Four hundred and ninety-six thousand
and ninety-nine saw logs, 7,002 pieces of
square timber, 1,124 pieces of flatted tim-
ber, and 1,123 pieces of round cedars.
This does not include the vast quan-
tities of saw logs brought down to supply
the Chaudiere mills.

THE LATHE.

In the last article, we referred to the
gouge and chisel, par excellence, the tools
of the soft wood turner. In this number
we propose to describe some tools, ad-
apted to special purposes.
The first are intended to be used wholly
for surfacing or facing large flat pieces of
board, the second are for hollow ware,
and are extensively used in districts where
tools and bowls, wooden spoons, &c., are
manufactured, as also for making spice
and powder bowls, wooden egg cups, and
similar articles, which, however, have
been largely superseded by metal and
earthenware substitutes. The broads are
made in two forms, the first very similar
to a heel tool used for metal turning; the
second has a stem, upon which discs of
any special form may be screwed. In
either case the rest is placed across the
face of the work, and the tool so held that
the cutting edge shall make as small an
angle as possible with its surface, and
this angle must be carefully kept, other-
wise the tool will hitch in a moment, and
be broken or wrinkled from the hand, and
in all probability the work will be spoiled.
When the first form is used, a flat-topped
rest is necessary (or at any rate better)
on which the heel of the tool can firmly
rest, by which means also the leverage
will not be so entirely against the opera-
tor. But if the movable discs are used,
which are sharp on all the edges, the lat-
er would be blunted by contact with the
rest, so that the bearing across the latter
must in this case be upon the
stem of the tool, and the thin-edged rest
must be used instead. Nothing can ex-
cceed the finish of the work done by these
tools when properly held by an experi-
enced hand, and nothing on the other
hand is more difficult at first than to re-
tain them at the exact angle required.
Of course the turner holds the longest end
of the lever, and, so far as mere power
goes, he ought to have no difficulty in pre-
venting the tool deep penetration of the
cutting the edge. Practically, however, a
moment's inattention will cast seeming
power to the winds, so deeply will the
tool enter the material. There is a sug-
gestion of vast importance in this case:
Don't have the lathe cord tight. If then
the tool catches, the cord will slip
and save your work; and a similar cau-
tion is necessary when using the hook
tools. It is, moreover, a mistake ever to
have a tight cord; it only drags down the
mandrel and makes it run heavily. Rather
use a moderately tight cord only, so
that, at any moment, the hand laid upon
the pulley will stop it instantly.
There is an advantage in this in divers
instances. A little resin powdered will
give the cord a better grip, if necessary;
and if you find you cannot turn with this,
and you are using catgut, unhook and
give it a twist or two, so as to bring the
strands closer. This will shorten, and of
course tighten, it at once.
Sometimes hook tools are made broad
and sometimes narrow in the hooked part,
according to the work proposed, and as
shown in the drawing, but in each case
the edge is thin and the tool kept as keen
as possible.
They are generally bevelled from within,
and sharpened by means of a round slip of
oil stone. If the bevel, however, is on the
outside it is more easily ground and equally
good if only the tangential position is
carefully retained. Some are bevelled like
the chisel from within and without, but,
in any case they must be very sharp to do
good work. A mere glance at a hook tool
suffices to show that it is a dangerous cus-
tomer to deal with. It looks as if it would
catch in, and at first, catch in it does.
After awhile it begins (if not already bro-
en) to behave better, and the shavings
curl off deliciously (for no other word
will express the fact. If it catches in, re-
duce the angle it is held at, so that it is
out of cut altogether, and then tenderly
but firmly let it take a gentle bite, so as
to cut the thinnest shaving possible. No-
thoroughbred needs more care and gen-
tleness, combined with decision, than
these tools, but when the happy knack is
once acquired, they will canter and galop
away finely, and to bore a box is the work
of a few seconds only. Moreover, an
adept at this work seems perfectly care-
less about the exact position, which never-
theless he retains to the greatest nicety,
and you would suppose it as easy to use
these tools as to cut cheese with a clasp-
knife—but try it. And one ought to try
it, and become master, too, of this art, for
it will help wonderfully ever after. Noth-
ing is more tiresome than to bore out a soft piece of wood with ordinary tools. The gouge, indeed, in one position, will do something, but is soon put out of the cut as the hollow deepens, and as to the chisel, or any similar tool, it has to be held flat so as to scrape and tear out the fibres in a manner unsatisfactory and provoking. Hook tools, and hook tools alone, are fit for such work as this. *Lumber Trade.*

