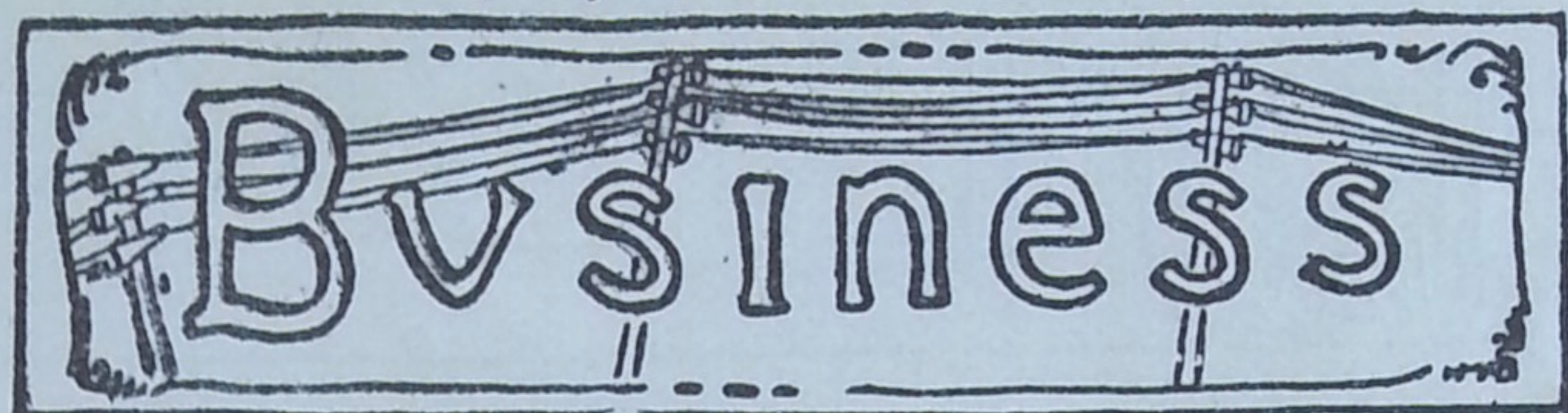


1892

Rural New Yorker T
Nov. 19, 1892

THE STORY OF "RUSTLESS" IRON.

Our readers know that iron pipe is now made so that it absolutely will not rust though buried in the ground and kept constantly filled or partly filled with water. A thin coating of magnetic oxide is formed on the iron through which the "rust" cannot eat its way. We have often wondered how this important fact of science came to be known, and asked Mr. W. T. Wells, the inventor of the process, to tell us. Here is his story:

"This is a case which well illustrates the truth that we should not overlook unusual occurrences, but should investigate and find, if possible, 'the reason why.'

"Early in 1884 I built the second furnace in this country to make rustless iron, having secured a license from The Bower-Barff Rustless Iron Co. Soon after getting the plant in operation, I discovered that although the processes were very valuable when properly and carefully carried out, nevertheless there was a large element of uncertainty in the results obtained. This was due mainly to the difficulty experienced in keeping the fire-brick furnace absolutely air-tight and damp-proof; consequently, I set to work to so improve the processes that I could always obtain the uniform and perfect oxide coating desired.

"About this time we had a hand-car which we used to transport work to and from the depôt, some distance away. This car was usually kept on a private siding or switch which leads to our works from the main line of railroad. One day, as a heavy car of coal was being switched to the works, the brakeman lost control of his car and it crashed into the hand-car, completely demolishing it. Some days later I had the wheels and axles of this car put into the furnace in order to heat them red-hot and then straighten the axles. Upon their cooling, I noticed a very handsome coating of the magnetic oxide on some parts of them. This caused me to work and experiment in an entirely new direction, the result of which was that I discovered that steam in the presence of carbonic oxide gas would oxidize hot iron, forming, at one operation, the black or magnetic oxide of iron. This is a fact which was then unknown to chemists.

"The great saving in heat, time and trouble, and the uniformity of the results, at once made my process a very valuable one, and it is now generally recognized as the best known. Having obtained patents for it in this country, Canada and Europe, the Bower-Barff Rustless Iron Company purchased them for a very large sum, thereby combining all the best processes for making rustless iron under one control. The Bower-Barff Company is now issuing many licenses for the use of the processes, and the rustless iron business is fast assuming large proportions." W. T. WELLS.