

A SHORT HISTORY OF STEAM DONKEYS

BY JAMES COLDICOTT

Part of the fun of model making as a hobby is that it can take us in unexpected directions. Our interest in railroads might lead us to explore scenic techniques or the construction of buildings or machinery that we may never have considered before.

The availability of On30 models may have already led us to start looking at the mines and industries that supplied the railroads and the challenges of researching related items can be a refreshing change in any scale.

This article comes as a result of many years fascination with the logging and lumber industries of the Western United States.

Early pioneers found themselves surrounded by huge forests of huge trees. At first they would have selected timber that suited their needs and the means available to them for processing trees into usable lumber. So for many years a single man with an axe and a horse could harvest and process most of the wood he needed. As time went on and larger sawmills were constructed, lumber companies used waterways to float trees to the mill.

Once all the timber next to a suitable lake or river had been removed skidways were laid- often using smaller timbers across a roadway to help teams of horses or oxen drag trees to the mill or water's edge.

Railroads were a boon to the logging industry in that they allowed for more rapid extraction of timber from the woods. The use of a railroad does, however, come with a new set of challenges. axed route means moving logs some distance to a landing point where suitable equipment can load logs onto railroad cars- while smaller trees can be prised up a ramp using peavies a 16 foot diameter log is a very different matter! Initially railroads also needed relatively level routes to operate over- not always possible

Resources:- This was logging! by Ralph Andrews. Superior Publishing Company
www.steaminthewoods.com

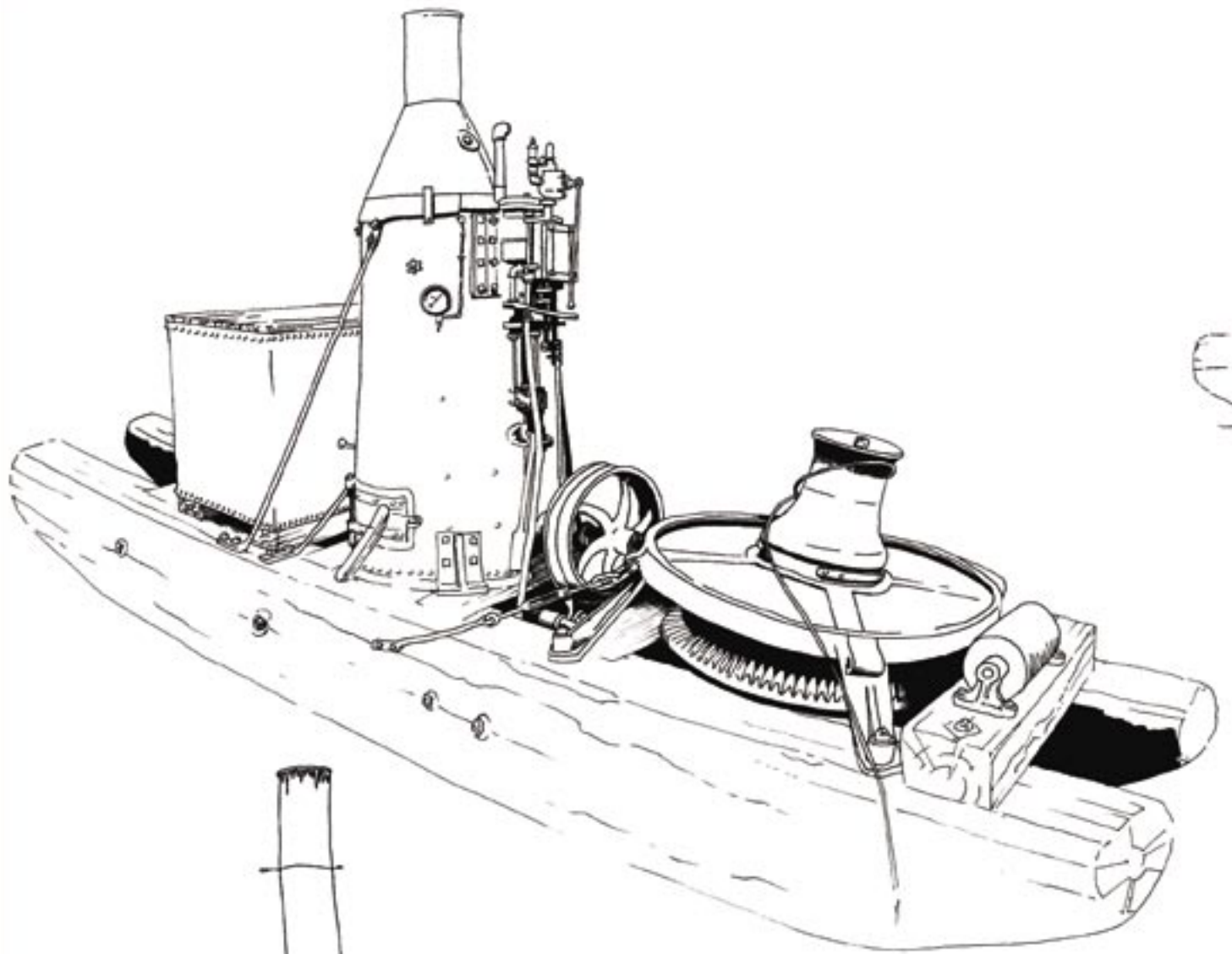
in rugged forest terrains. Resourceful timber men came up with many ingenious solutions to these problems but a key inventive year for the lumber industry was 1881.

