# MERSENNE'S NUMBERS.

(*Addition to a previous paper*, pp. 34–36).

By *W. W. Rouse Ball.*

In the paper on Mersenne's Numbers which appears in the current volume of the *Messenger* (pp 34–40) I stated (Art. 10) that I believed that the factors of $2^p - 1$ when $p = 29$ were discovered by Euler, but that I had mislaid my reference and could not quote an earlier authority than Plana. I am able now to supply the reference. The memoir by Euler which contains the result was written in 1732 and appears in the *Comment. Petropol.*, Vol. VI., p. 103; or the *Commentationes Arithmeticae Collectae*, Vol. I., p. 2.

This memoir contains also the factors of $2^p - 1$ when $p = 43$ and when $p = 73$; of which results I attributed (Arts. 12, 14) the first enunciation to MM. Landry and Le Lasseur respectively.

The theorem which I attributed (Art. 11) to M. Lucas was enunciated by Euler in the same memoir: hence the credit of the discovery of the factors of $2^p - 1$ for the values $p = 83, 131, 179, 191, 239, 251, \ldots$ should be assigned to Euler.

Lastly I regret to say that in consequence of my having used an old and inaccurate table of powers of 2 there are a few mistakes. In the table on p. 35, the value of $2^p - 1$ when $p = 67$ should be 14757... instead of 13957...; the value when $p = 71$ should should be 236118... instead of 223318...; the value when $p = 89$ should be ...196426901374... instead of 195176901874...; the value when $p = 101$ should be ...458802993... instead of ...459007793...; and the value when $p = 127$ should be ...4604692...68...105... instead of ...3324884...04...361.... In article 20 the ninth perfect number should be 2658455991569831744654692615953842176.