

## Our Kydex Sheath Press

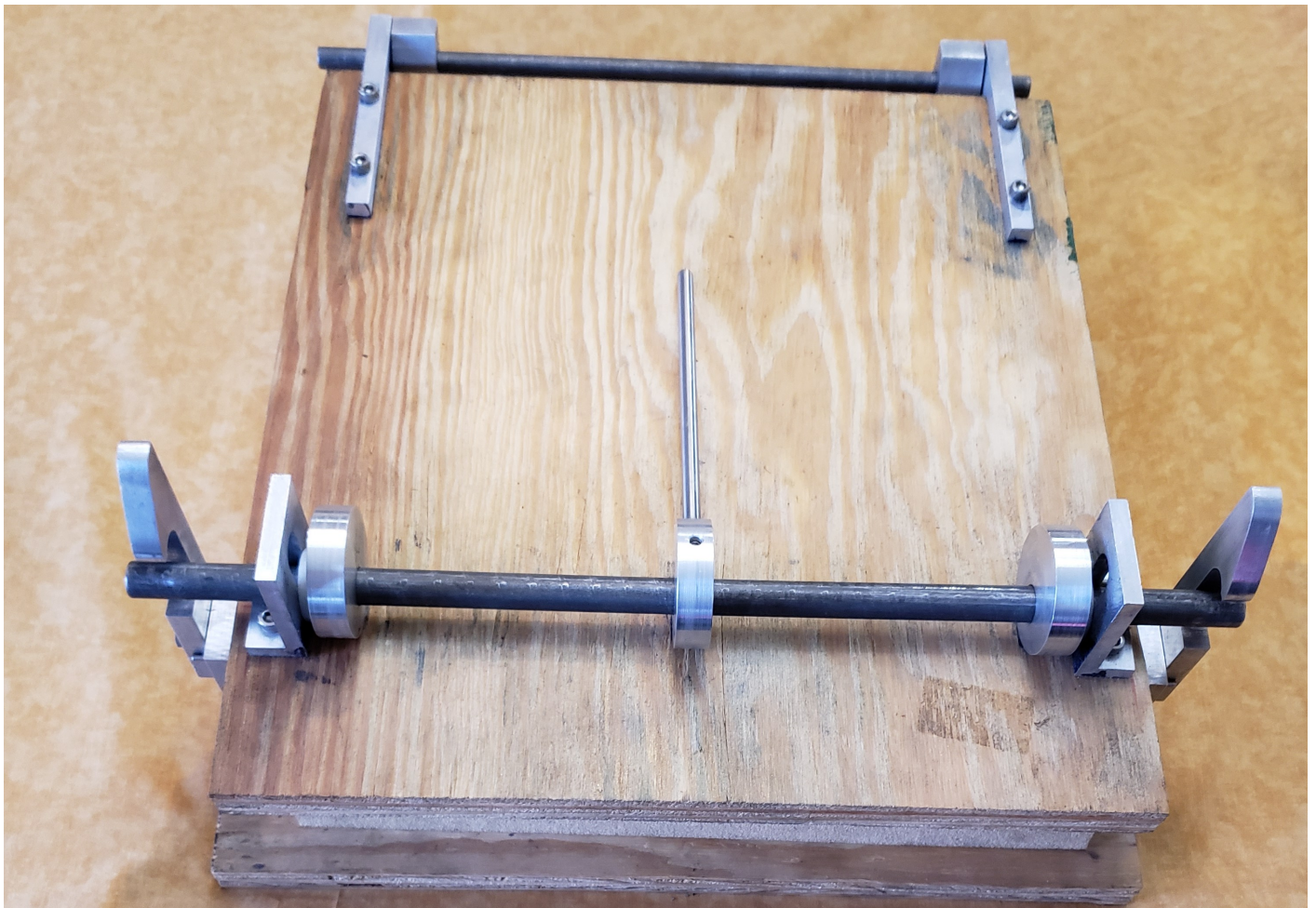
When we started making sheaths, we originally pressed the heated Kydex between two pieces of wood-backed foam and clamped them together. Results were acceptable, but the time-sensitive process of quickly clamping the pieces together led to occasional soft failures—low definition. We needed a faster clamping system so we could strike while the Kydex was hot!

