of the orders 4 and 8. Hence, *there are just four groups in which H is necessarily non-abelian.* In two of these G/A is cyclic while the quotient group is non-cyclic in the other two.

The total number of the non-abelian groups of order 2^m which contain an invariant cyclic subgroup of order 2^{m-2}, but no such subgroup of order 2^{m-1} is therefore fourteen. The last four were explicitly excluded from my list of these groups which do not contain an abelian subgroup of order 2^{m-1} including A* since Burnside had considered this subject. Knowing that Burnside gave the correct number of these groups I failed to observe the compensating errors. It may be added that the title of Hallet's paper as given in both reports noted above is misleading, since every possible group of order 2^m contains an invariant subgroup of order 2^{m-2}.

STANFORD UNIVERSITY,
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GALILEO AND THE MODERN CONCEPT OF INFINITY.

BY DR. EDWARD KASNER.

(Read before the American Mathematical Society, February 27, 1904.)

THE definition of an infinite assemblage, as one in which a part exists which may be put into one-to-one correspondence with the whole, recognized as fundamental in recent discussions by mathematicians and philosophers, is usually associated with the names of Bolzano, Cantor, and Dedekind. The object of this note is to call attention to a passage from Galileo which is of significance in this connection.

The passage in question appears incidentally in the work which contains Galileo's most permanent contribution to science, the foundations of dynamics; namely, the Discorsi e dimonstrazioni matematiche of 1638,† often referred to as the

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* *Transactions of the Amer. Math. Society*, vol. 3 (1902), p. 385.

† The full title, taken from a copy of the first edition in the Columbia University library, is as follows:

Discorsi | e | Dimostrazioni | matematiche, | intorno à due nuoue scienze | Attenenti alla | Mecanica & i Movimenti Locali, | del Signor | Galileo Galilei Linceo, | Filosofo e Matematico primario del Serenissimo | Grand Duca di Toscana. | Con vna Appendice del centro di grauità d'alcuni Solidi. | In Leida, | Appresso gli Elsevirii M.D.C. XXXVIII.