

THREE TIPS FOR COMMERCIALY AVAILABLE MOBILE-BASES FOR LARGE AND HEAVY EQUIPMENT FOR PAPER CONSERVATION LABS

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ABSTRACT:

Paper conservation labs are often asked to be highly adaptable to the wide range of object that require treatment, and this can be challenging in labs with limited space. In situations such as this, every square foot of floor space and table space becomes precious and being as adaptable as possible is essential. Large and/or heavy pieces of immobile equipment, such as flat files, sinks, board shears, and book-presses, can work against lab adaptability because they are often seen as immobile objects occupying a permanent spot in a the lab. It also creates a challenge in lab-design in finding the 'perfect spot' to set up this type of equipment, and in many cases no matter where a large or heavy piece of equipment is placed it never feels like the 'perfect spot', with the equipment always feeling like it is the way. This is also often the case with heavy table-top equipment, like book presses and dry-mount presses, where table-top space is in short supply and cannot be sacrificed to a piece of equipment that may not be used very often. But what if some of this equipment, that is often considered to be an immobile permanent fixture in a lab, could become mobile? Often conservators would prefer to store this equipment away and be able to easily retrieve it when needed. For the larger floor-based equipment, a conservator might want to have some of this equipment be mobile, but often it wasn't designed that way. Therefore, finding ways to adapt such equipment for increased mobility, in a way that doesn't impact the functionality of the equipment, can often be difficult and expensive. This brief talk will demonstrate three tips on how to adapt three large and heavy pieces of paper conservation lab equipment for increased mobility, the cast iron nipping book press, the Hollinger© Phase Box Maker, and the dry mount press, using inexpensive commercially available wheel bases and carts.

HYDRAULIC LIFT TABLE:

The hydraulic lift table is a highly mobile base that can easily lift large and heavy objects from a height of several inches off the floor to waist level (Image 1). These tables come in a wide variety of styles that differ in size, price, and weight limitations. These tables can easily be found and purchased from most industrial supply companies and automotive suppliers. In the paper conservation lab these tables are particularly useful for situations where lab space is limited. This table is also extremely helpful for large and heavy equipment that is used infrequently and where table space in the lab cannot be sacrificed. For equipment that is very heavy, such as book presses and dry mount presses, this table allows for the equipment to be easily stored under tables when not in use, and then quickly and easily rolled out and raised to table height when needed. For equipment that might be wider than the table platform, another rigid platform can be made and used on top of the table platform to balance and support the equipment (Image 2). The images below show the hydraulic lift table being used to support a Seal© 500T-X Dry Mount Press. The press weighs several hundred pounds and is used infrequently. In this lab, table space is very limited and cannot be sacrificed permanently to the dry mount press. When the press isn't needed, it is stored under a table (Image 3). When it is needed, it gets rolled out and raised to the height of the worktable for use (Image 4). This hydraulic lift table, which was made by Haul Master©, has a lift capacity of 500 lbs. and easily lifts the dry mount press from floor to table height in minutes. After which, it drops back down to floor height and rolled back under the table.



Image 1



Image 2



Image 4

Image 3

HYDRAULIC MOTORCYCLE JACK:

Cast iron nipping book presses, while very useful in a book and paper lab, may not be used often, and when not in use can often occupy valuable table space. These presses are very heavy and difficult to move, and unlike other types of equipment cannot easily be put away and stored when not needed. This is where the hydraulic motorcycle jack has proven to be valuable (Image 5 and Image 6). The hydraulic motorcycle jack, manufactured for the maintenance and repair of motorcycles, can be purchased from most automotive supply companies. It is a small lift table, with a platform that is similar in size to most cast iron book presses. If needed, the surface of the platform can be made larger to accommodate larger presses, by bolting a wooded board to the top of the platform. Bolts should be used in the platform around the book press to prevent it from spinning during use (Image 7). The jack can be lowered to almost floor level, allowing the press to be stored under a table when not in use (Image 8). When the press is need it can easily be rolled out and raised to the height of a table in minutes (Image 9 and Image 10). The hydraulic motorcycle jack shown below is made by Dragway Tools© and has a lift capacity of 300lbs. (Image 11)



Image 5



Image 6



Image 7



Image 8



Image 9



Image 10



Image 11

SHOP FOX MOBILE BASE:

