

LESSONS IN
EFFICIENCY AND
DURABILITY
FROM THE PAST*

*Mostly



Can a water heater be made that:

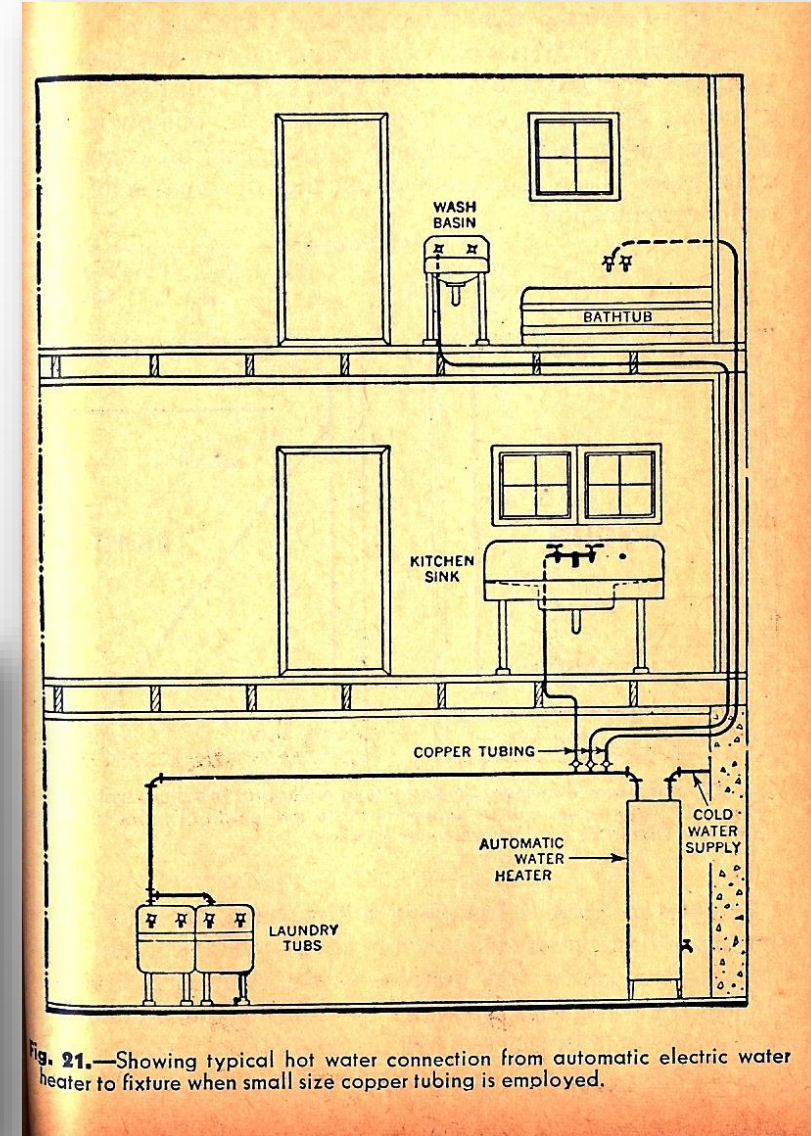
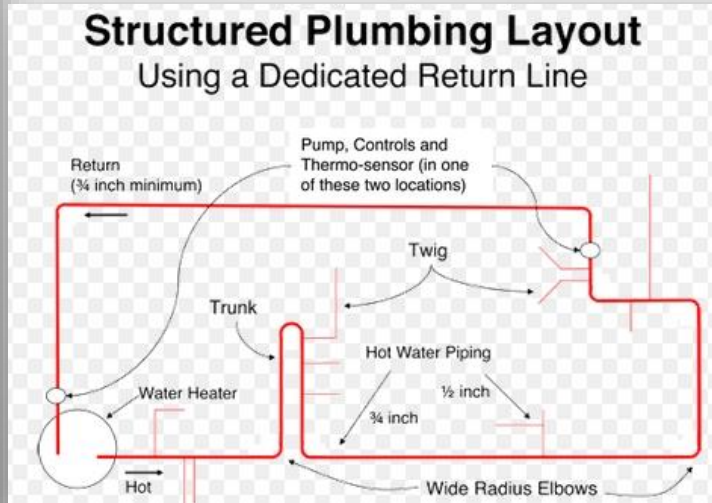
