

quently such wood prevents the spread of fire instead of helping forward its destructive course. The ordinary natural effect of fire, of great heat is to set wood aflame, to make it a vehicle for carrying fire, against this ordinary, natural effect of fire, such wood as has been treated for the purpose, is "proof" it is therefore, correctly styled "fire-proof."

**A Famous
Fire Engine
Builder.**

The death recently of Mr. James Shand, removes one to whom the world owes much for his labours in developing the use of steam as the motive power of fire engines. The floating fire engine may indeed be said to be the creation of his mechanical genius, the first of which, made for the London Fire Brigade, was built from his designs. Mr. Shand learnt his business as a mechanical engineer in Edinburgh where he was born in 1823. When just of age he had acquired such a reputation as led to an engagement in London as manager of a fire engine factory, and in his 22nd year he became head of the firm Shand, Mason & Co., which is so familiar to observers of English fire engines. Steam for these engines was first applied by the late Mr. Braithwaite, in 1830, but it took over 20 years to bring the new class of engines into general use. Hand worked fire engines were the sole ones in use in most of the large cities and towns in England up to 1855-60, not until Shand improvements had been introduced and the price of the engines reduced and their efficiency greatly enlarged by his mechanical arrangements for rapidly generating steam power. The slowness with which improved fire protection plant was, and is yet, introduced in the old country may be judged by the fact that 35 years after steam fire engines were built, an English town with a population of 165,000 and two adjoining ones of over 30,000 each, had no fire engines except those worked by hand, and not one of them had a street hydrant. It is stated by a London paper that the premises of the London County Council, so progressive a body in some respects are in the most disgraceful condition as regards fire protection.

**Monarchies
and
Republics.**

Venezuela is a republic; British Guiana is the dependency of a monarchy. They lie side by side, and the people of the two countries ought to have equal rights, liberties and security of person and property. But instead of that we find the republic in a constant brawl, a new revolution, insurrection or rebellion on its hands every thirty days, its inhabitants hardly getting time to cut kindling wood between battles; while on the British side of the line there is stability, order reigns and the people enjoy prosperity. What does Monroeism stand for in this case? The "Hamilton Times" that gives the above might have enlarged its comparisons by citing the record of the other South American Republics that are either in a state

of revolution, or preparing for one all the time. Our city contemporary "La Presse," recently rebuked a French writer who wrote disparagingly of the monarchy of Great Britain and belauded the republican government of France as much superior. It was pointed out that France had suffered disastrously from its republican rulers, quite as much as from monarchical. If the question is extended backwards, it could be easily demonstrated that popular liberties, rights and interests have been as ruthlessly trampled down, suppressed and ignored by republican rulers as by the most despotic. The republican system splits a nation into two irreconcilable, ever warring parties, the one supports the President, the other, on principle, is disloyal to him. It creates a chronic agitation which antagonises, belittles, slanders the chief of the State, and keeps up a perpetually rebellious movement against his authority. From such a mischievous never-ending disturbance of a country's peace a monarchy is free.

**Value of
Practical and
Technical Skill.**

One of the leading manufacturers in this city told us a few days ago of an experience he had which illustrates the value of technical skill. Some years ago when soliciting orders in a distant town he noticed traces of a fire on the premises of one of his customers. On enquiring how it happened he was informed that a certain operation conducted in the yard of the factory was so very risky that they had a fire break out about once a quarter. As the same operation has been conducted on his own premises daily for years without a fire occurring he expressed great surprise at these casualties. He proceeded to examine the plant and surroundings where periodic fires took place and soon found the weak spot, which was a place where better bricklaying and an improved process were needed to guard against fire. The improvements he pointed out were effected under his direction, both of which required technical knowledge quite outside his business, and there has never since been a fire in those premises. In another case he found a manufacturing customer troubled over his failure to produce certain desired effects in his goods. Our informant was supposed to be nothing more than a commercial traveller with a talent for selling goods. But he had not been satisfied to know merely the prices and uses of the goods but had carefully studied the processes of their manufacture so that he had a practical knowledge regarding them which gave him a great advantage over rivals. In the case in point, he examined his customer's methods and materials and quickly pointed out the defect which was giving him embarrassment. To youths and young men the lesson of these incidents is,—study whatever has or is likely to have a bearing on the business you are engaged in. If an insurance clerk, study insurance engineering and acquire all the technical knowledge you can relating to risks.