The Hollinger© Metal Edge Phase Box Maker is machine use widely in paper conservation labs to make boxes and folders (Image 12). It is an extremely useful machine allowing creases in boards to be done rapidly and efficiently. Unfortunately, the metal pedal used in the use of the machine does have a serious safety issue. The metal pedal is located about six inches off the ground and is made from solid metal. If the machine is in an area that gets foot traffic this can result in people tripping over the pedal or other injuries. Paper labs often go to great lengths to address this issue from painting the pedal a bright visible colour to wrapping the pedal in a soft material. Some labs have even gone as far as to put warning tape on the floor around the pedal as seen in the pictures below (Image 13 and Image 14). This issue has also created a secondary problem with lab deciding to relocated the machine to areas of the lab that don't get the foot traffic, but that has in turn resulted in the machine often being located in spots that reduce its functionality. There have also been many attempts to modify the pedal to address the safety issue. This is where the Shop Fox© Mobile Base comes in handy (Image 15). This base was designed for making large wood working equipment mobile, such as table saws. What makes this base so helpful for this purpose is that the casters are located off-side rather the underneath (Image 16). This only raises the height of the machine by about $\frac{3}{4}$ " and allows the machine to be used without the risk of tipping when weight is put onto the pedal. Installing it is quite simple and fast. The base is essentially a metal frame that the machine sits in. It assembles very easily and doesn't require modifying the machine. It should be noted that the base is assembles with the use of four metal steel tubes. The tubes that Shop Fox© sells are not long enough to go all the way around the machine, so one will need to purchase either four $\frac{3}{4}$ " x $1\frac{1}{2}$ " tubes or eight $\frac{3}{4}$ " x $\frac{3}{4}$ " tubes and stack them. These are easily found and most metal suppliers. The tubes slide right into the four-caster corners and are tightened with a wrench (Image 17). Once the frame is assembled the machine is simply dropped into the frame (Image 18). Once the machine is inside the mobile base the machine can be easily moved around the lab. When not in use the machine can be pushed against the wall, safely keeping the metal pedal out of harm's way, and then rolled out when needed, as seen in the pictures below (Image 19 and Image 20). In the Indiana State Library Conservation Lab, The Shop Fox© Mobile Base greatly increase the use of the Hollinger© Phase Box Making Machine. It eliminated the safety risk and improved the machines functionality.

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Image 12



Image 13

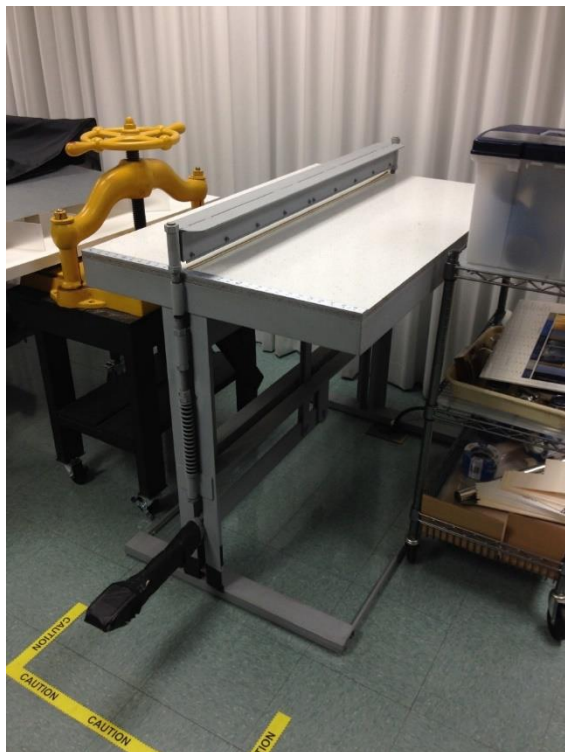


Image 14

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Image 15



Image 16



Image 17



Image 18



Image 19

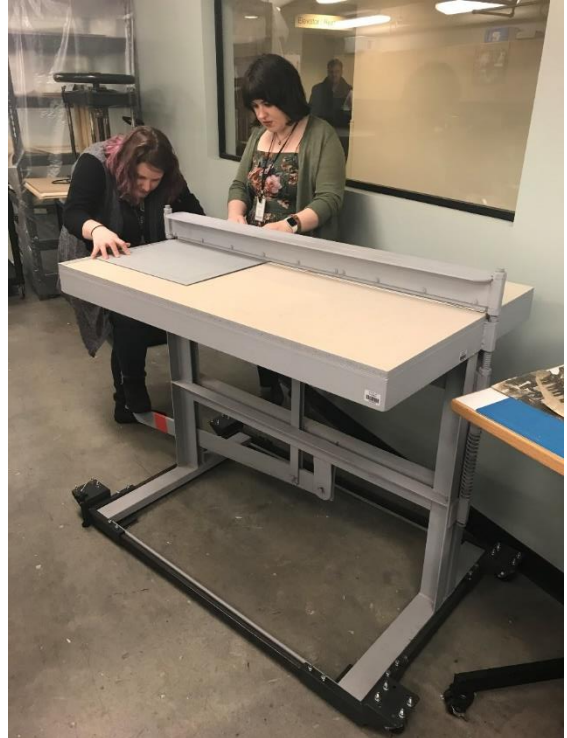


Image 20