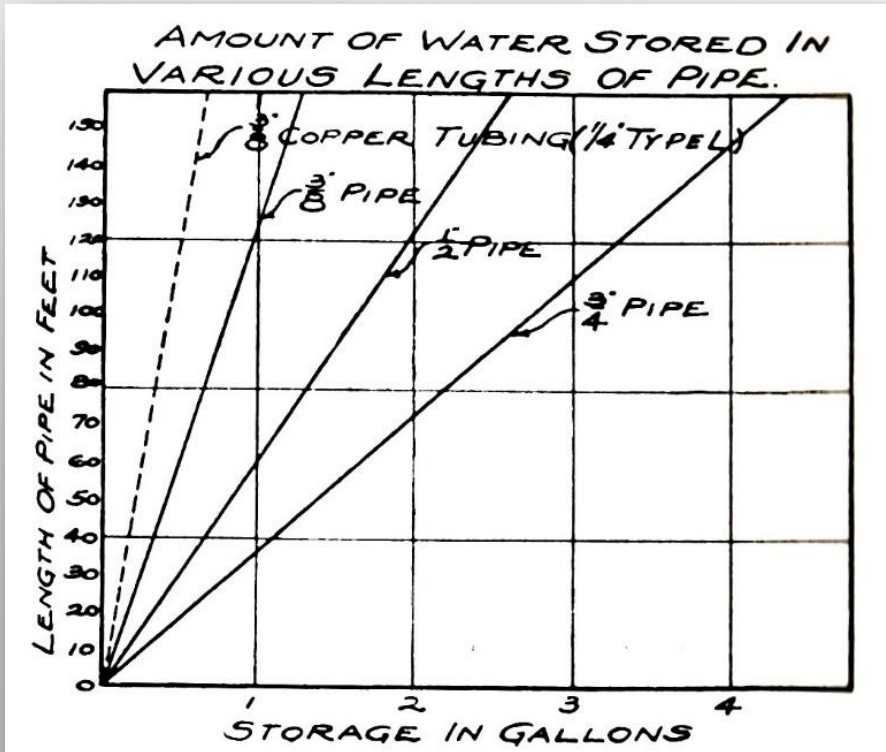
- Lasts a very long time
- Is very energy efficient
- Is not particularly expensive
- And provides the service we want?

