Certifiable Guide to Tweaking the Beauport (Gloucester) Easel

by Dave Gehman, dgehman@rcn.com

I've purchased my last easel

That, of course, is a joke. Those who paint never could possibly purchase their last easel until (as Stapleton Kearns says) the death bunny comes hop-hop-hoppin' along.

Anyway, my most recent easel is a Gloucester-type, made in China and sold by Jerry's Artarama (and ASW Express). Prior to early 2014, I'd only seen pictures of this design, primarily in Stapleton Kearns's blog, http://stapletonkearns.blogspot.com/ . Then in January, I saw the design in person at Stape's Snowcamp workshop in New Hampshire. At that point, I knew I wanted it. I played with building my own, but concluded that I had too few tools, too little skill, and too few hours to build my own.

History: The Anderson/Gloucester easel

Sometime in the 1910s, a Swedish immigrant named Oscar Anderson began making Anderson easels. They became popular with outdoor painters in the Cape Ann, Massachusetts area, and were sold from Anderson's studio in Gloucester. Eventually Oscar's easel became known as the Gloucester easel. (Today, these painters might have said that they were painting 'en plein air,' but in this early age, people in Cape Ann spoke English. As a result, they just painted outdoors.)

In the 19th and 20th Century, art colonies were active on Cape Ann: Gloucester, Rockport, and Annisquam, with some spillover to nearby Manchester-by-the-Sea and Essex. The Gloucester Easel was especially popular in the Cape Ann area. It had some penetration into other areas of the US, including the mountainous regions of New Hampshire and Vermont, where Cape Ann painters like Aldro Hibbard, Emile Gruppe, and John Carlson took their Gloucester easels to paint during the winter.

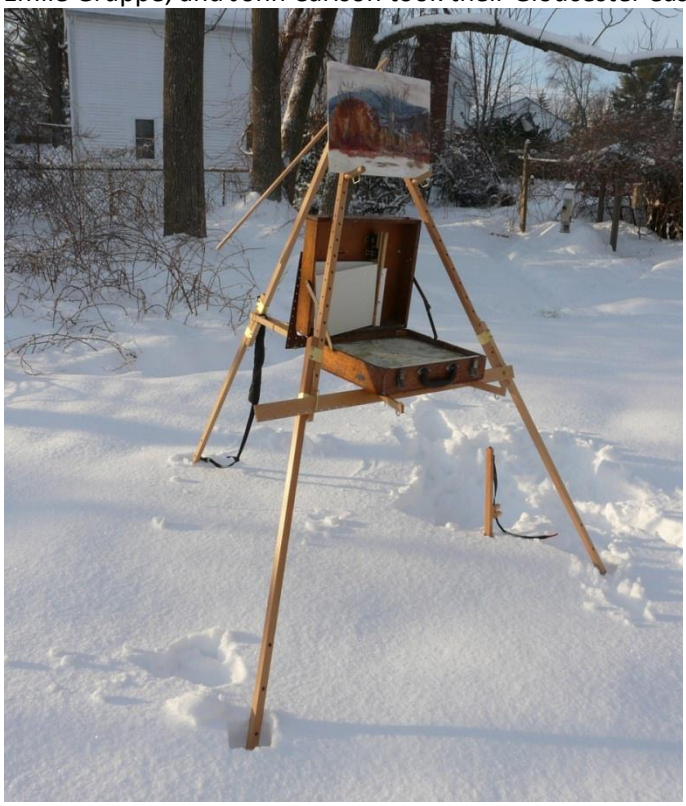

Figure 1 - The Beauport version of the Gloucester easel, photographed in one of its natural habitats, 32 inches of New England snow. (The other habitat? Planted firmly on granite shores north of Boston.)

Figure 2 - Charles Hawthorne demonstrating to a class in Provincetown, 1910. He's using a Gloucester easel, but one configured without support bars. Photo from Wikimedia.

Figure 3 - Kenneth Nunamaker (1890-1957), date unknown (possibly 1920s-30s judging by the cap, his age and those striped socks), He's using what is essentially a Gloucester easel, now with support bars, but with a different arrangement at the top. Photo from Michener Art Museum.

Many of the pre-eminent Cape Ann artists ran schools during the summer, selling many Gloucester easels to their students. No idea whether this was hundreds or thousands of easels over 30 or more years.

Figure 4 - Photo of students in Aldro Hibbard's Rockport-based School of Art. Everyone appears to be using a Gloucester easel. The clothing and wooden lobster traps suggest a 1950s time frame. From *Artist in Two Worlds*, by Aldo Hibbard and John Cooley, Rumford Press, 1968

The easel clearly made it to Pennsylvania:

Figure 5 - Edward W. Redfield at work outdoors, 1930 (photographed by Peter A. Juley & Son; collection in the Smithsonian). The basic pyramid is all Gloucester, but the stick-and-arm canvas holder is very different.

You can see more pictures of an original Anderson easel on http://brushwork.blogspot.com/2014/02/oscar-anderson-easel-revisited.html . It's a mid-stage design, still built by Anderson, and it used to belong to Thomas Curtin, an accomplished Vermont painter.

For real plein air painters

When you first meet it, the Gloucester easel is just a bundle of sticks. This bundle can be arranged into a 3-sided pyramid whose base is nearly as wide as its legs are tall. This makes it eminently usable (read: stable, not blown over) in the Cape Ann area, which often experiences high winds.

Because each of the legs is adjustable, you can set the Gloucester easel up on nearly impossible sites, including sea walls built from huge blocks of granite, wildly hilly countryside, or 24 inches of snowpack during a blizzard. The first two these physical features are found all over Cape Ann. The third is found in the colony's Vermont and New Hampshire winter haunts.

