

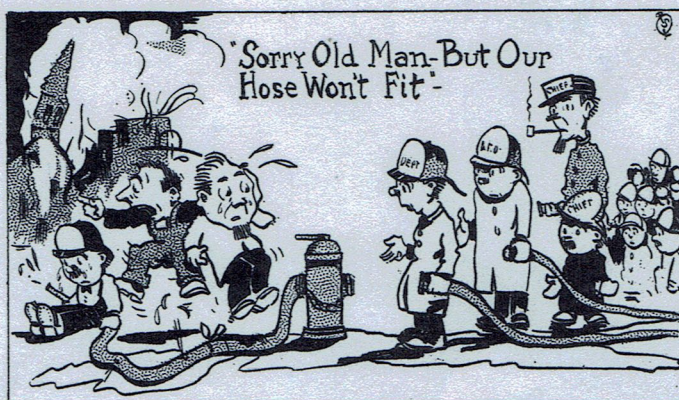


HOW GTD IS HELPING TO STANDARDIZE THREADS FOR FIRE HOSE COUPLINGS AND FITTINGS

The recent disastrous fires in Worcester and other cities in which fire departments from outside towns and communities had to be called in to quell the conflagration shows the necessity for universal standardized thread fittings for Fire Hose Couplings.

sections of the country, it is only within comparatively recent years that really definite and lasting progress has been made towards country-wide standardization.

The first organized efforts towards the adoption of a universal standard thread, was made by the International Association



It is obvious that it would be nothing short of a calamity for a willing fire fighting team to arrive from an adjoining town and find that the hose couplings would not fit the local hydrants and have to stand by without the chance to render much needed aid.

While the urgent need of uniformity in fire hose threads has been recognized over a long period of years, as indicated by individual and localized efforts in several

of Fire Engineers, during their annual conventions from 1873 to 1883.

However, it was not until 1905 that the foundation work was permanently commenced through the efforts of a Committee appointed by the National Fire Protection Association.

It was through the efforts of this committee that the thread known as the National Standard was adopted and received the unqualified approval of the leading or-

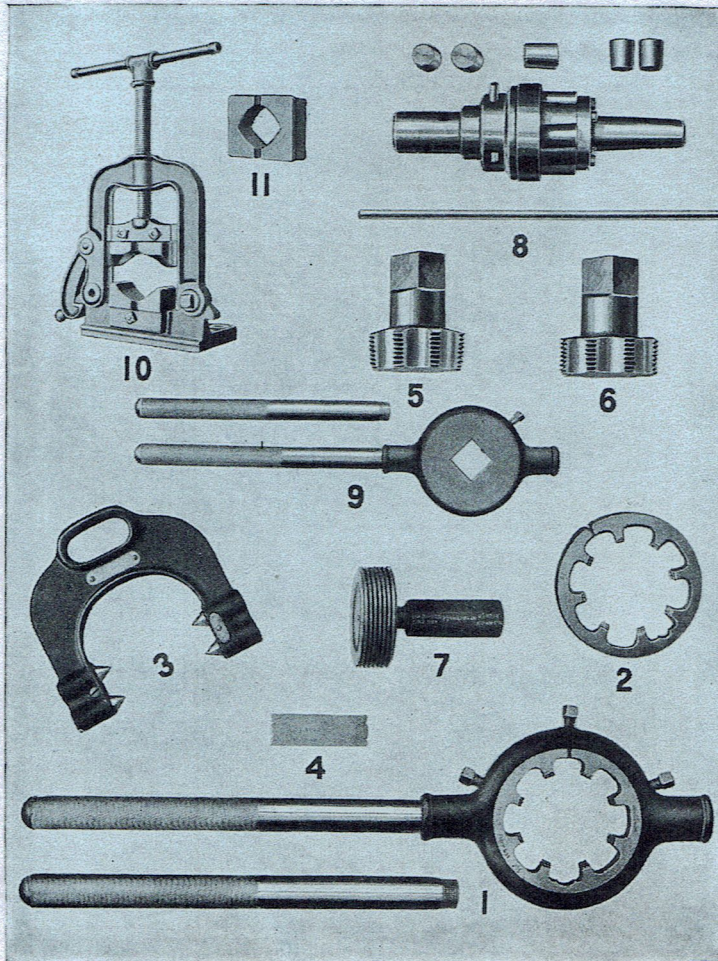
ganizations concerned with water supplies, fire departments, and fire protection.

Even then, up to 1916 a comparatively small percentage of the protected cities and towns in the United States were using the National standard thread, owing to the absence of co-ordinated effort towards accomplishing the actual work of standardization. Tools had to be perfected and tried out. A great deal of time, necessar-

ily from the National Standard and which could be readily converted to Standard size and avoid the danger of misfit.