Absolutely!



Can we design and build efficient plumbing systems?

Yup!

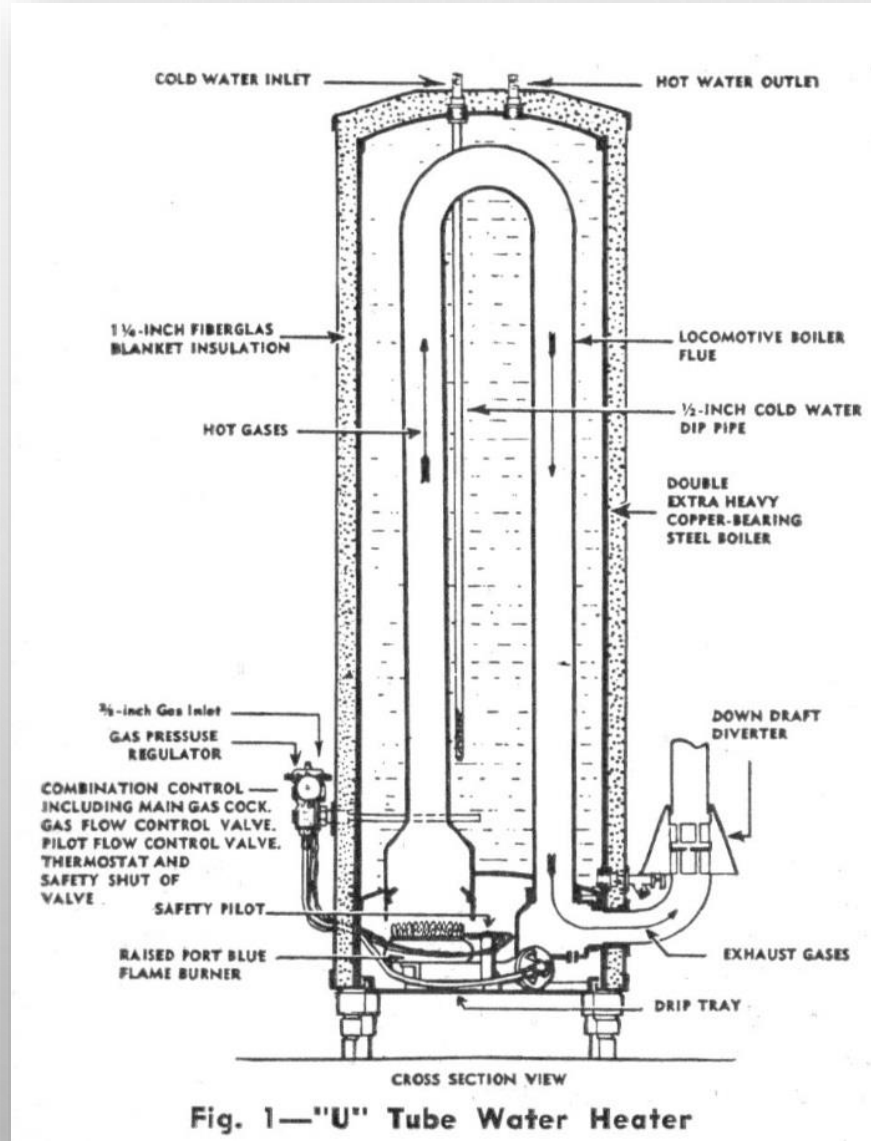


Then why don't we?



- **Education**, Who is training the designers, plumbers and end users?
- **Habit**, “This is different from what I’m used to”.
- **Greed or Fear**, We have learned to design things to fail (planned obsolescence).
- **Regulation**, Simply isn’t keeping up with technology.

Here are some old heater ideas



More heater ideas



worldwide



And
yet
more!

BETTER
BATH HEATERS
Introducing
Improved Designs.

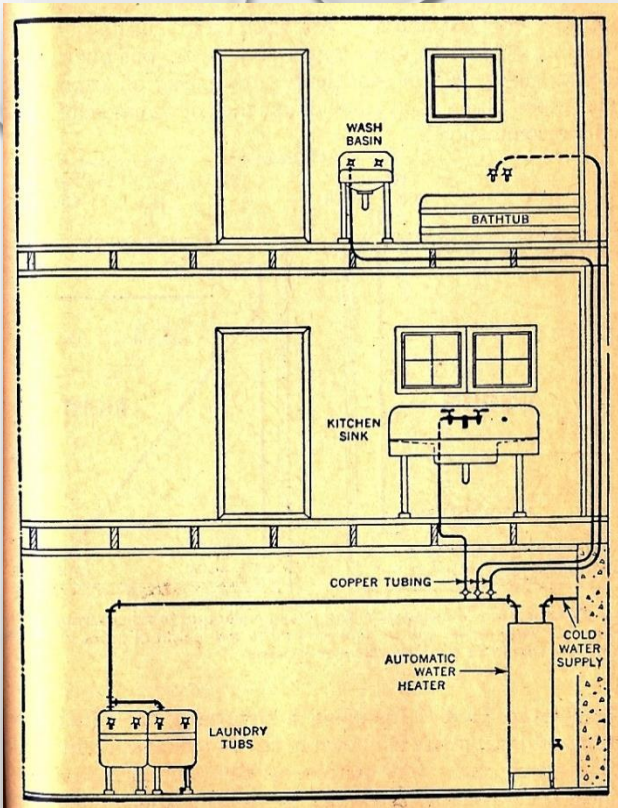
FOLLOWING our policy of continued research, with a view to giving our clients better and more efficient Chip Bath Heaters, we have pleasure in introducing improved designs throughout our complete range.