**THE BIG TREES OF CALIFORNIA.**

I passed on the Hardins route (which is identical with the Coulterville for a large portion of the distance), from the Yosemite valley to Stockton, in October 1870, and about thirty miles southwest of the valley, passed through a grove on or near the banks of the Tuolumne river, in Tuolumne county. I measured one tree whose trunk was seventy feet in circumference four feet from the ground. There are also thirty trees in this grove, one of which is decidedly the best grown and handsomest tree of any I saw in either the Calaveras or the Mariposa Grove. I measured the Grizzly Giant in the Mariposa Grove and found it seventy feet six inches at eight feet from the ground. It is stated to be thirty feet in diameter; the fact is, this specimen like many others, swells out towards the root, and I consider the dimensions mislead one in forming an estimate of the size. I took my measurement where the trunk is straight. I must confess these gigantic trees did not at first strike me with the wonder I had laid in store for myself on seeing them. The fact of my having ridden for days through forests of giant pines, P. Ponderosa, P. Lambertina, and Abies Douglassii, whose trunks I measured and found to be from eighteen to twenty-six feet in circumference, had so prepared or accustomed the eye to such (to an Englishman) large trees, that the Sequoias did not at first strike me with that amount of surprise I expected them to do. I collected some seed, and I find I had no difficulty in raising seedlings in this variable climate (N. W. Yorkshire.) One fact struck me forcibly while I was in the Mariposa Grove as well as that of Tuolumne—namely, the total absence of seedling plants or young trees, which led me to put the inquiry, are these mammoth trees the last of their race, and, like many of the tribes of red men, to be wiped out in the next generation?—*The Garden.*

**FUTURE PROSPECTS FOR LUMBER.**

From the Manufacturer and Builder.

Some of the industrial papers are discussing the question as to the future supply of lumber, and as usual in such cases, take extreme opposite views. Thus the *Wisconsin Lumberman* fears a great scarcity, and says that the Atlantic states are almost devoid of forests; that the lumber lands of Wisconsin and Michigan are being rapidly used up, while the prairie states have no lumber at all. The *Mining and Scientific Press* of San Francisco maintains to the contrary that there is plenty of it, that the forests of the Sierra Nevada and the coast range for 3,000 miles in length can furnish lumber for the whole continent for untold centuries, and that the pine woods of Canada are also good for a supply of long duration. Without taking a too cheerful view, and so weaken the arguments in favor of forest culture and against reckless destruction of wood, we may remark that there is still much more forests in the Atlantic states than our western friends give us credit for. For instance, in New York state, the Catskill, Shawangunk, Adirondack, and other mountain ranges contain immense forests, covering lands unfit for farming purposes, and in which the denuded places will in a few decades be covered again by nature with a new crop of timber. It is the same in Vermont, New Hampshire, and still more in the southern states, especially in the Carolinas and Georgia, where immense forests are still being utilized, and by the luxuriant southern climate replaced with wonderful rapidity.

Our only uneasiness in this regard proceeds firstly, from the unfortunate and fatal yearly fires, which sometimes burn up as much as one single sweep as a whole generation would consume during several years; secondly, from the increasing demands of our growing population, which, instead of needing 30,000,000,000 feet per year, will in a few decades need 800,000,000,000.

**CALIFORNIA'S GRAIN SHIPMENTS.**

California shipped, in 1872, 183,448 quartersacks of flour more than in 1871, and 2,083,437 pounds more of wool, or over $1,000,000 more of values in wool. Since July 1, 1872, and to January 1, 1873, California has cleared for the United Kingdom of Great Britain, by 198 ships, 5,385,445 centsals of wheat, valued at $9,154,361. The smallest shipments were in July, the greatest in November.