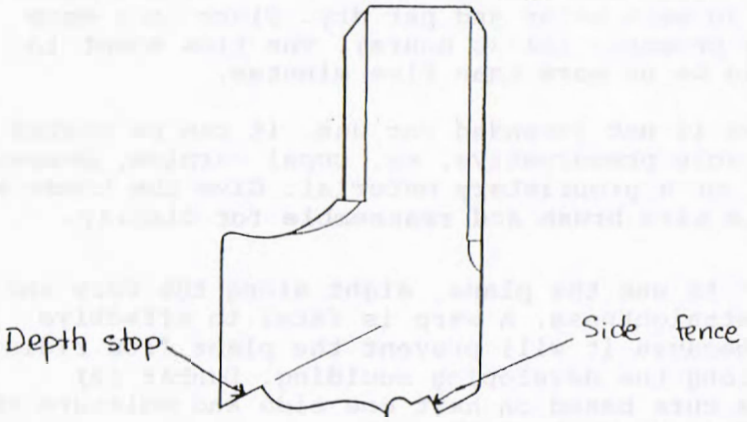
Laminated blades

TYPES/CLASSIFICATION

The planes we call moulding planes can be classified as shaping, simple and complex (2). Shaping planes are represented by Hollows and Rounds. They have a convex or concave sole in radii of 1/16" to 1 1/2". There seems to be some disagreement on which is which; Dunbar(2) names them for the shape of the sole, but Goodman (1) follows the convention for complex moulders and calls them by the shape they produce. We should agree on a standard-a vote, perhaps?

Simple moulding planes are represented by the beading planes (& reeds). They should be familiar to everyone.

Complex planes are those designed to produce, on the edge of a board, a shape that could be cut off and applied to the surface of a panel. These planes have two features not found on the simpler planes. A fence is provided to keep the plane on course and facilitate production of a good moulding, and a depth stop ensures that successive mouldings are all the same. The latter feature stops the blade from cutting and the final passes burnish the wood to a smooth surface that needs no further treatment. Complex planes come in many profiles and are often combinations of simpler shapes eg. Ogee with Fillet.



63. R. Wooding

Reverse Ogee with Astragal.

RESTORATION

The question of whether to restore or not must remain a personal one. If you want to use the plane, restoration will almost certainly be necessary. If the plane is very old or by a rarely seen maker, and is relatively clean with a smooth dark patina, it is probably best left as it is. If it is a poor specimen, some cleaning up will enhance its appearance and possibly its value. My view is that the craftsmen who used them would have kept them in good condition, and the dirt on them now is the accumulation of years of neglect and abuse.

To begin the restoration the plane must be dismantled. The wedge is not removed by bashing it with a hammer, though many planes show evidence of such abuse. To remove the wedge, grip the wedge in the left hand with the plane upsidedown and exert some pressure on the plane with the top of the hand. Strike the rear of the plane with a mallet. If several blows do not loosen the wedge, grip the wedge in the vice and drive the the plane body off the wedge by striking the rear with the mallet.

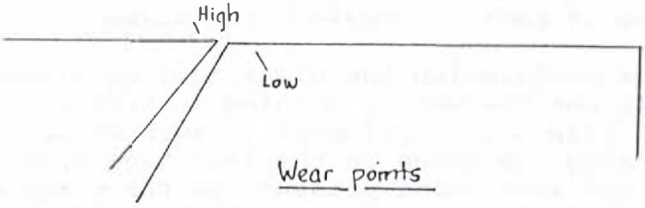
If the plane needs cleaning, this is the method I use, but it's not the only one. Apply paint stripper liberally to all parts of the body and wedge, including in the throat (a stick in the throat, held in the vice, is a useful support). When the stripper has done its work, wash thoroughly in hot soapy water (I use 'Omomatic'). Wear rubber gloves for this operation or you'll regret it.

Use a stiff brush to remove all traces of stripper and old finish, clean the throat with a bottlebrush. Rinse thoroughly in warm water and pat dry. Place in a warm spot to dry properly (24-48 hours). The time spent in water should be no more than five minutes.

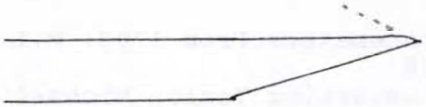
If the plane is not intended for use, it can be coated with a suitable preservative, eg. copal varnish, beeswax, linseed oil or a proprietary material. Give the blade a clean with a wire brush and reassemble for display.

If you want to use the plane, sight along the sole and check for straightness. A warp is fatal to effective operation because it will prevent the plane from riding smoothly along the developing moulding. Dunbar (2) describes a cure based on heat one side and moisture the other but I don't know whether it works as I haven't tried it.

Assuming the plane is straight, it must be checked for flatness and uniformity from heel to toe along the sole. The usual wear points are in front of the blade and at the heel. High spots occur just behind the blade. If not corrected, the blade will need to protrude so far to clear the high spots that it will dig in and be impossible to use. The fence side and depth stop can be trued with a very sharp and finely set rebate plane; the sole can be restored to shape by careful scraping with suitable tools (chisels, gouges etc, but scrape, don't cut). Check flatness and uniformity frequently. When you are satisfied put the stock to one side and tackle the blade.



