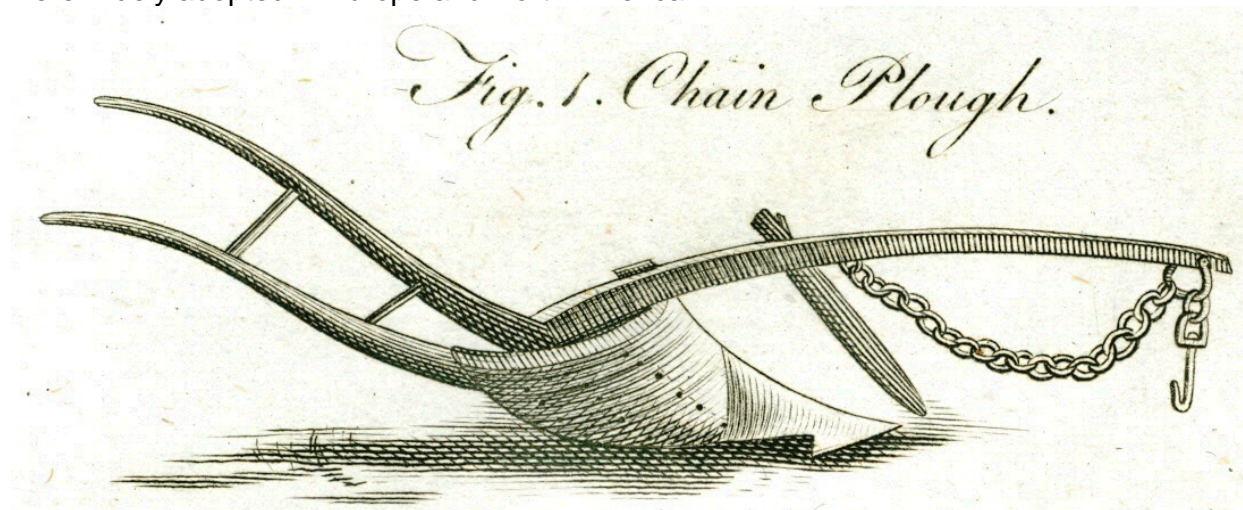


The Walking Plow

by Bob Powell

The Development of the Plow:

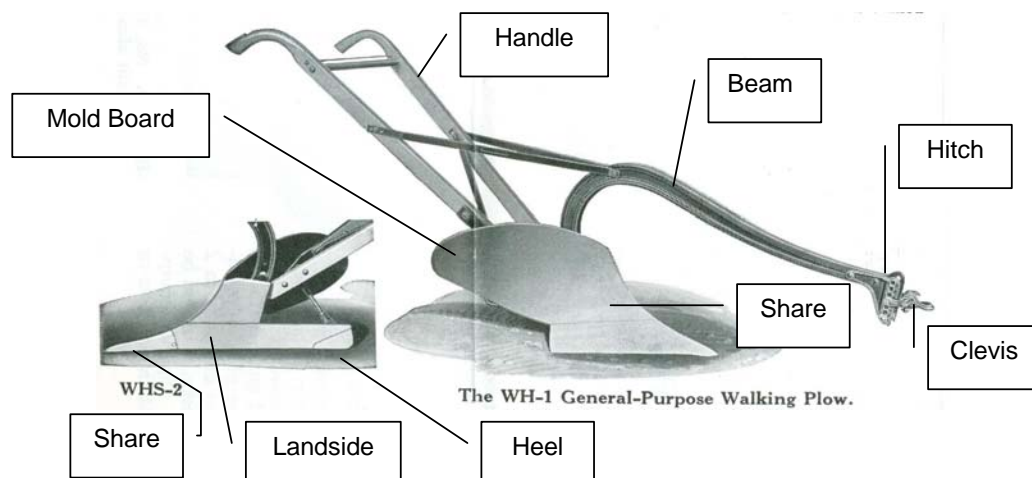
Possibly influenced by having seen an existing Dutch plow design, one of the first innovators of walking plows was Joseph Foljambe of Eastwood, Rotherham, England who in 1730 patented a plow with an iron clad moldboard. The 'Rotherham Plow,' as Foljambe's implement became known, was imported into America by George Washington and successfully used until worn out beyond repair. However, it was James Small, born c.1740 at Upsetlington, Berwickshire in the Scottish 'Borders', who scientifically developed the plow. Influenced by the Rotherham model, he focused on the wooden moldboard profile that he later produced in cast iron. The principles of plow making that Small incorporated into his 'Swing' or 'Chain Plough' by 1765 were key to the 'Agricultural Revolution' and by the 1780s were widely adopted in Europe and North America.



James Small's 'Swing' or 'Chain' plow from a later 1700s engraving.

