NEW WATER VELOCIPEDE RECENTLY TRIED AT MARSEILLES.

The apparatus is, however, only in its experimental period, and its inventor, Mr. Romanès, a naval mechanic, and its constructor, Mr. Rousseau, foreman of a large velocipede manufactory at Marseilles, are about to add some improvements, such as watertight compartments, larger paddles, lighter wheels, etc., so as to be able to attain a speed of 4¼ miles in the water without any trouble.

It is clear that in a heavy sea the apparatus will be difficult to manage, but a rowboat would be in the same situation, and this is not a normal case. What seems to us to result from the experiments is that the lightness of the apparatus, its easy management, the feeble resistance experienced in complete immersion, and especially the ease with which it permits of passing from a road to a lake or pond, or even to an agitated sea, and, inversely, from a river, etc., to a road, without any preparation, class this velocipede among the useful inventions.—*La Nature.*

THE MACHINIST'S SHIBBOLETH.

To form an estimate of a machinist's ability, in these days of improved methods, is not so easy a matter as it was thirty years ago. Almost everything is now done on machine tools, and the hammer, chisel, and file are little used. In the old time, it was by his manner of using these that we were accustomed to gauge the skill possessed by the new man. If he took hold of his hammer handle at the middle, and struck as if his elbow had no joint, or took up a file with his thumb under the handle and shoved it across the work with a teetering, jerky motion, he would at once be put down as an impostor.

Sometimes worse blunders than these were committed. For instance, grinding the cutting edge of a drill on the wrong side, or attempting to put a belt on a pulley from the wrong side.

The file test is a good one, and, if followed up, may put to shame some who claim to be good workmen. We wonder if any one in ten of the thousands of machinists who read your paper can file a spot on a round iron bar, perfectly straight, crosswise. We have seen such a surface concaved by the slight rotundity of the file. One of the interesting features of this performance is the nice vibratory movements of the joints in the arms and body that are necessary to secure the perfectly parallel motion of the file. Comparing these with the mechanism in the beam engine, the latter is very simple, for in this there is but one point to be kept in a parallel line (the crosshead), while with the file both ends must be controlled and held true to a line. Yet the operation seems very easy when, by practice, the art is acquired.

The plumber takes pride in his "wiped joint;" the slater in shearing and punching his brittle material, like so much putty; the blacksmith his perfect weld; and the machinist will ever esteem his dexterous use of the file as one of his best proofs of skill.

One of the modern tests, we believe, is the use of the scraper; and the fitting together of two surface