Its size and features make it really good for
(a) Tall painters. You can use it to paint at eye level even if you're in the NBA.*
(b) Real plein air painters (see previous 2 paragraphs; it sets up in all sorts of wild sites)
(c) Continuing your athletic development (lots of stretching and lifting in carrying and setup)
(d) Painting a very wide range of sizes, literally 4 x 5 inches to 4 x 5 *feet* or more.
(e) Fast setup (55 seconds to set up with the tweaks in this document; 1 minute 15 seconds to tear down and stow)

*Most of the Gloucester and Rockport artists were 6 feet tall and over.

Good for connecting with history

If you like using tools and techniques from the painters of yore, you'll like the Gloucester, thanks to its long history of use by master painters on the East Coast.

Wood & brass

Finally, if you like the aesthetics of late 19th – early 20th C equipment for enthusiasts, you'll like the hardwood and brass of the Gloucester. As looks go, it's a cousin to those magnificent old view cameras, with their gleaming gold-toned metal and lacquered maple.

Two vendors today

There are two sources for the Gloucester easel right now:
The first is from Tobin Nadeau. His hand-crafted, Vermont maple and brass version is the Take-it-Easel.
http://www.takeiteasel.com/index#nice1

The Take-It-Easel is ready to set up the moment you buy it

The second is the semi-mass-produced, Chinese elm or beech Beauport Easel sold by Jerry's Artarama and ASW Express. http://www.jerrysartarama.com/discount-art-supplies/easels/travel-and-outdoor-easels/beauport-large-format-outdoor-easel.htm or
http://www.aswexpress.com/wholesale/easels/french-and-travel-easels/creative-mark/beauport.html

The Beauport takes tweaking.

To be perfectly accurate, you can use it right out of the box if you want, but the Beauport takes tweaking if you want to be happy with it for years to come.

Advice nearly everywhere: buy the Take-It-Easel

Most sources will tell you to buy the Take-it-Easel. It costs three to four times as much as the Beauport. Apparently it's worth it: many who began with a Beauport have set them aside and purchased a Take-it-Easel, including Dan Corey, who outlined the most important fix to the Beauport (see Tweak 1 below).

However, if cost is an issue, the Beauport is an attractive alternative. Since I had used 98% of my supply of disposable income at Stape's workshop, I had to opt for low cost. The Beauport's quality—at least the once I received from Jerry's—is good. The wood is good, the machining is good, and overall the hardware is at least okay.

Nomenclature

First, some nomenclature:

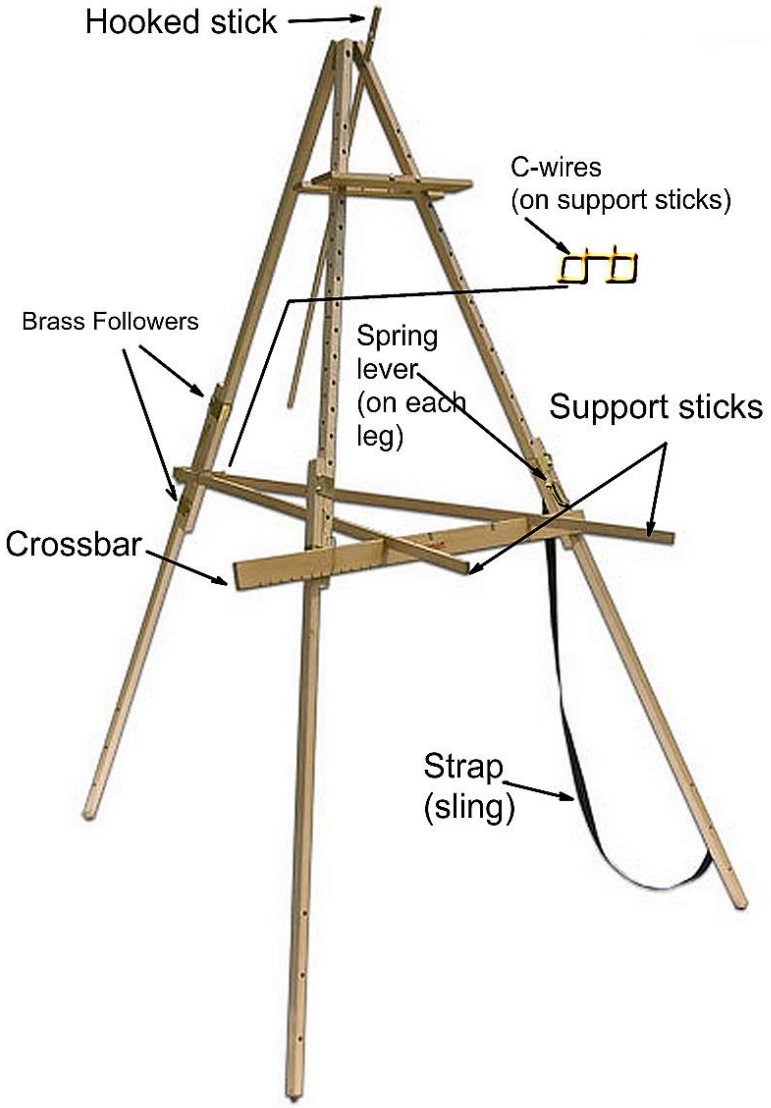

Figure 6 - Parts of the Beauport. The C-wire is shown here with its spine up; in a moment, you'll see that they have to be spine down. Holes running from hallway up the left and right legs are for canvas pegs (not shown--what is shown is the accessory panel holder that clamps onto the legs). Three holes visible at the bottom of each leg are for leg extensions (3 come with the Beauport).

Differences between the Take-It-Easel and Beauport
(NOTE: this comparison is based on a couple of days' exposure to the Take-It-Easel versus immersion experiences with the Beauport. I couldn't compare, for example, relative stiffness of the legs.)