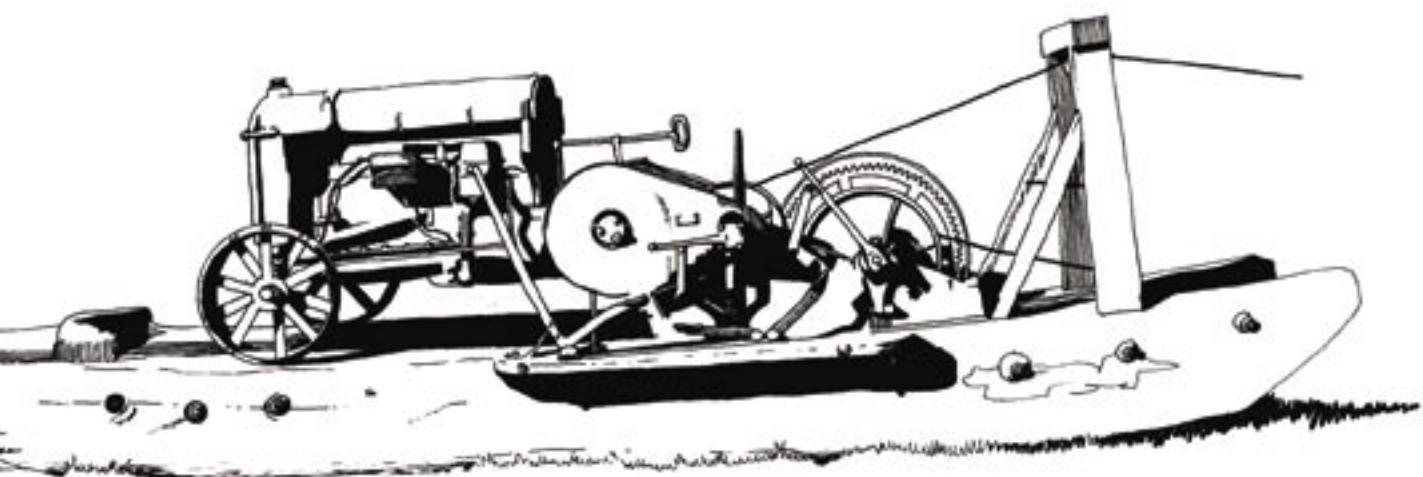
It was in this year that one Ephraim Shay nally patented his geared steam locomotive (patent no.242992 of March 30th- a fascinating story in itself as Lima was already producing Shay type locomotives) 1881 was also the year that John Dolbeer invented his single spool donkey engine (patented April 18, 1882- patent no. 256553)

The steam donkey was rapidly adopted by logging operations. While horses and oxen required straw and fodder the steam donkey required only wood for fuel and water- much easier to find in a forest! The donkey name is interesting as donkeys were rarely used for pulling trees out of the woods and likely comes from similar machines used on ships to pull rigging ropes and anchors. Ironically the invention of the steam donkey gave rise to a new use for real donkeys in the woods to haul back the cables once trees had been landed.

Development of John Dolbeer's invention was rapid with many companies producing single and multiple drum machines.

It is interesting to note that there was a distinction between roading donkeys (or roaders)- high speed machines with larger drums for pulling logs long distances along skidways, and yarding donkeys (yarders) which had slower gearing for the more job of pulling logs to be loaded onto railroad cars. A further distinction was the loading donkey (or loader) which differed only in the addition of an A-frame over which the ropes or cables passed- thus enabling logs to be lifted onto cars. At times the use of a spar tree and complex rigging allowed lifting operations to be accomplished by a standard yarder.