We originally looked at some of the commercially available presses and home-made press designs. After evaluating them, we thought we could do as well if not better. Whether they were based on c-clamps, bottle jacks, ratchets or even a screw-press, none satisfied our desire for speed of compression, although the ratchet looked pretty good. So, as usual, we turned to the DIY approach. Goals: cheap, fast-action and simple to use.

Many times when designing, our first step is to use parts already at hand. I still had the pieces of 3/4" plywood that I originally used to sandwich pieces of foam and c-clamp them together for making Kydex sheaths. Our next step was to design a fast operating press mechanism: no external clamps, nothing that would allow for too much cooling of the Kydex between the oven and the press. We also keep the press right next to the oven for fast transfer.

We developed a simple hinged system with a spring-loaded latch and cams for applying compression, as shown in the illustration below. Our only expense was the foam, which we already had, all of the other parts were dug out of our metal stock bins. Admittedly, some lathe and mill work was required, but we have the equipment. And the experience.

Naturally, we didn't bother to video or even take pix of the build process. We actually didn't think anyone would care about such a device. Recently, I have had a couple of requests regarding Kydex sheaths, so I decided to present our approach to forming Kydex. With the proper tools or some hand tools and a lot of patience (of which we have none), you can **Do It Yourself!** You may even come up with a better, faster system!