The B & W
MALLEY TYPE
CHIP BATH HEATER

BRIDGE & WILSON LTD.
The Bath Heater Specialists
540 MURRAY STREET PERTH
CRAFTSMEN

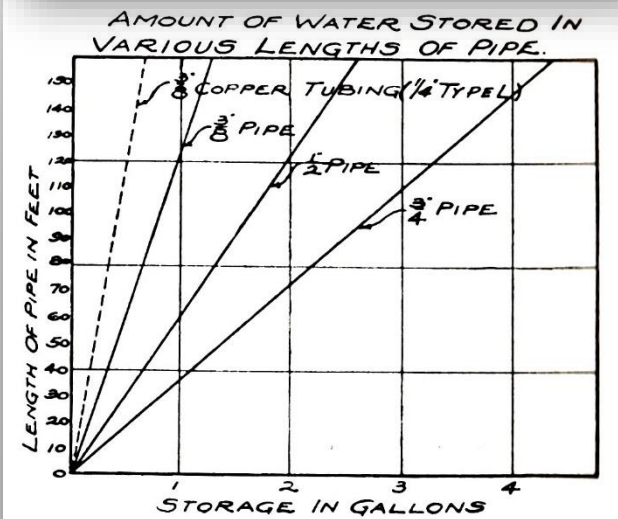
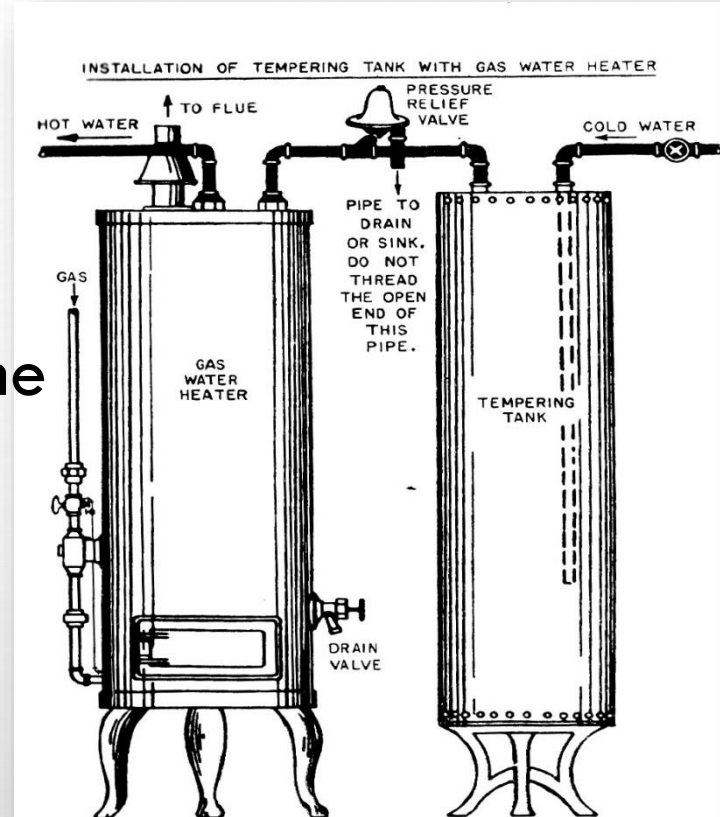



How about system design?