Finish
The finish on the Beauport ranges from very good (matte surface of the brass, well-sanded and varnished working surfaces of the legs); to okay (leg ends, hinges at top); to rough (adjuster wires, ends of the pins on the support sticks).

The finish on the T-I-E is superb throughout.

Components
Leg adjustment: the Beauport uses wire adjusters while the T-I-E has pull knobs. Untweaked, the Beauport's wire adjusters are hard on fingers. The T-I-E's pull knobs are elegant.

The brass followers (the bands associated with the leg adjusters): Beauport is lighter gauge brass than the corresponding parts of the T-I-E. Beauport may have a looser fit as well.

Top hinges: Beauport top hinges and hinge-pin are just a shade lighter than those of the T-I-E.

Support stick configuration
As shipped, the Beauport's two support sticks are a separate assembly, un-handy for setup because it has to be manually set onto the back leg every time. (Tweak #1 below fixes this.)

The T-I-E has the original Gloucester design, permanently mounted support sticks with a hinge or pivot plus a hanger.

Extension legs supplied with original purchase
Beauport: three. T-I-E: one (you can buy more as accessories—two more will set you back about half the cost of the Beauport).

Small panel holder
Only on the Beauport.

Leg end points
The Beauport legs are terminated with tiny plastic furniture glides. The T-I-E legs are terminated by cut-off nails. The Beauport is easier on civilized surfaces while the T-I-E is a touch more stable on dirt and sand, where the nails can dig in.

Weight
This is about a wash. The Beauport with hooked rod and one extension leg weighs 9.5 lb. The T-I-E runs from 7.5 (no rod or extension leg) to 9.5 lb (all accessories).

Country of manufacture
Beauport: China, probably sourced from Sinoart, Shanghai, who in turn sources it from PAN'AN Easel Factory in Zhejiang province. T-I-E: US, Tobin Nadeau's workshop in Vermont.

Day 1 – The first tweak… and it's cogent and rational

Of course, once I received the Beauport, I wanted to make it just like its high-end sibling. The process starts more or less rationally with a simple fix that simultaneously (a) converts the Beauport to the original design and (b) makes setup and teardown much easier.

Unfortunately, as the days progress below, you see distinct veins of madness creeping into the picture. You start tweaking and things keep occurring to you.

That said, I thoroughly enjoyed messing with the Beauport.

Tweak 1
Do this tweak if you do no other

It's Dan Corey's fix, posted in 2010, http://danielcorey.blogspot.com/2010/05/beauport-easel-fix.html

His description is not 100% clear, but the fix is genius. Here it is
(1) On the back leg, permanently affix the back C-wire on the 2 support sticks
(2) Pull the brass pins between the 2nd C-wire and the front of the sticks, so you can slide the front C-wire all the way up the stick for hanging (see next step)
(3) Add a hanger (cup hook or strap) at the top of the back leg for parking the support stick assembly.

Anthony Sell has excellent additional pictures of Dan's fix, pictures that make the fix more clear, and he adds some ideas of his own: http://sageartsstudio.com/wp/blog/2010/09/18/breaking-in-my-beauport-easel/

To provide a pivot for the back C-wire on the rear leg, Dan suggests using one of the fittings for the strap that comes affixed to the easel. However, you can use anything from a screw eye to (my option) a heavy leather pivot or hinge scavenged from an old purse from a thrift store (see Tweak 6 for a use of more of this purse, which was made of quality thick leather).

Figure 7 – Heavy leather hinge or mount for permanently affixing the two supporting sticks (the sticks are in the up or parked position). This hinge was made from a $3 thrift-store purse and buttoned down with a hand-cut chunk of brass and a screw. The rectangular brass above the mount isn't part of the hinge. It's the follower or brace that's part of the leg adjusting mechanism.

Note that the C-wires are positioned so that the spine of the C-wire is on the bottom and the squarish sections that the sticks slide along are aimed up. (In Figure 7, the spine is toward you while the squarish sections extend toward the back.) That's opposite to official set up photos and video.

Dan Corey's fix allows you to keep the sticks on the easel permanently. At the end of your painting session, you simply pull the front C-wire toward you, lift the sticks up and back, then hang the front C-wire on its hook.

If you keep the support sticks as a separate assembly (the way the Beauport is shipped), you find yourself constantly kneeling and messing with the C-wires at the bottom of the back leg during easel setup (see the sequence beginning at 1:14 in the "Assembly Instructions" video at the Jerry's Beauport page—that's what you wouldn't want, day after day).

This fix also allows to you make sense of the Beauport instruction sheet, whose wording has been paraphrased from the Take-it-Easel instructions. The Beauport sheet reads: "4. Unfasten the dual support bars from the top of the back leg [You can't possibly do this on the as-shipped Beauport]. Slide the metal holder [the "C wire" and again, you can't do this in the as-shipped configuration] down enough for the dual support bars to spread and put into the grooves on the crossbar. Use the metal holder as tension support by sliding forward to ensure the sturdiness [stability] of the easel."

Figure 8 - "Use the metal holder as tension support by sliding forward to ensure the sturdiness of the easel," the Beauport instructions say. Here the C-wire ("metal holder") closest to you has been pulled forward to squeeze the legs to stiffen them. It is difficult to do this effectively the way the easel is shipped.

Day 2. Only a little crazy.

Tweak 2

Life-enhancing loss prevention

On the right leg, back off the nut on the screw that acts as the pivot for the crossbar. Put a drop of Loctite Blue 242 on the threads and re-tighten the nut. Otherwise over time, this nut works itself off as you raise and lower the crossbar while setting up and taking down.

What, you don't have a little tube of Loctite Blue 242? Ok, use any flexible glue: E6000, dimensional fabric paint, heavy medium for acrylic paints, even super glue.

Day 3. Mmmm, magnets.