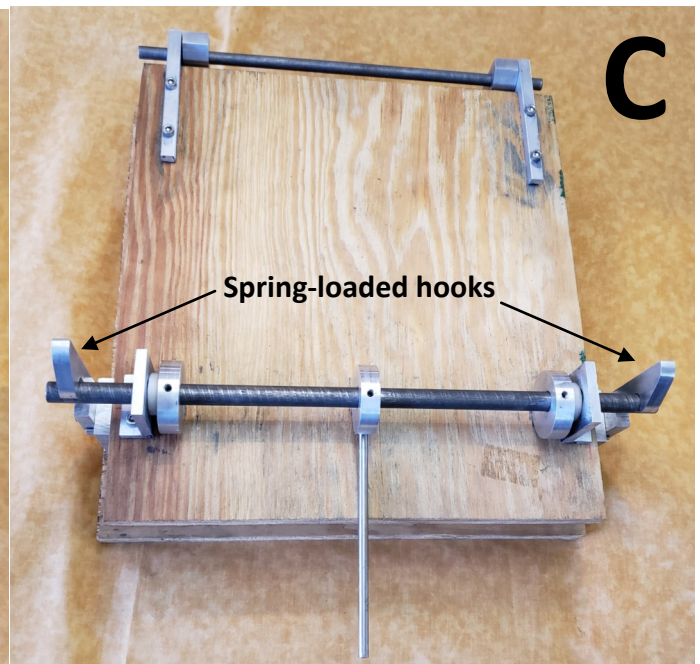
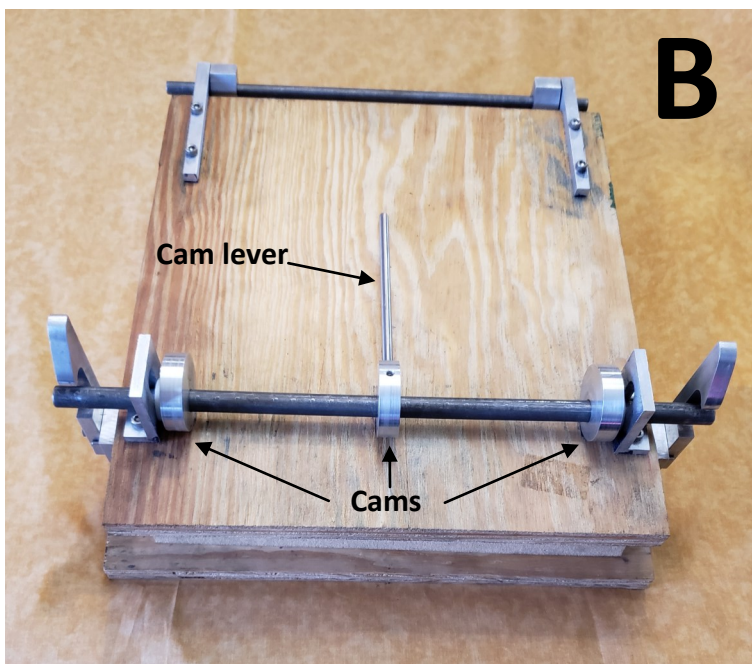
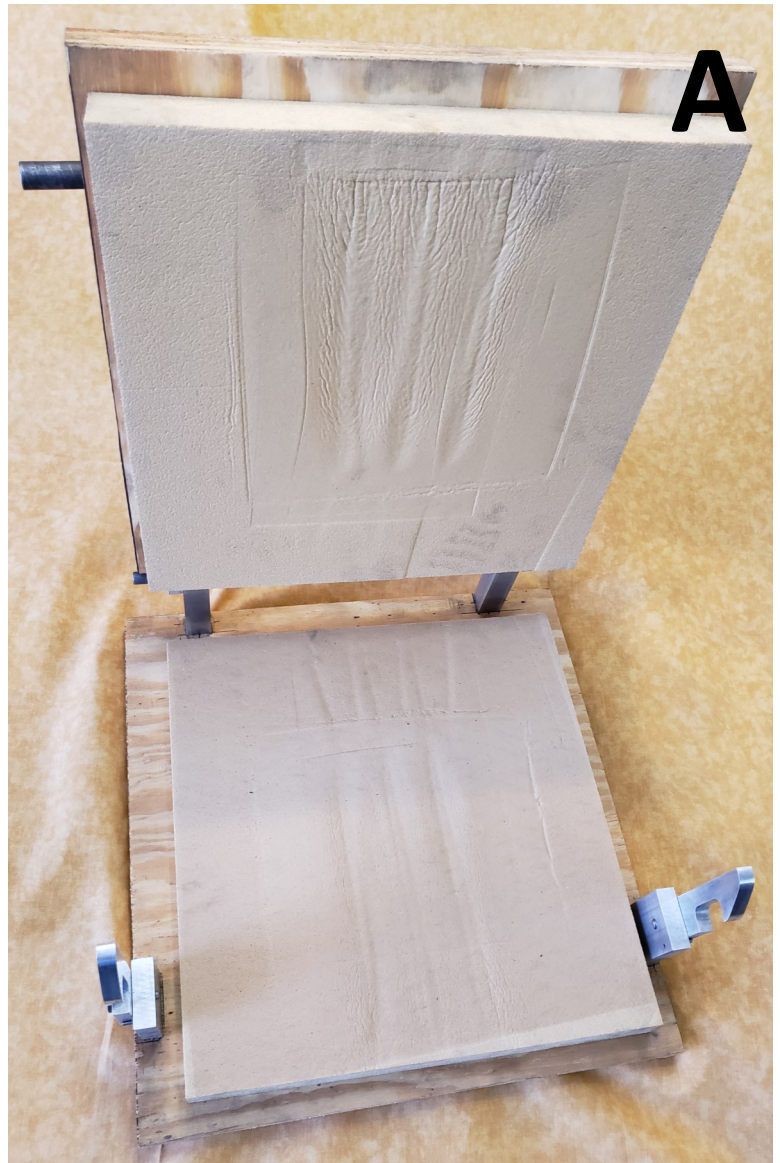


### How it works:

- A. Unit is open. Top foam is glued in place, bottom foam is free\*. A hot Kydex sheet is placed on the bottom foam, followed by the knife (or knives). When these are properly aligned (we don't rush on the bottom piece), remove the top piece of Kydex from the oven and quickly place it on top of the knife (or knives).
- B. Then quickly close the press which is now held by spring-loaded hooks.
- C. Immediately rotate the cam lever towards the front, compressing the work piece in the press.

