

A Word on Light Machines.

The demand for light-weight cycles is more than a mere craze, and that it emanates from experienced riders is almost proof sufficient that it is based on good grounds. It has been plainly demonstrated to them, both on road and path, that to drag a few pounds less under them is to increase their pace, though at the same time they admit that the torsional strength of the frame must not be detracted from. The result is that we have makers of the highest class of cycles striving to bring their machines down to the lowest weight compatible with stability, and to ensure this it is quite customary now for the maker or his agent to take account of the rider's weight and physical peculiarities. Here they find where weight can be saved, or there where greater strength must be allowed for, though in general detail the pattern stands untouched. Of course a fancy price is paid for the article; the scorcher is delighted with a mount built to his own heart, and he goes out to battle for the pots hopeful and confident. Anon, for one good reason or another, he determines on a change, and goes through the course as before, meantime disposing of his cast-off mount to the best advantage, probably with little regard for its suitability to the new possessor. The latter may possibly be of the untutored class, proud to become possessor of the very machine that So-and-so rode to such advantage. To such as he we would address our words of caution. He should take care that in buying a very light or special machine it has been used by one quite up to the new user's weight. If he, being a heavy-weight, purchase a machine built for a light-weight, he may do himself and the maker an injustice, albeit in the common order of things a maker's responsibility ceases after the course of a year or when a machine changes ownership.—*Scottish Cyclist*.

Aluminum Bicycles.

That time-worn story regarding the use of aluminum in the manufacture of bicycles hobs up serenely once more in a new form, the last issue of the *Iron Age* stating that all difficulties have been overcome, and that a company is now making arrangements to put such a machine on the '93 market. We quote it as follows:—

"It is interesting to learn that a process has been discovered by which aluminum is hardened and toughened, and in this condi-

tion may be substituted, in some instances, for steel. As the result of a long series of experiments, the Orange Machine & Mfg. Company, Orange, N.J., have succeeded in perfecting a process for hardening this metal, and are preparing to manufacture safeties in which the principal parts are made of aluminum. Another serious difficulty was to obtain a solder that would solder aluminum, but that has also been discovered by them. At the factory we were shown a pair of aluminum pneumatic rims with securely soldered joints, the rims weighing 12 ounces each, instead of 2 pounds 5 ounces, the weight of steel rims. The soldered joint on the rims is patented, and is 1½ inches long. Through this joint, the strongest part of the rim, the valve hole will be made, whereas in the steel rim the hole is through a single thickness of the metal. They propose to make bicycles with aluminum frames, forgings, hubs, spokes, rims, heads, handle bars, sprocket wheels, cranks, pedals, and with cork handles. In fact, the machine as designed will be all of aluminum except the saddle, ball bearings and the hardened steel cups in which they run. It is undecided as yet of what material the chain will be made. The tires used will be the Morgan & Wright pneumatic. According to present calculations the road machine will not exceed 15 pounds in weight, in comparison with the present road safety of from 35 to 45 pounds. The name of this wheel has not been definitely decided upon. It will probably be known as the Orange, although Essex is also under consideration as a name. The company expect to have the machine ready for the season of '93, their price being from \$160 to \$180."

A steering lock is a great advantage to a safety. It adds practically nothing to the weight, and allows the machine to be left leaning against any wall or fence without fear of its lying down to roil in the mud the moment its rider is out of sight.—*Irish Cyclist*.

J Perry Worden, the American wheelman who has been touring economically in Great Britain, has regained his home in the United States. He left New York for Glasgow on June 3rd this year, and has explored Scotland, England, Wales and Ireland during his visit. He carried with him appliances for cooking his meals *en route*, and from start to finish his total expenditure amounted to less than £19. When it is remembered that this sum relates to a period of three months, and includes steamship fares, Mr. Worden's trip must be considered remarkable.