Tweak 3

Life-enhancing cross bar slam prevention

The crossbar has a bad habit of slamming down to the ground as you're setting up the easel unless you somehow hold it during setup. That takes three arms. You can follow Sell's model: use a rubber band to hold it. However, you can persuade it to stay in place with a magnet on the crossbar that gloms onto a short steel bolt or screw head in the right leg. Rubber bands don't like the hydrocarbons involved in oil painting and don't last long.

Here's how: mount a super-strong flat magnet from a failed computer hard drive on the back of the crossbar at the far end (where the little slots are milled). Use epoxy. Swing the crossbar up and mark where on the right let the magnet sits. Drill a hole and drive in a short ¼" flathead screw or bolt. "Short" means ½ inch at most in length. The magnet will hold the crossbar while you're setting everything up.

What, you've never disassembled any of your dead hard drives? OK, don't do this tweak. Or buy some strong flat magnets at, say, Harbor Freight. (Since writing this, I've found that American Science and Surplus, sciplus.com, sells scavenged hard drive magnets for cheap, if you ignore the shipping costs.)

Day 4. Maybe things are getting out of hand.

Tweak 4
Hand-saving smoothing of spring levers
As-shipped, the ends of the spring levers are roughly cut off. Most of them have burrs that will tear up tender fingers. Round off the ends of these levers (2 per leg) with a small file.

It's pleasant work as you carefully file burrs off of the cut wire. But, it's also a little tedious and you begin to think as you carefully guide your little file here and here on the wire ends. Well, maybe you don't, but I began to think, and that's when Tweak 5 popped into my head—I have to admit, maybe I was getting a little light-headed by this point.

Tweak 5
Add knobs to enhance comfort (and cool looks) and enable gloved operation of the spring levers
If you like to be out in -15 F weather painting a snow scene, add little knobs to your spring lever ends. That way, you can swing them out and adjust the legs without removing your gloves. In more clement weather, the little knobs are far easier on your fingers than the naked bent wire adjusters.

Use 12mm diameter (almost one-half inch) black acrylic round beads (eBay, $3.50 for 24 with shipping; you'll use only 6). Drill out the bead holes with a drill bit that's around the same diameter as the spring lever ends (which on my Beauport is 0.12 inches, just under 1/8 … translating out as a 3/32 inch bit.

Roughen the ends of the spring levers where the bead will sit. For example, draw a file several times along the side of the levers at the slightly-bent end. This puts scratches or ridges on the brass wire where the beads mount, ridges that greatly help the adhesion of the. Coat the wire and the interior of the bead hole with epoxy, then wiggle, push or drive the beads onto the spring ends.

Figure 9 - Knobs epoxied onto the wire adjuster on left leg. The cut-out visible on the crossbar just behind the brass staple on the left leg is part of later madness. It accommodates the parked knobs on the right leg and allows the crossbar to stow fully upright when pivoted up.

Figure 10 - Knobs allow easy leg length adjustment while wearing heavy gloves. In the summer, the knobs protect your sensitive artist's fingers. Note the showshoe on back leg (Tweak #12, below)

Day 5 – things are occurring that don't need to be done… stop me… stop me…

Tweak 6

Storing the hooked rod
Drill a pilot hole and insert a brass screw eye. If the eye of this hardware is too large, reduce the diameter with acrylic (or, as you see below, dimensional fabric paint).

Alternatively, do nothing and just put the hook through one of the peg holes in one of the legs as you tear the easel down.

Tweak 7

Add a shoulder-saving pad on the easel strap

Actually, this one's not so crazy. Carrying the folded easel on your shoulder using just the thin strap provided with the Beauport will hurt as the strap digs in.

Make a pad from any tough yet soft material. This one's leather (from the same purse that donated the hinge/pivot in Tweak 1, above). If you want pre-built, go with a rifle sling, $12 to sky's-the-limit.

(Of course you can use the Beauport easel's bag, which has a shoulder pad of sorts.)

Tweak 8

Turn the extra-long brass pins at the front of the support sticks into useful hooks.

As shipped, there are extra-long brass pins at the front and the back of each support bar. They retain the C-wires. Here's a picture of the long back pins from Dan Corey's fix. The ones at the front are the same length. They scratch into the left and right legs when the easel is folded up. Not pretty.

The front pins are the same length. At the front of each support bar, push or lightly hammer the long pin down until it is flush with the top of the support bar. The pin is now extending downward from the support stick. Bend the pin into a hook, handy for holding brush washers, containers of medium, etc.

Figure 11 - Hook bent from the extra-long brass pin at the front of this support stick, handy for hanging brush holders, medium cans and so on. Note palette/paint box stop glued to the top of the stick.

Tweak 8 A, a tweak needed after executing the previous tweak.
After I did this, however, I saw that there was a reason that the pins stick up as well as down. The upper pin segments act as a stop for your palette or paint box, keeping it from sliding off to the front.

So, fashion two stops from wood, say slices of bamboo chopsticks, scrape about half an inch of finish from the top of each support bar and glue the two wooden stops in place.

I also clipped the extra-long pins at the back to minimize scratching of the left & right legs when the easel is folded down.

Day 6 – can't put up with staples, right?

Tweak 9
Replace steel stops (staples) with brass screws
At the top of the inside of each leg there are 3 ordinary steel staples driven into the wood. These stop the brass sliding portion of each leg from traveling too far north.

They pull out with use—and even if they stay in, they will almost certainly rust. Replace them with small round head brass screws, leaving the heads standing proud of the surface to act as a positive stop.

