

# NO PLOUGH? NO PROBLEM!

## A Method for Constructing a Low-Budget Bookbinding Plough for Conservators



A plough is typically used by fine binders to trim a textblock to produce smooth, even edges. A book is placed in the press of the plough and a blade is drawn perpendicular to the book along the length of the textblock, slicing through it a few sheets at a time.

For conservation purposes, a plough (or guillotine) is used to trim off the damaged spine of adhesive-bound books in preparation for rebinding using the double fan adhesive method (DFA). The DFA method deposits tiny amounts of glue on either side of individual pages, essentially tipping them to each other, therefore a smoothly trimmed spine edge is crucial for this binding's success and mechanical stability. A DFA bound book has a very strong and flexible textblock that will remain more resilient than commercial adhesive bindings which are prone to failing, especially under heavy use.

Hybrid or general collections labs that rebind large quantities of books using the DFA method will typically invest in a guillotine or plough which can cost hundreds or thousands of dollars. Working in a primarily special collections lab, the only opportunity I have to perform this type of rebinding is when one of our reference books becomes damaged and/or the original binding has failed. Therefore, I could not justify spending hundreds of dollars for a piece of equipment that may be used only a few times per year, regardless of how handy it would be.

There are many book binders and book artists that have created their own makeshift ploughs using various materials and equipment combined with specialized blades, some of which may be purchased (see References below). Studying their methods inspired me to construct my own version of a plough using materials and tools already present in the lab.

Image courtesy The Preservation Lab  
Cincinnati, OH



Assembled press with untrimmed textblock in position



Detail of board placement, extending the flat edge of the press



Detail of spine edge during trimming



Fully trimmed textblock ready for DFA binding

- Select a lying press that has cheeks with flat edges. In this case, a tying-up press was used and three extra pieces of binders' board were cut flush to the top press edge to extend the flat area. This is the area your blade will glide along during trimming, so it's crucial this edge be as flat and even as possible. Any uneven areas will cause the blade to move and will be reflected in the quality of the trimmed textblock.
- Cut another piece of binders' board larger than the textblock so the knife may cut into the board to produce a clean, even edge on the final page. This is the same idea as sandwiching a textblock between two pieces of binders' board before trimming in a guillotine or other paper trimmer.

- As the knife is pulled along and through the textblock, it cuts through each leaf producing a smooth, clean spine edge.
- The textblock was subsequently re-bound using the DFA method with the aid of a wooden DFA press. There were no observable differences noticed when re-binding this textblock versus one trimmed using a conventional plough or paper trimmer.



Round hacksaw blade knife used for trimming



Detail of knife position

- In this example, a rounded knife made from a hacksaw blade was used. The knife is flat on one side and beveled on the other to create the cutting edge. The flat side of the knife is placed on top of the flat edge of the press and boards, perpendicular to the textblock. The knife is then pulled in a motion running the length of the spine to begin trimming; this is the same cutting motion performed when using a conventional plough. Frequent sharpening is crucial to achieving an even and smoothly trimmed spine.

This makeshift plough produced a spine edge as smooth and flush as that achieved using a conventional plough or guillotine and provided enough control to remove a minimal amount of material from the spine during trimming. As a result, the book was easily rebound using the DFA method and produced a strong and flexible textblock able to withstand further heavy use in our reference room.

### References

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