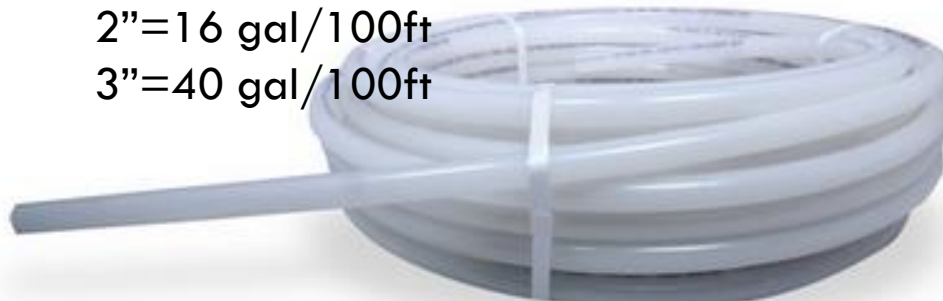


Two thoughts:

- Keep system volume low
- preheating



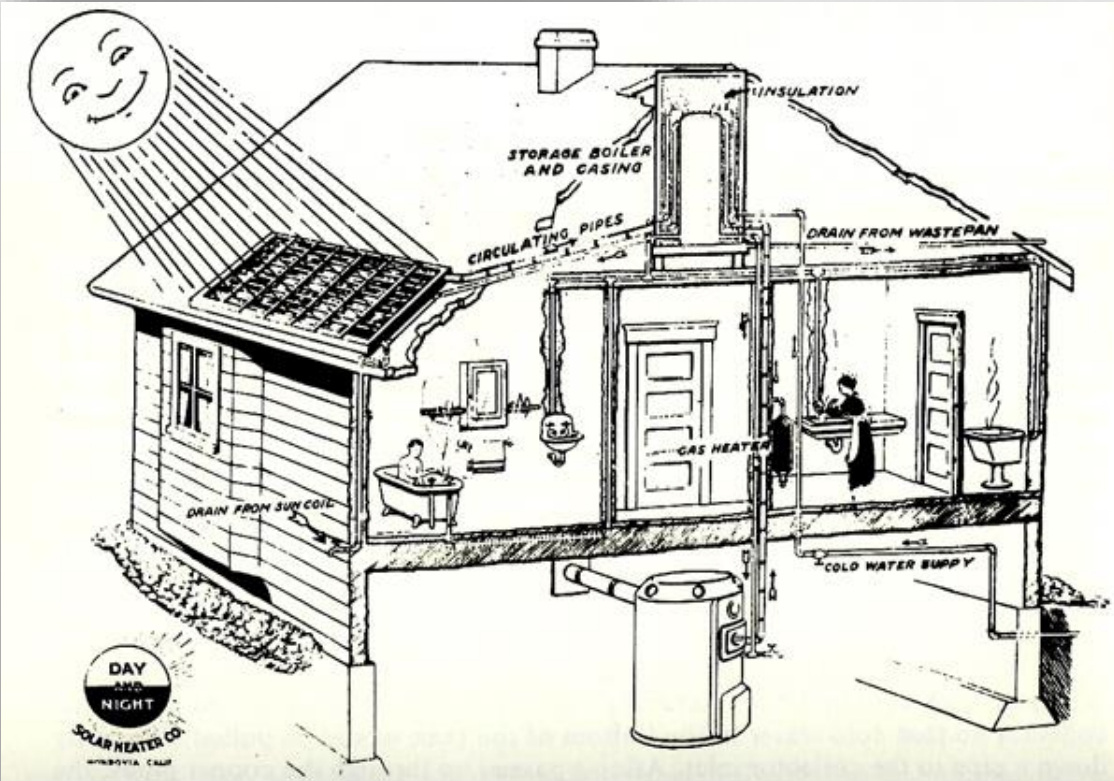
2"=16 gal/100ft
3"=40 gal/100ft



And more on preheating



Direct or
indirect solar

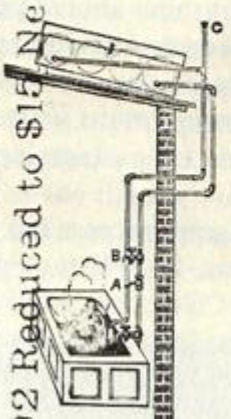


Climax Solar-Water Heater

UTILIZING ONE OF NATURE'S GENEROUS FORCES

THE SUN'S HEAT { Stored up in Hot Water for Baths, Domestic and other Purposes.

Price Of No. 1 Heater for 1892 Reduced to \$15 Net



GIVES HOT WATER at all HOURS OF THE DAY AND NIGHT.