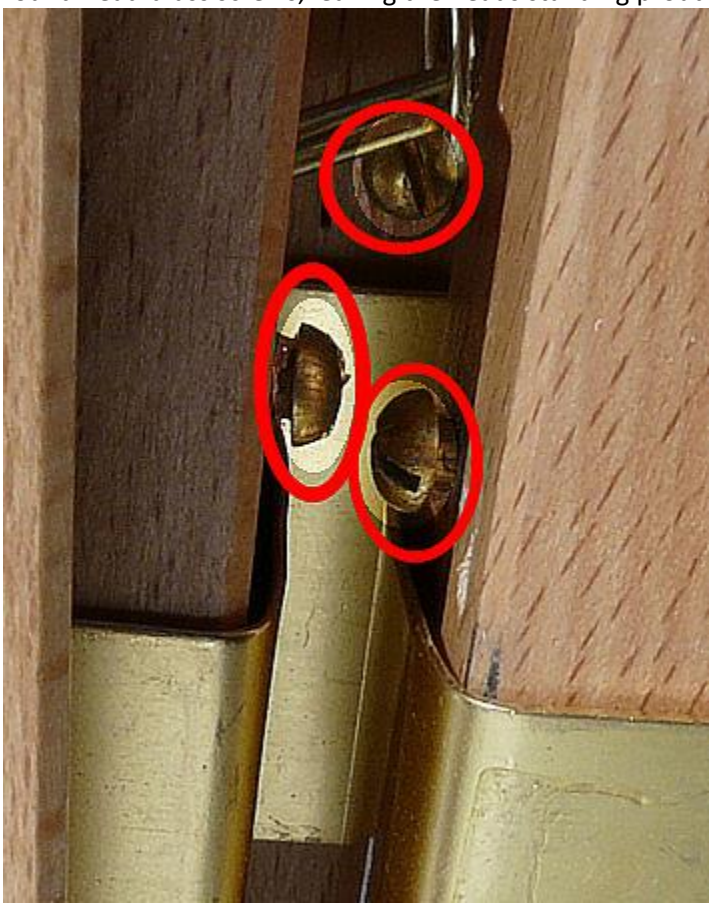

Figure 12 - Detail of folded easel near top. Three small brass wood screws (highlighted) replace the original steel staples. They prevent the brass followers (visible at the bottom of this picture) from traveling too far north when you're retracting the legs.

Tweak 10

Make a handy, combo Velcro strap and peg holder
The Beauport comes with 3 leg extensions. You can turn one of these into a combo Velcro strap and peg holder.

Add a brass staple to one leg by bending a handy piece of brass wire and drilling pilot holes. This hand-made staple then acts as the anchor point for a 23 inch long, 7/8 inch wide Velcro strap (about $4 for 3 from Lowe's, item #184584. Velcro model # 90700.) The strap has the typical Velcro hooks on one side and the fuzzy hookable stuff on the other side, with a fairly strong hookiness. On this Velcro strap you can thread the 4 of the supplied canvas pegs, 2 with staples and 2 with slots for straps, as a way of holding these otherwise easily-lost pieces during transport.

Figure 13 - Combo easel wrap and peg strap. Velcro strap runs from a brass staple added to one of the extension legs (not visible). The strap has a red coating on the near end for visibility and to provide a handy pull tab. The canvas pegs slide onto the strap.

Figure 14 - Better view of combo strap on leg extension. Strap is affixed to the added brass staple, the leg swung upside down, and the extension's three pegs merely stuck into the corresponding three holes on the left leg.

Disable the Velcro-city from the end of the strap by coating it with dimensional fabric paint or acrylic paint, so you can find the end easily when removing it as you're setting up the easel. Otherwise, the black Velcro end of the strap blends into the strap itself and sticks tightly. It's a bear to find.

In use, you push the dowels on the upside down leg into the bottom holes of one of the easel's front legs. I use the left leg. The strap wraps around the folded easel to hold it all in a tight bundle of sticks.

Day 7 – yes, things do keep on occurring

Tweak 11
Prevent crossbar wear at the pivot
Totally optional.

I found that the back of the crossbar was being chewed up because it rubbed on the heads of the two screws affixing the brass follower on the left leg behind the crossbar.

I got a few extra brass washers to offset the crossbar enough to ride above the brass screw heads and for no good reason cut a large brass washer out of some of the leftovers from the thrift-store brass décor item that contributed the brass sheet for the 3rd hole (Tweak 12, next) at the top of the easel.

Figure 15 - Preventing marring of the back of the crossbar. Crossbar is at the bottom. Right leg is the square bit of wood on top. Several brass washers have been added to the pivot screw for the crossbar, plus a large thin washer. These ensure that the crossbar can't rub on the two screw heads you see at the left and right of the stack of washers.

Tweak 12

Add a third angled hole for the hooked rod

As shipped, both modern models of the Gloucester easel come with 2 holes drilled at the top of the left and right leg. These are for the hooked rod that holds the top of the canvas. The hole in the left leg is drilled at a more acute angle than the hole in the right leg, so when the rod is in the left leg, it extends closer to the horizontal than is the case when it's stuck through the right leg. You end up with 2 different angles for the rod. If you want a 3rd angle for more versatility, add a drilled-out block to the back of the rear leg.

According to the Take-it-Easel site, Vermont painter Eric Tobin invented this third hole. It sets the hooked rod at a 3rd angle, one that is quite a bit more vertical than the standard hooked-rod holes. In this 3rd hole, the rod is parallel to the back leg. Take-it-Easel calls this the "Tobin hole" and is a $32 option. I made my own from a 1.5 inch long piece of oak cut from an oak stair bull nosing (around $3 from Home Depot) and drilling a 5/8 inch diameter hole more or less parallel to the back leg.