Gradually developments were made in the US. Charles Newbold from Chesterfield, NJ, was granted the first US patent for a one-piece cast iron plow on June 26th, 1797 (excluding the handles and beam.) In New Jersey, David Peacock developed a similar three-piece plow that was granted an 1807 patent. However, it was deemed to have infringed Newbold's patent. It was Jethro Wood, of Scipio, NY, in 1819 with his ideas for replaceable plow parts that really caught farmers' interests. Vermont-born blacksmith, John Deere by then located in Grand Detour, Illinois, developed and manufactured a commercially successful cast steel plow in 1837. With its polished surfaces, the plow ultimately sold in the thousands and created the foundation for Deere & Company. There were other successful plow manufacturers. The plow works founded in 1842 by William Parlin, later Parlin & Orendorff, of Canton, Illinois eventually became the home of the International Harvester factory producing McCormick- Deering plows as shown below.

Parts of the Plow:

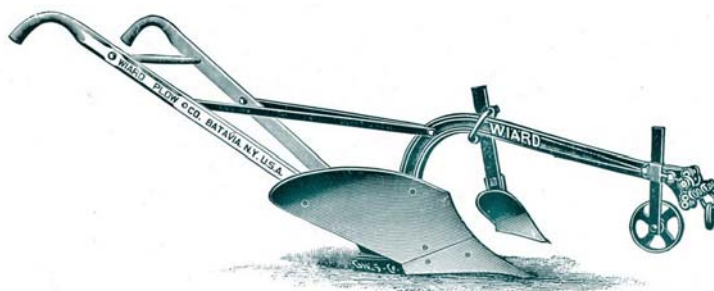


Above: A McCormick-Deering Walking Plow from a *circa* 1930s catalog with the principal parts named. Plow terminology can vary greatly. Terms used here are common.

Many plows also have attached to the beam, forward of the moldboard and share, a device called a 'coultter.' These were in the form of either a nearly vertical knife or rolling disc, or a 'jointer' in the form of a miniature share and moldboard. The function is to partly cut a furrow width through the unplowed sod, ground or residual crop growth thereby assisting plowing a clean furrow. With or without these fittings, plows may also have an adjustable depth wheel attached to the beam to regulate the plowed furrow's depth.

Plow Makers: There were many North American plow makers from individual blacksmiths through to large agricultural implement and machinery makers. Premier examples include:

- Deere & Co., Moline Ill.
- Emerson-Brantingham Co., Rockford, Ill.
- Frost & Wood Co. Ltd., Smiths Falls, Ontario, Canada. Later known as Cockshutt.
- International Harvester Co. (I.H.C.), Chicago, Ill.
- J.I. Case Plow works, Racine, Wis.
- Massey-Harris Co., Toronto, Ontario, Canada.
- Oliver Chilled Plow Works, South Bend, Ind.
- Parlin & Orendorff Co., Canton, Ill.
- Rock Island Plow Co., Rock Island, Ill.
- Wiard Plow Co., Batavia, NY.
- Chattanooga Plow Works, Chattanooga, Tenn. (Taken over by I.H.C. in 1919)



Wiard Plow 'rigged' with jointer and depth wheel from their 1912 catalog.

Getting Set to Plow:

- Check that all bolts, nuts, clevis and other parts are secure.
- Check that no parts are broken or are likely to break.
- Ensure that the plough, especially the moldboard is clean.
- Check that the share is not too worn. If worn replace and ensure secure.

For Emergencies, Have With You:

- An adjustable wrench.
- A 'Vise Grip'.
- A spare clevis and pin.
- A few spare appropriate bolts.
- An oil can for the depth wheel.



Steady work at the International Plowing Match, Meaford, Ontario, Canada in 1987.

Plowing:

- The aim of this note is not to teach you how to plow, however:
- RELAX
- Remember, the plow pulled by the team is there to do the job. Pushing the plow will not help and will only tire and stress you out!
- Your tension will also transmit to the team and whilst you require to be in control and vigilant, a calm approach will pay dividends all around.
- The principal aim is to achieve a straight furrow of uniform depth and width appropriate for the cultivation intended.

After Plowing:

- Clean the plow especially the moldboard, share and landside.
- Grease the moldboard, share and landside to maintain non-rusty surfaces.
- Check plow for loose parts, breakages or significant wear. Attend to as required.
- Store plow under cover.

Did You Know That?

- On average a plowman and a two-horse team on a single-bottom walking plow can, depending on the width of furrow, plow from 1 to 1½ acres in a day.
- When plowing a nine-inch wide furrow, the plowman would walk eleven miles for every acre plowed. For an average twelve-inch furrow he would walk 8¼ miles per acre and at least 12 miles as he approached 1½ acres per day.

Recommended Reading:

Miller, L. R. *Horsedrawn Plows and Plowing*. Sisters, Oregon, Small Farmer's Journal, 2000.

Oliver Chilled Plow Works, *The Oliver Plow Book: A Treatise on Plows and Plowing*. South Bend, Ind., 1920.

Wendel, C.H. *Encyclopedia of American Farm Implements & Antiques*. Iola, W.I.: Krause Publications, 1997.