NO DELAY.

FLOWS INSTANTLY.

NO CARE. NO WORRY.

ALWAYS CHARGED.

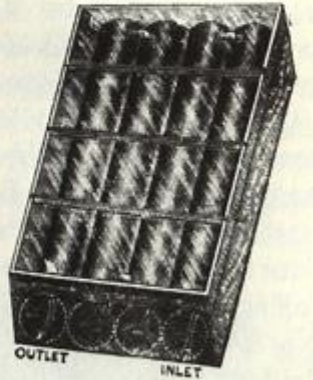
ALWAYS READY.

THE WATER AT TIMES ALMOST BOILS.

Price, No. 1, \$25.00

This Size will Supply sufficient for 3 to 8 Baths.

CLARENCE M. KEMP, BALTIMORE, MD.



How well is equipment installed?

- Safe?
- Easy to maintain?
- Functional?

Where is training for today's plumbers?



Efficiency & Durability; How do we get there?

Well designed and not-too-complex equipment, designed to be serviced easily

- Manufacturers do a better job involving installers in design
- Better quality control and support for installers

Tradespeople who are well educated and “happy” with their work

- Some form of ongoing education
- Rethink our “college bound or stupid” bias
- Rethink our adversarial bidding process

Keep the end user in mind

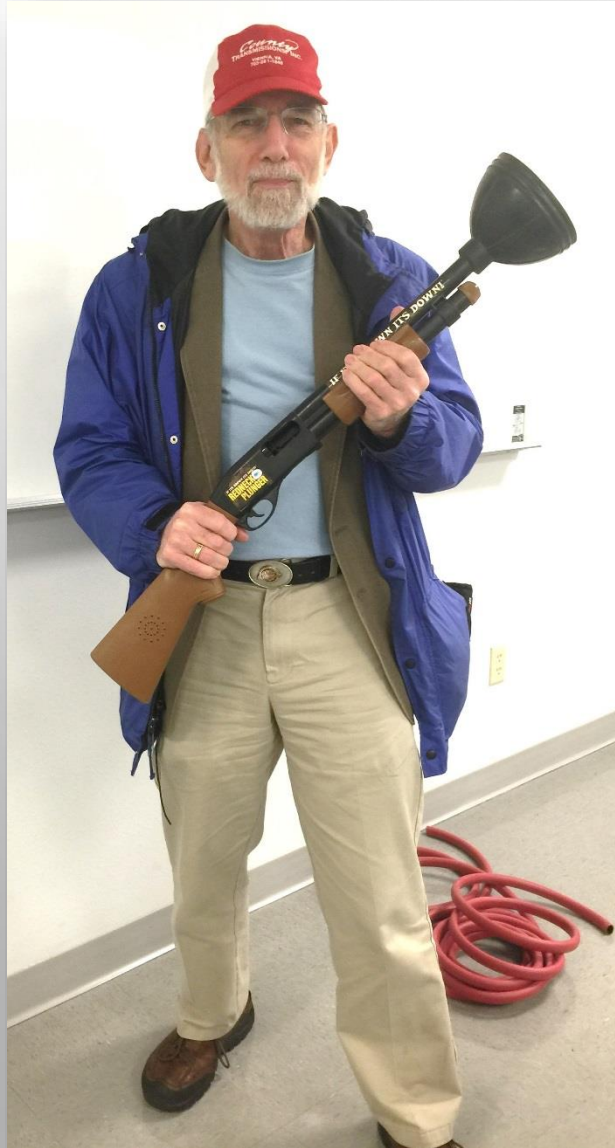
- Both manufacturer & installer must think about and act on what’s best for end user
- Consider life-cycle-cost vs first cost
- Make “planned obsolescence” a thing of the past



And, (of course) look for lessons from history!

Thanks for bearing with me!

*It's largely
this guy's
fault!*



LarryWeingarten.com

In Hot Water

PO Box 928, Monterey CA 93942

831-402-0490

eleent@startmail.com