You remove the finish from the back leg where the oak will glue on, then you glue the oak to the easel . Be sure to scruff both the leg and the block with the hole to gain maximum glue adhesion. Then, because the oak could split if something snagged the hooked rod or it bumped against something, I clad

the oak with sheet brass. Don't buy this new ($$), but scavenge some from, say, a household décor item from a thrift store ($2.99). Use super-strong J-B Weld (not J-B Kwik) between it and the oak and the leg, to make sure it will always do its best to keep the oak from splitting.

To ensure even longer life, I used clipped-off sections of 4 copper roofing nails (epoxied in place, 2 on each side) to anchor the cladding. Each nail is cut down to about ½ long so they more or less meet in the center of the back leg. They look like some kind of classy copper rivet.

Protect the exposed oak with polyurethane varnish.

Tweak 13

Make snow shoes

Make quantity 3, 4 x 4 inch plates. These could be tempered hardboard ("Masonite"), plywood, close-grained hardwood, paper + epoxy, anything. Drill a 1/8 inch hole in the center of each. Mount 1- 1/8 inch diameter rubber furniture tips to the center. Any way that you want to affix them will work – I used ¾ inch segments of copper roofing nails, whacked the nails a bit to partially clinch them inside the tips, and made them irremovable with dollops of epoxy inside the cup of the tip.

This design is more effective than the snow shoes offered as an accessory to the Take-It-Easel, which fall off when you lift the easel. My furniture-tip type stays firmly on the legs until it's time to remove them.

Tweak 14

Add landing lights
Inspired by Stape's reason for not using the Gloucester easel in crowded areas: "In a crowded city a big Gloucester easel becomes a traffic hazard and dorks always trip over its legs."

I took a clue from those antennas with airplane warning lights. Place flashing red LED lights at the bottom of the left and right legs when in civilized areas where bystanders are around. The idea is to alert bystanders that the legs are there—and hopefully keep them from tripping over them. I simply took the headbands off 2 cheap LED head lights and used a strip of brass to mount them on a piece of dowel with a cup hook in the end. The cup hook is closed with pliers to marry the light and the dowel forever.

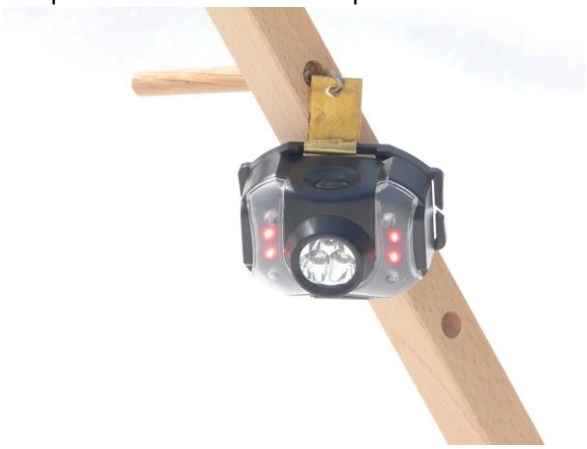

Figure 16 - LED landing light, caught mid-blink.

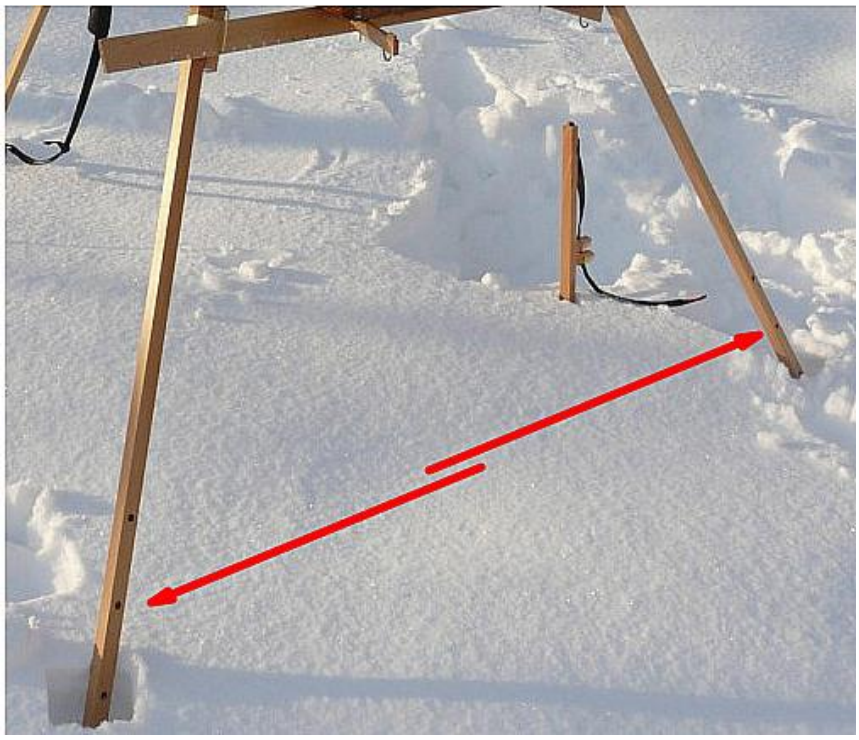

Figure 17 – The holes drilled for the leg extensions is where the landing lights go.

I'll have to fabricate little hoods for the lights so they don't shine up and distract me… although I've already discovered that even *I* can absent-mindedly trip over my own easel. (I'm thinking about writing a treatise on dorkdom self-taught.)

Day 8 – Enough's enough

Tweak 15- make a custom painting box

Why, yes, the support sticks seem to call out for an oversize palette, and an oversize palette just aches for an oversize paint box.

I made mine out of 3 sheets of foamcore plus a couple pieces of small wooden molding and a remaindered wood picture frame. Oh, and some pieces of leftover artist's canvas for hinges. Total cost, under $15.