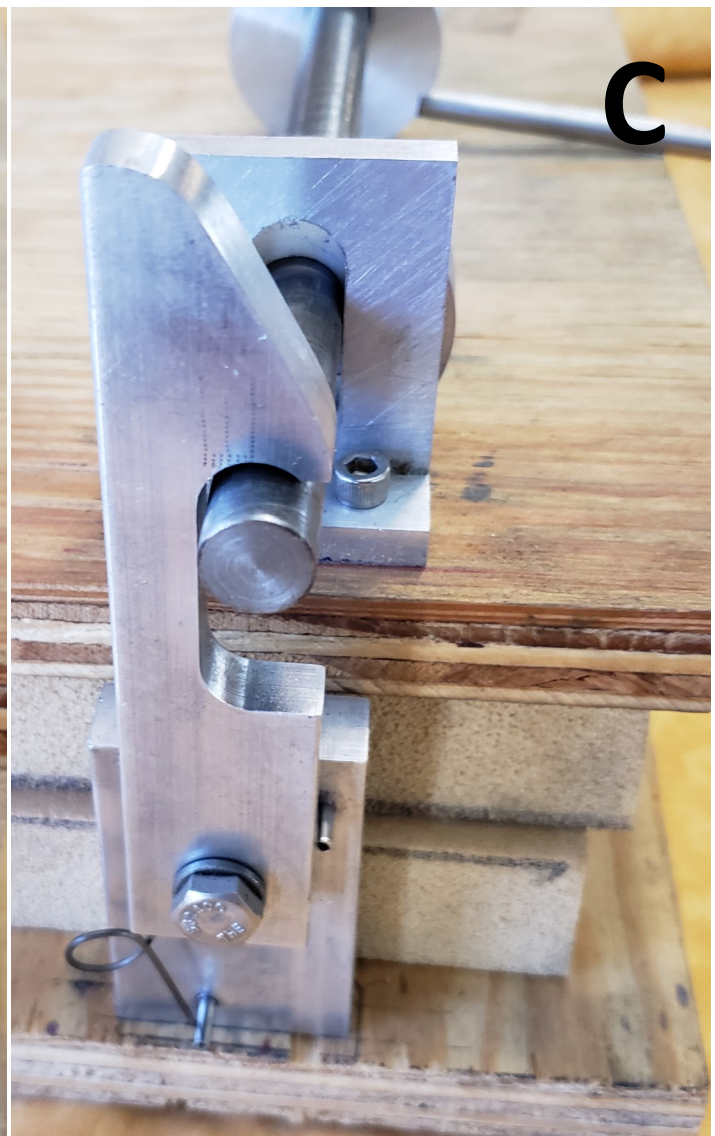
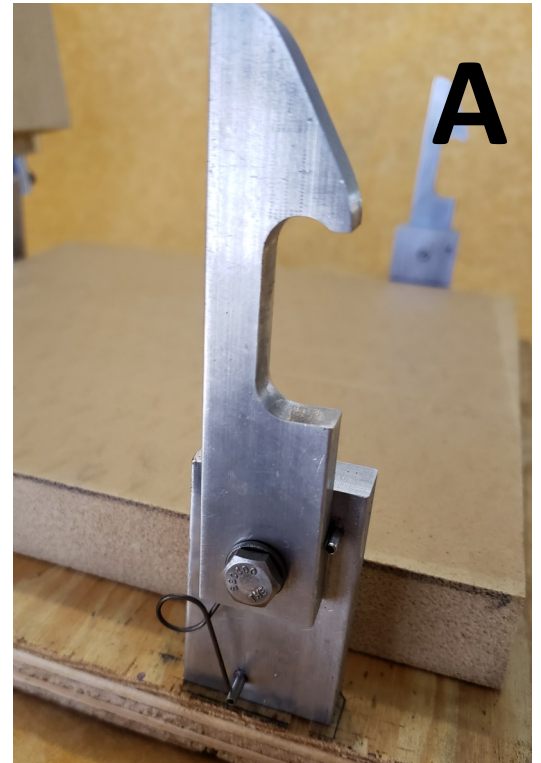
Now you go away for about 30 minutes to allow for cooling.

\*This allows for placing a 1/8" - 1/4" spacer under the foam for increasing pressure, if desired. We haven't yet!



### Close up of Spring-loaded Hooks and Cams

- A. Press is open.
  - B. Press is snapped closed, cam lever toward the back—no pressure applied.
  - C. Cam lever in forward position—pressure applied.
- The picture shows a gap between the hook and cam rod because there is no Kydex and knife in the press.



## Some Close Up Pix of Components



## Some of Our Results So Far

