

CORRESPONDENCE.

FORMULÆ EXPRESSING THE VALUE OF ALL THE FINES
PAYABLE ON THE RENEWAL OF COPYHOLD LEASES.

To the Editor of the Assurance Magazine.

SIR,—It happened to me the other day, in answering a question which occurred in practice, to stumble upon a formula expressing the value of all the fines payable on the renewal of copyhold leases, which is more simple and useable than those which I have since seen in the works of Baily, Milne, or Professor de Morgan.

Calling $A, B, C,$ &c. the values of an annuity of £1 on the lives now in possession; P the value of an annuity of £1 on any one of the successive lives; $A, B, C,$ and P the value of £1 to be paid on the failure of those lives; ρ the interest on £1 for a year, and v the value of £1 to be received a year hence, Milne's formula is, the fine being called f ,

$$f \frac{A + B + C + \&c.}{1 - v^{t'+1}},$$

in which t' = the number of years' purchase of an annuity certain, equivalent to an annuity on the life of P .

Professor De Morgan's formula is

$$f \cdot \frac{\frac{n}{\rho} - (A + B + C + \&c.)}{1 + P},$$

in which n represents the number of lives.

The formula which I lately arrived at is

$$f \cdot \frac{A + B + C + \&c.}{1 - P}.$$

These two last formulæ are identical in value, and either may be deduced from the other.

Milne's formula is identical in value, but is obtained by the imputation

of an entirely unnecessary equivalent to the value of £1 on the failure of the life which I have called P.

Baily's formula differed from Professor De Morgan's by giving P instead of $1 + P$ as the divisor. I have a copy of Baily's work in my possession, in which the author has corrected this inaccuracy.

If there is any advantage in my formula, it lies simply in the rejection of unnecessary quantities. The following is the rule in words:—

Add up the values of assurances of £1 on each of the lives in possession, and divide the sum by the complement to unity of the value of an assurance of £1 on the life to be put in on failure of any life.

I remain, Sir, yours truly,

7, *New Bank Buildings, Lothbury,*
24 *March, 1854.*

E. RYLEY.

THE QUESTION OF INTEREST IN POLICIES UPON THE LIFE OF ANOTHER.

To the Editor of the Assurance Magazine.

SIR,—As it is probable that some legislative enactment may shortly be expected, founded upon the recent report of the Select Committee on Life Assurance Associations, in which case the entire subject of life assurance must come under the consideration of Parliament, it seems desirable to direct attention to the Act of the 14 Geo. III., cap. 48, known as the "Gambling Act," with a view to consider whether this measure has really answered the intentions of the legislature; and if not, whether it would be advisable to make some effort for its modification or repeal. The legal bearings of the subject have been very clearly treated by Mr. Bunyon in the first chapter of his recent valuable work; but as the law and the practice are very much at variance, and as the practical operation of this measure is, I think, sometimes misunderstood, perhaps you may consider a few observations upon the subject not altogether out of place in your *Journal*.

The preamble of the Act recites, that "whereas it has been found by experience that the making assurances on lives or other events wherein the assured shall have no interest hath introduced a mischievous kind of gaming": and to remedy this evil the main provisions are—1st, That no one shall be allowed to effect an assurance upon the life of another unless the former have an interest in the life of the latter; and 2nd, That when the life fails, the claimants shall not be entitled to receive more than the amount or value of the interest that they may *then* have in the life in question. It may be remarked (the fact, I believe, not being generally known), that this Act having been passed before the Union, its operation is confined to Great Britain, and does not extend to Ireland.

Now, what effect has this measure had upon the issue of what are ordinarily termed "life of another" policies? Whatever may be the strict legal meaning of the term, it seems to be well understood that the "interest" in these cases must be pecuniary, and that no other will suffice; so that a creditor may assure the life of his debtor, but that a parent, as such, has no legal interest in the life of his child. The consequence has been, that