DOLBEER STEAM DONKEY

The original steam donkey as designed by John Dolbeer of Dolbeer & Carson and built by Murry Brothers in San Francisco

SKAGIT GAS YARDER

Skagit Steel & Iron Works built the first gasoline powered yarder by converting a Fordson tractor

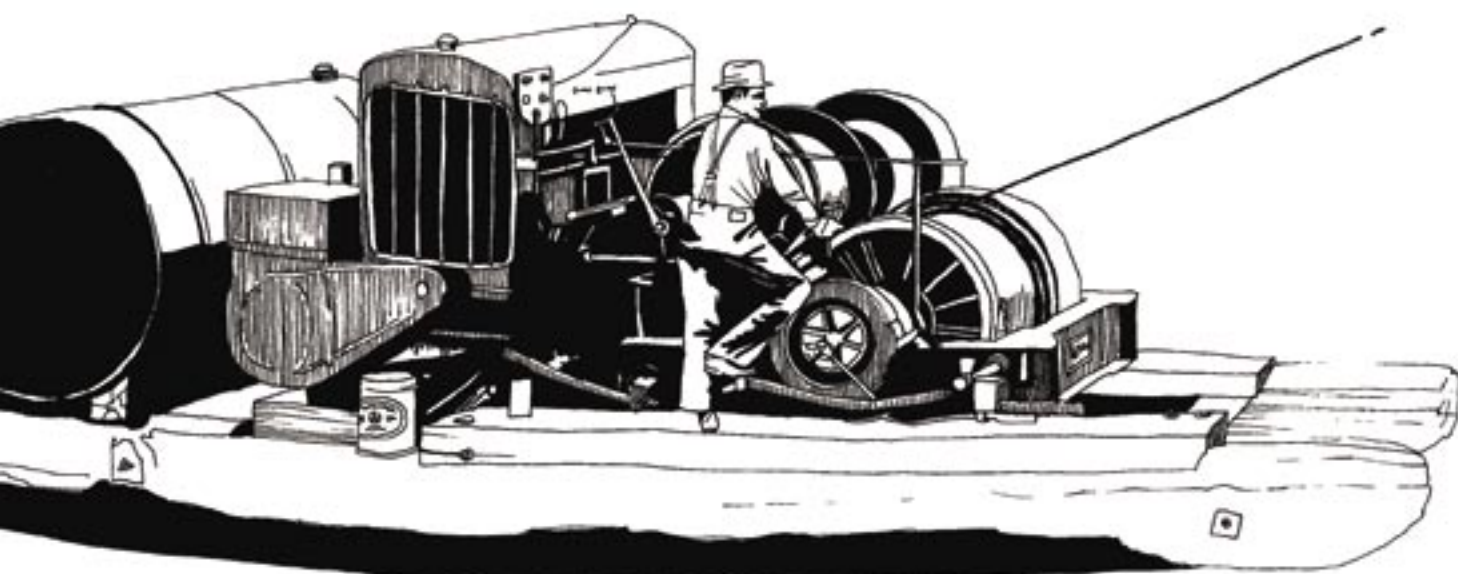


LATER SEAM YARDER

Typical development of the steam yarder led to horizontal cylinders and drums. Built by many Pacific Northwest engineering firms

MODERN DIESEL YARDER

1950s Skagit Steel & Iron Works diesel powered yarder with air controls- note air compressor attached to hood.





