Wooden Water Pipe.

It will be news to many of our readers to learn that the wooden pipe which a generation or two ago was very generally in use as a water conduit, and which is regularly supposed to have long since gone out of use, is still extensively used in a number of cities and towns of the United States, and by many coal miners and other companies, for the conveyance of water. We confess ourselves to have been quite ignorant of the facts in relation to this subject, which we find set forth in an interesting pamphlet, descriptive of the Wyckoff water pipe, issued by the Michigan Pipe Company, of Bay City, Mich. From this we glean the fact that the city of Detroit, Mich., has over 100 miles of ordinary wooden pump logs in use as water conduits; that Portsmouth, N. H., has had the same in use for over seventy years; and that some seventy cities and towns, in addition to those above named, are at present using (whether exclusively or not we are unable to state) the Wyckoff water pipe—a wooden water pipe of novel and improved construction—to which a long list of mining corporations might be appended. Some astonishing facts are named in the pamphlet in operation respecting the remarkable longevity of common pump logs which have been used for this purpose; thus, for instance, it states from chamber’s “Book of Days” that “over four hundred miles of elm pump logs were laid down in London, England, in 1613,” and that “some of the pipes were taken up and removed from before the houses in Poolebury, extending from the Duke of Devonshire’s to Clerges street, in 1862, after being down 249 years.” This recalls to mind the fact that, from time to time, wooden pipes, that at one time were largely (or exclusively) used for water conveyance in Philadelphia, having been laid down perhaps 50 years or more, are brought up by workmen engaged in excavating the streets in the older portions of the city, and are found to be in remarkably sound condition. Several specimens of such wooden water pipes, duly authenticated, are at present in the model rooms of the Franklin Institute.

With the development of the art of casting iron pipes of proper size and length, the use of wooden water pipe gradually passed away, only, however, as our readers may glean from what follows, to make its appearance again in an improved form, in which the imperfections of the common wooden pipe of the olden time have been done away with.

The improved wooden pipe to which we have alluded several times, is certainly a decided advance upon anything of the kind that has been brought to our notice, being not only ingeniously contrived to meet all the deficiencies known to exist in the common wooden pipe in vague years ago, but also, so far as we may judge from its construction, realizing the claims to superiority which the makers put forth in behalf of its manufacture. They claim for it the following advantages over other water pipe: Greater cheapness and less expense in laying; greater durability; that it is more easily tapped for service pipe connections, and less liable to get out of order; that the purity of the water conveyed through it is better preserved; that, being a poor conductor of heat, the water is less liable to freeze; and should it freeze, the elasticity of the pipe would prevent bursting; that its elasticity also renders it less liable to burst under the hammer action of the pump, or the sudden pressure caused by closing hydrants quickly; and, finally, that no noisiness has ever been known to burst so badly that a five pressure of 80 pounds to the thimble, or connecting piece, is 8 inches long, made of seasoned timber, turned, perfectly green, of an inch larger in diameter than the mouth of the pipe, so that it must be compressed when the sections are driven together, making a tight joint without packing of any kind. It is then subjected to a hydraulic pressure equaling that which it will be required to withstand in actual use. After testing, the pipe is given a heavy coat of asphaltum cement, thus preventing any corrosive substance from reaching the bands which strengthen the pipe.

For connecting different lines of pipe at street crossings, and for connecting hydrant pipe with mains, special couplings are used, the bell ends of which are bored out smooth in a lathe, allowing the thimble joint connection to be driven in closely, forming a tight joint.

To make service pipe connections, a hole is bored between the bands with an extension bit, and the corporation cock, which is made with a long coarse thread, is screwed into it. A piece of lead pipe, with a nipple on the opposite end, is wiped on to the nipple of the corporation cock, and the wood service pipe is connected with the nipple by an iron connection, or the nipple may be screwed into the end of the wood service pipe. If the space between the bands is not sufficient for pur
unit of inserting the corporation cock, the sides of
two adjacent bands are trimmed with a cold chisel
until the space is sufficient. If in so doing, enough
is taken from the bands to weaken them materially,
a screw is put through the weakened bands and into
the pipe on each side of the joint where the band is
so weakened.

To tap main pipes under pressure, a hole is bored
for the corporation cock through the shell of the pipe
to within about half an inch of the inner side, the cock
is inserted, and the remaining outerhalf inch of wood
is bored out with a bit a trifle smaller than the bore
of the cock, passed through the barrel of the same.

To remove a piece of pipe in the line for the pur-
pose of inserting special castings for branches, etc.,
a sleeve is used as shown in Fig. 3. The exact
length of pipe to be taken out is obtained, thus giv-
ing the space to be filled by the sleeve and the article
to be inserted. In placing, the sleeve D is slipped
over one end of the main in the ground. The pipe,
etc., to be put in is then joined to the opposite end
of the main, leaving a space of about one foot to be
filled by the sleeve. The tenon end of the reducer A
is then pressed into the end of the main through the
sleeve D, making a joint in that end, and the re-
ducer C into the end of the piece of pipe just
placed. The space between the two is then
filled by the "Dutchman" B. To complete
the joint, the sleeve D is pressed back over the
whole connection, making it tight.

We are excellently informed that pipe con-
structed in the manner above described, after
having been in the ground for a period of 24 years,
was found, on examination, to exhibit no signs
of rust or corrosion of the iron banding, thus
proving the efficiency of the outside coating to pro-
ect the same from the injurious action of the
soil.

In respect to the ability of the Wyckoff pipe to
withstand the action of frost without bursting, we
have the most unquestioned assurances, and this
quality would appear to be what might be reasonably
anticipated from the fact which is well known, that
wooden pipes, owing to their elasticity, rarely, if
ever, burst from this cause. The freezing and burst-
ing of iron mains, on the contrary, is a very common
occurrence, and the damage resulting therefrom is
often serious. In respect to strength, the makers as-
sert that the Wyckoff water pipe is surly provided,
and that in an experience of 24 years no piece of
their pipe has been known to fail so completely that
50 pounds pressure could not be maintained in the
line of pipe. Furthermore, it is claimed that the
elasticity of the wooden pipe gives it decided advan-
tages over iron pipe where it is used in connection
with the Holly or other direct pressure supply sys-
tem, for the reason that this quality enables it bet-
ter to withstand the hammering action of the pumps.

From the foregoing somewhat lengthy account of
this interesting invention, the claims of the makers
that the Wyckoff water pipe possesses every essential
quality that a first-class water main should have,
would appear to be substantiated. It is certainly a
circumstance that speaks strongly in its favor that it
should be found so extensively in use.