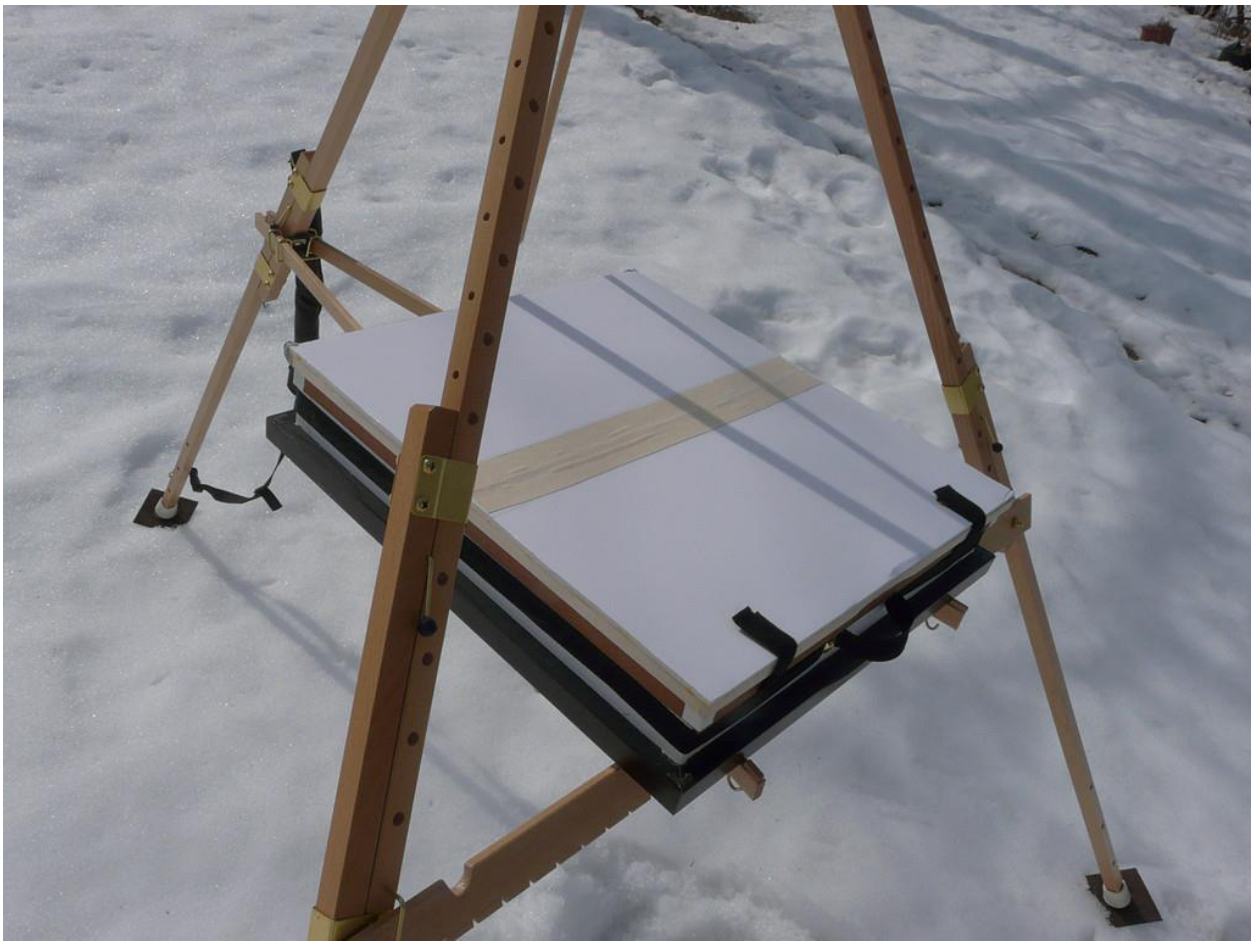

Figure 18 - Box on support sticks, closed. Relatively big – 20 x 24 inches or so. The "latches" are simply pieces of a second Velcro strap, one set glued on the box front with fuzzy side out (won't stick to clothes or coats), one set on the top (also fuzzy side up – the inner-facing hooks on the front closures engage with the fuzzy top bits). Before cutting up into closure chunks, this strap was identical to the one used for the combo strap (Tweak 10). The hinge in center of the lid is a strip of artist's canvas, gesso side glued down.

Figure 19 - box open to palette. Note articulated top to allow the big box to be open, yet not have the box lid completely obscure sightlines to attacking otters. Palette is an old acrylic ("Plexiglas") palette that I had on hand, taped down to a bit of foamcore. Like the lid hinge, the back hinge is a strip of artist's canvas.

Figure 20 - Box w/palette removed, showing storage compartments. Extra pegs and the landing lights snuggle into the center cubby at the top.

No, it won't last.

Possible future tweaks
Things do keep occurring to me…

Add pull knobs
I really want to remove the wire-based leg adjusters and replace them with pull knobs, just like those on the T-I-E. Talk about elegant!

The design of the adjuster mechanism makes this relatively easy, because you can simply remove the external adjusters and affix a pull knob to the springy wire inside the leg. The latter acts as a stop as its right-angle-bent proximal end drops into adjusting holes drilled into the inside of each leg. But the small size poses one problem I haven't solved: how to attach the stem of the pull knob to the springy stop-wire.