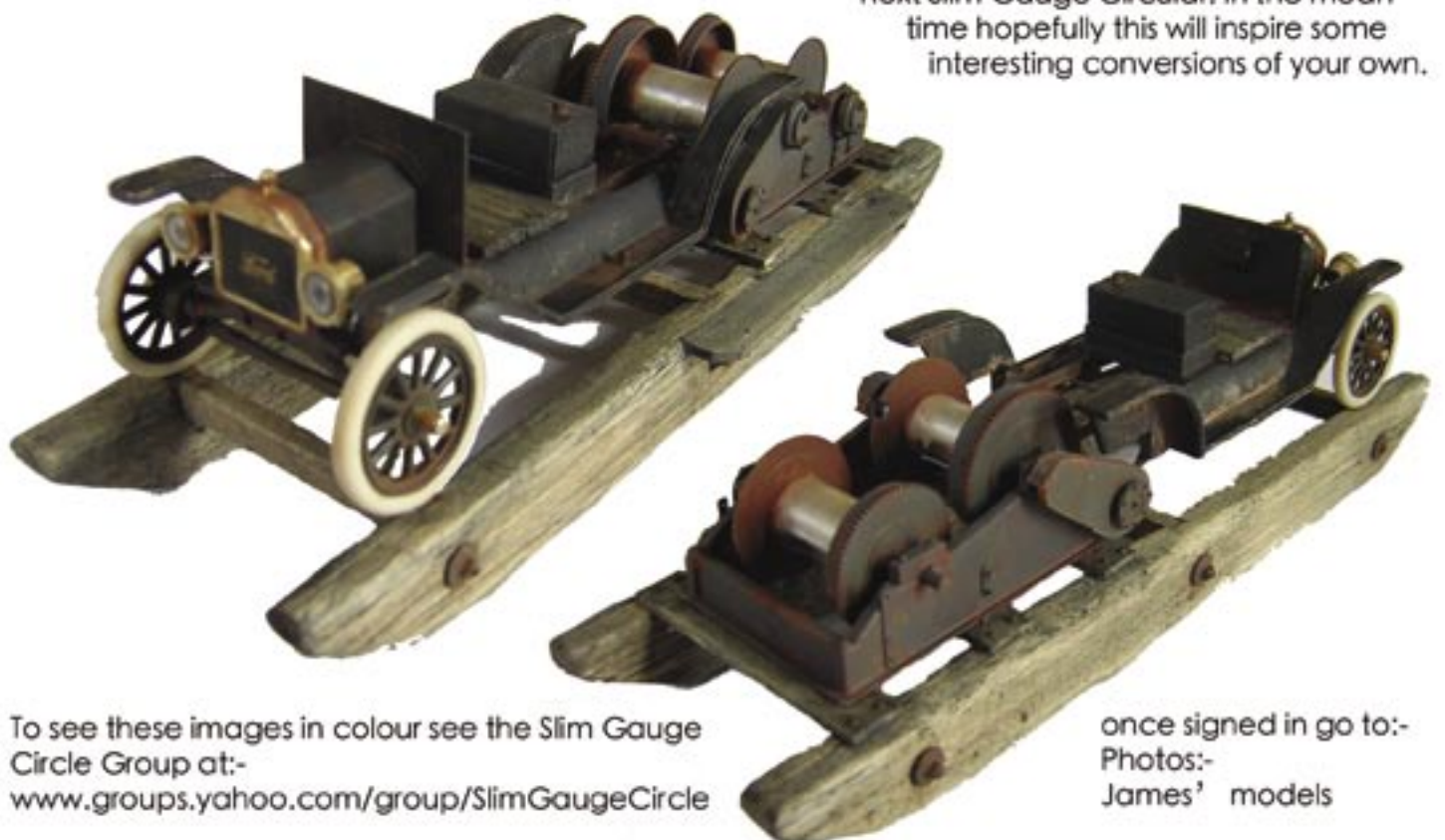
BUILDING A GAS POWERED YARDING DONKEY

BY JAMES COLDICOTT

There are several excellent kits for steam powered Donkeys on the market. Sierra West is currently re-issuing the superb CHB kits for both Dolbeer and multiple drum type yarders. This model was born out of the desire for something a bit different. I have a feeling I have seen photos of model T powered yarders but am having trouble remembering where- perhaps a reader can tell me of a prototype picture. If not, this is one of those "should have been invented if it never has been" type projects that make modelling American narrow gauge railways so much fun.

The model is based on a 1/43 scale IXO model T ford kit bought for me by my Dad a while back. My original intention had been to turn it into an On3 railcar and some parts not used for this conversion may eventually find their way to that project- the body, hood and dash not being needed here.

Painting was a combination of usual basecoat and weathering techniques but the body was not primed- washes and stippling being used directly over the stripped diecast parts- this allows some of the metal to show through and is a technique that has quite some potential, especially when combined with rottenstone texturing and rusty washes for unpainted metal objects. It could be used to good effect using self adhesive aluminium or corrugated tin materials to represent the corrugated or sheet tin often seen cloaking American timber mines and buildings. I will expand on this subject in the next Slim Gauge Circular. In the mean time hopefully this will inspire some interesting conversions of your own.



To see these images in colour see the Slim Gauge Circle Group at:-
www.groups.yahoo.com/group/SlimGaugeCircle

once signed in go to:-
 Photos:-
 James' models

CONSTRUCTION NOTES

The model was carefully taken apart and the die-cast parts stripped in car paint thinners. Make sure not to get thinners or paint stripper near to plastic parts as it will melt them. Plastic parts were primed using Humbrol Matt Dark Earth from a spray can. Once dry the plastic and stripped metal parts were painted with rusty coloured washes of Humbrol enamel paint.

The wooden skids were made up from two pieces of scale 12" x 12" bass wood each. Shaping and graining was achieved using 60 grade sandpaper and further splits made using a knife. Notches for the cross members were made using a single sided razer blade. All wooden components were stained using washes of Lamp Black & Burnt Umber artists oil paints before being glued together. I use Winsor & Newton water mixable oil colours- white spirit may be needed in washes to get pigment to soak into wooden parts but water can be used for clean up.

The rear part of the body was cut away to show off the chassis and axle detail of the model.

The yarding gear was made up from plasticard and from parts found in my scrap box. Gears were old watch and clock parts. Drum barrels were covered in self adhesive aluminium sheet available from craft shops- a useful way of representing areas where metal remains polished through use.

At this stage details were added to the wooden skids and to the Model T body. Cross members to support the yarding gear and a platform for the operator were added in timber and nut, bolt, washer castings from Grandt Line. Further carving was also done to make the skids look more like the tree trunks used on the original- sawn timber being only rarely used for the main beams