Many experiments were made with taps, dies, etc. and finally a set of taps, dies, gages, etc. were made up by GTD, and sent to the New York and other offices of the National Board for further experiments.

Owing to the entrance of the United



ily had to be spent on field work, evolving considerable investigation and expense.

In July 1917, by mutual agreement the work was turned over to the National Board of Fire Underwriters, and it was in the same year that this new committee took up with the GTD Corporation the matter of making tools for standardizing Fire Hose connections, as many cities and towns had screw threads in service which varied

States into the World War about this time, and the urgent Government call on the National Board Engineers for various war duties, it was found necessary to suspend operations on standardization work for an indefinite period.

However, shortly after the Armistice was signed the work of Standardization was recommenced by the National Board of Fire Underwriters and Major J. H. How-

land was assigned to the job and collaborated with Franklin Judge and G. W. Carpenter, representing GTD in the manufacture of a tool set for the work.

In the Spring of 1919 the work of standardizing the complete fire equipment of a town with the new tools was attempted and High Bridge, N. J., was selected as the victim, and the non-standard threads on all hose couplings, hydrant nipples and caps, play pipes and connections to fire apparatus or equipment were re-sized and left in exact conformity with the National Standard.

Afterward, Messrs. Howland and Carpenter visited Lambertville, N. J., and New Hope, Pa., and then went further afield to Indiana where the fire equipment of Lebanon and Thornton of that state were re-sized and standardized.

While all this practical work was being accomplished new improvements and developments were made in the tools until the final efforts of the collaboration between the GTD Corporation and the National Board of Fire Underwriters resulted in the complete set as herein described.

Complete Set.

No. 1—Roughing Die and Stock—For use on all male fittings having an outside diameter of thread larger than 3 1-16 inches and up to and including 3 3-32 inches. This die has a wide range of adjustment by means of set screws. It is used to chase down the outer ends of oversized threads to more readily receive cutters on the sizing die (No. 2).

No. 2—Sizing or Finishing Die—For re-threading oversized male fittings so as to conform with the National Standard. To be used on all sizes longer than 3 1-16 inches only after the application of the roughing die. Can be used alone on sizes 3 1-16 inches until after the fitting has been expanded. An additional stock is furnished to permit simultaneous use of roughing and finishing dies.

No. 3—Thread Limit Gage—Set for gaging National standard male threads. To be used in gaging threads re-chased with the sizing die (No. 2); also in gaging the enlargement of undersized fittings by means of the expander (No. 8) until the maximum points on gage just start to bind when passed over the threads of the fitting.

No. 4—Check Block—For accurately setting Thread Limit Gage No. 3.

No. 5—Roughing Tap—A tapered Tap about 3-32 inch under standard size at the point; For use in roughing out undersized female fittings to enable the finishing tap to enter freely. The standard diam-

eter is about $\frac{3}{4}$ inch back from the point of this taper tap. In roughing out it should therefore be run in until about 3-16 inch of the cutters remain outside of the fitting, thereby allowing the finishing tap sufficient clearance to get an easy start.

No. 6—Sizing or Finishing Tap—For re-threading under-sized female fittings in conformity with the National Standard. On sizes appreciably smaller than the standard it should be used only after the Roughing Tap (No. 5) has been first applied. On fittings with either 7 or 8 thread pitches and threads equal to or slightly over the standard pitch diameter this finishing tap may be used without the rougher as there would be very little material to be removed.

No. 7—Male Gage—Made to conform precisely with the National Standard Female thread. For use in gaging fittings after they have been cut by the finishing tap (No. 6) should also be used in testing threads on all new female fittings.

No. 8—Roller Expander—For use in expanding undersized Male fittings as small as 2 31-32 inches and if there is a good thickness of metal possibly as small as 2 15-16 inches up to the standard pitch diameter. It also can be used to good advantage in repairing jammed or mutilated fittings.

No. 9—Tap Wrench—Two are furnished, one for roughing tap No. 5, the other for finishing tap No. 6, thus permitting two men to work on fittings simultaneously. Each tap is held firmly in the wrench by means of set-screw shown in cut.

No. 10—Vise With Special Jaws—For holding hose couplings without undue distortion by means of lugs on couplings inserted in recesses shown in jaws. Though not shown in cut, regular pipe jaws are also furnished for effectively gripping special fittings not provided with the projecting lugs.

No. 11—Special Jaws—For use in plain bench vise to permit of the simultaneous standardization of male and female hose couplings. These jaws similar to those in No. 10 are recessed to receive the spanner lugs on hose couplings.

No. 12—Suitable Tool Chest—For containing the complete set of Standardization Tools described above.

Besides the above, a tool set has been designed for the maintenance and repairing of National Standard Screw threads and the proper gaging and inspection of new couplings and fittings before acceptance.