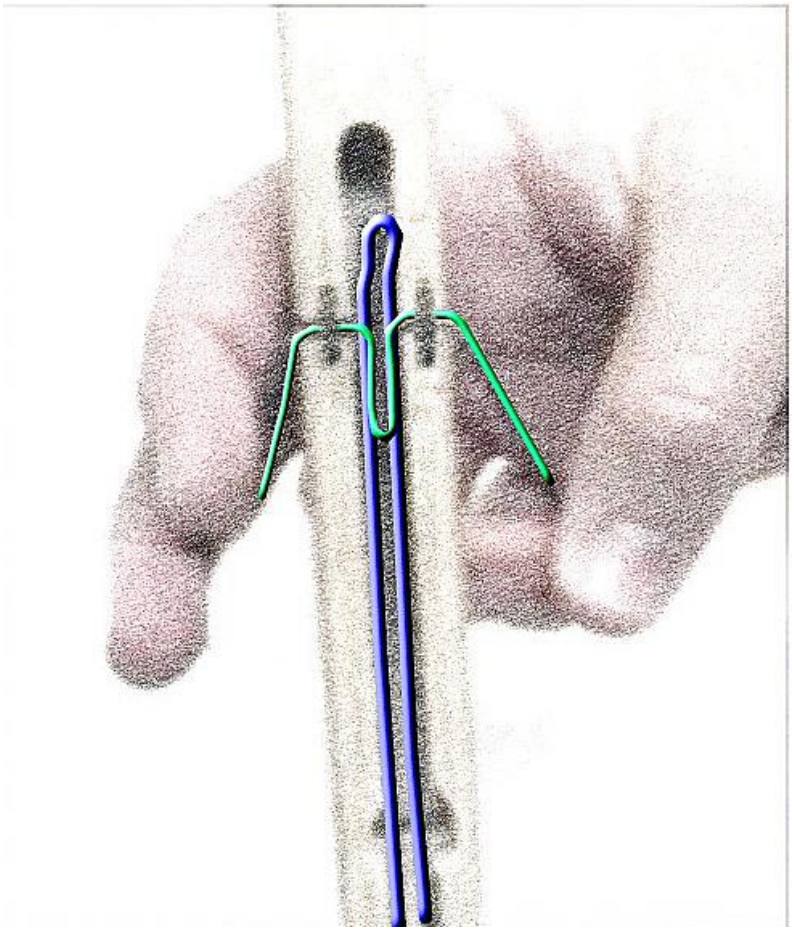

Figure 21 - Spring adjuster mechanism, view from inside the outer leg section. All the working parts are bent wire. You can't see it in this view, but the cranked upper part of the long springy wire (colored blue here) is facing almost directly out at you. When you swing the stiff wire adjuster (green) back, its tongue presses the spring down, retracting the tip from the drilled holes in the easel leg. You can remove the adjuster by pulling the two staples holding it in. Drill a hole in the leg on the outside of the leg (which the palm of the hand above is touching) and make some sort of knob + stem that can be affixed to the long spring. Then, pulling out on the knob will retract the spring.

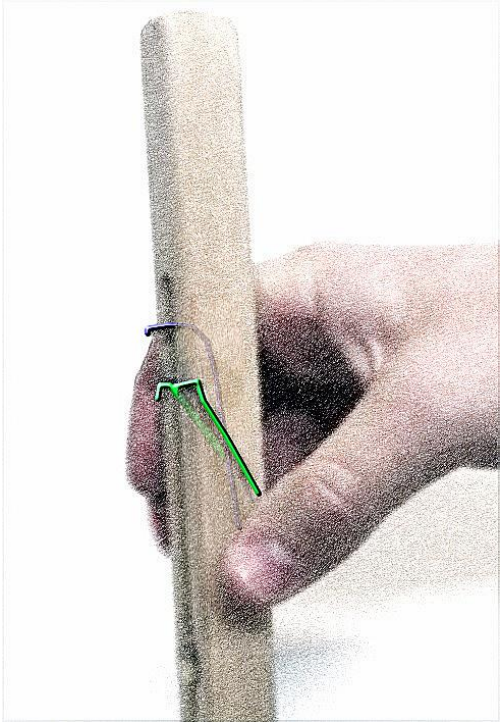

Figure 22 - Semi-phantom oblique view of the release. You can just make out the internals in transparent-ish blue and green. The stiff wire control (green) is being pulled back, rotating its tongue to press on the long spring (blue). That pushes the long back and retracts its bent tip. Once the tip is fully retracted, you can freely adjust the leg.

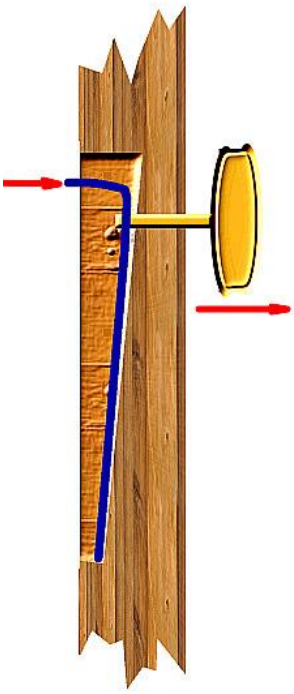

Figure 23 - Cutaway side view showing a knob retracting the spring (blue).

You *can* of course use the T-I-E's solution, which is to buy 3 brass and stainless steel plunger knobs from an industrial supply house. They have internal stainless springs and come with a collar that you drive into the wood. The downside is that each of these costs between $15 and $25 and you need 3. Even the cheapest come to more than half the cost of the Beauport by the time you add shipping.

Stiffen the legs

A nice, thin layer of carbon fiber tape and epoxy on the inside face of each leg section would add a huge amount of stiffness. It would also be a lot of work – skimming a bit off the legs, gooping on the tape + epoxy without wrinkles, curing the epoxy, trimming the edges.

Spiffing it all up

Sanding down the rough ends, chamfering all the drilled holes, refinishing with spar varnish. Real spar varnish. You might have to make your own. And, yes, the web does reveal the formula: 1 qt of [real] Turpentine, 1 qt [real] Boiled Linseed Oil, 1/2 pt Pine Tar, and 1/2 pt Japan Drier. What results is a darker, amber finish. To customize the mixture, add more pine tar for a darker color or add less for a lighter color. Allow more drying time for the darker mixture. (from www.jamestowndistributors.com)