For effective use the top of the blade must be flat so that the 'attack' angle is the same as the bed angle. Many blades have been rounded over at the tip by unskilled hands (fig. 4) and even if they are sharp, they will not work properly because of the exaggerated angle. The top can be made flat by careful work on a belt sander, by hand grinding on a stone or by surface grinding by machine etc. But remember the quality of the steel is variable and it may be very brittle. Overheating will destroy the temper (and yours, too!). If the 'roll' is bad, it may be better to grind back the tip rather than remove too much from the top.



When the top is flat, the profile can be restored. I use small grinding wheels and shapes, and dunk in water often. Check the shape against the sole of the plane; it should protrude evenly at all points when the blade is in its normal position, held by the wedge. The final sharpening and honing requires a selection of small slip stones. I use oil on mine, but I don't think it matters whether you use oil or water.

Well, having spent upwards of two hours on this, you might think you're finished. Not so, there are two more points to be checked. The wedge must be properly fitted so that it holds the blade securely and also guides the shavings upwards and out of the throat. The tip of the wedge should extend almost to the sole of the plane and grip the blade all the way. Any looseness will allow the blade to 'chatter'. The mouth should be wide enough to allow the shaving to pass, but not wide enough to cause it to catch and jam.
Before adjusting either wedge or mouth, assemble the plane and try it on a suitable piece of wood. You may be lucky. Or you may need to adjust the wedge or make a new one. If the shaving jams, it might be either wedge or mouth. You will need to watch closely as you plane to decide and correct the problem. A wide mouth can be patched, it's not difficult, and may make all the difference.

When you are satisfied that all is OK, give the plane a coat of your favoured preservative, being careful to avoid the throat and make sure the wedge is dry, then assemble and adjust it.
Production of consistently good mouldings requires patience and practice and good timber. Practise on short scrap wood; when cutting a moulding on a long piece, start at the far end and work back.
A well prepared plane should cut easily and should 'sing' as it cuts and be a pleasure to use. To quote Michael Dunbar (2)

> " These planes are perhaps the most sophisticated woodworking tools pre-industrial Man ever developed. But beyond their concept they are also the most critical implements a craftsman would have used. In order to perform properly they insist that all conditions be just so. A moulding plane that is not perfect cannot be expected to produce even acceptable results."

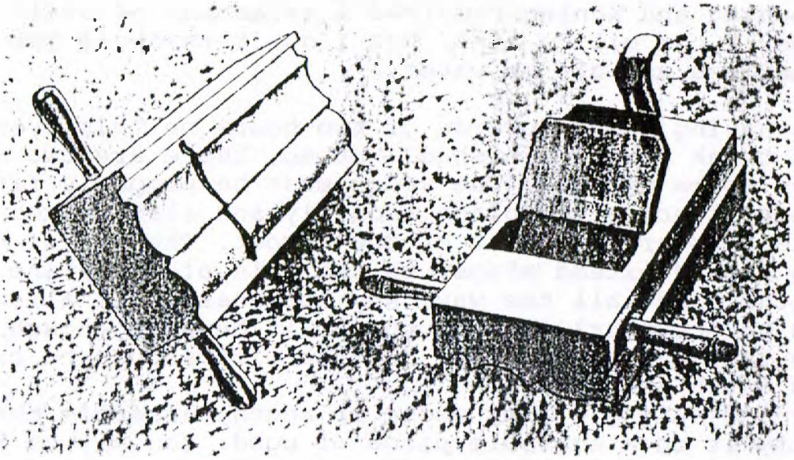
REFERENCES:

(1) British Planemakers From 1700. W.L.Goodman. Arnold & Walker 1978

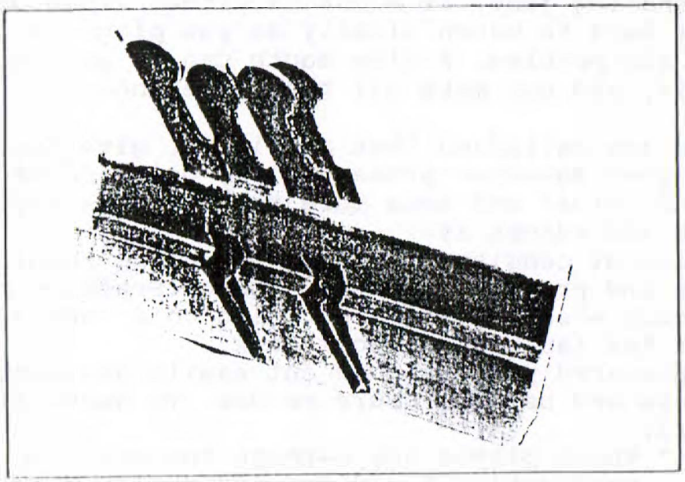
(2) Antique Woodworking Tools. Michael Dunbar. Stobart & Son 1979

A very useful description of how to make moulding planes can be found in 'Fine Woodworking on Planes and Chisels' Taunton Press 1985. p30

MOULDING PLANES



CROWN MOULDING PLANE:



Circa 1856-1870 4-toned moulder by Mathieson & Son

References: Barlow, R.S, The Antique Tool Collector's Guide To Value, Windmill Publishing Co, El Cajon California 1989