ADJUSTMENT AND APPORTIONMENT.

How it was Done.

We have been requested by one of our readers to explain somewhat more circumstantially, the *modus operandi* by which the apportionment of insurance liability amongst the several co-insurers upon the five houses, as given in our solution of the Lye problem, was made; more especially that on numbers 4 and 5, whereon the deficiency was the heaviest; because, while recognising the equity of the conclusions reached, the details are not quite so clear to the unpractised in this especial department of fire underwriting. We take great pleasure in complying with this or any other similar request, coming within the sphere of an Insurance Journal, and our ability to answer.

In making this explanation it will be necessary to fix a starting-point or basis of operation, which we condense into the following brief summary, viz.:

1 Indemnity to the insured to the full extent of his insurance. "Every time."

2. Compound or general policies, covering several subjects under one sum, are liable to their full extent upon any one, or pro-rata upon all of their several subjects, as the case may be. Or, in other words: general policies *float with the loss*. Which brings us to our third and last fundamental principle.

3 That compound, policies are first made specifically liable upon each item under their protection in the exact ratio of the loss upon the several subjects, and thereafter must float from one to another, when needful, in such sums as will make the indemnity of the insured complete. Should the loss at any time, exceed the total insurance, then the liability will be pro rata.

Acting upon this basis, we find that policy A, in the Lye problem, was a general policy, covering the five houses in one sum of $5,000, which we divide in the ratio of the losses upon the several houses, which makes it *quasi* specific in the sum of $1,000 upon each house, which may be called its "initial," not fixed, liability thereon.

We next find that Company E, covered in the same way $5,000 on 4 of the houses, making its "initial" liability $1,250 on each.

Then comes Company F, covering $5,000, in like manner upon 3 of the houses, giving an "initial" liability of $1,667 on each. And, finally, we find Office B interested, with a specific insurance of $1,000, neither more nor less, on each house.

From this condition of the insurance we find that house 5 was covered by insurance, as follows: Loss $5,250.

Company A, quasi-specific,	$1,000
Company B, actually specific,	1,000
Company F, quasi-specific,	1,666
Total Insurance ("Initial Liability"),	$3,666
Leaving a deficiency of,	1,584

Now policy B, being specific or fixed, cannot be increased, but must be held for its full amount, because offices A and F are liable, not only in their "initial" or contributive sums, but as floaters, must in addition make good this deficiency between them. This they do in the ratios of their several "initial" liabilities to the deficiency. Their quotas are found by percentage as follows:

1584 (deficiency) ÷ $2,666 (insurance) = 05.94 per cent.
Then 1,000 + 05.94 = 1,594 for Company A.
1666 × 05.94 = 989.61 + 1666 = 2655.61 for Company F.
(To avoid fractions we call this in the table 2,656.) Leaving unexhausted insurances, viz.:

Company A, 5,000—1,594.=3,406.
Company F, 5,000—2,656=2,344.

Which is to be treated as "original" insurance on the several remaining subjects of the respective companies, and is to be divided equally or pro-rata, between such items, to find the ' initial" liability of each co-insurer on each of its remaining subjects. Thus Office A, covering the remaining 4 houses, will be divided into as many equal portions, giving the sum of $851.50, as the new " initial" or contributive liability on each. While Office F, having but 2 houses remaining, will be apportioned accordingly, giving the sum of $1,172 on each. Company B, as before, being fixed, and its full amount required to fill up the indemnity, will contribute in the face of the policy, $1,000. And now comes in another co-insurer, Office E, with its first or "initial" liability fixed at $1,250, to contribute its proportion with the other 3. This gives the total insurance on No. 4 as follows:

A, $851.50 + B, 1,000 + E, 1,250 + F, 1,172=4,273.50, to pay a loss of $5,250, leaving a deficiency of $976.50, which must be made good by A, E, and F, pro-rata. Their several quotas are found by the rule of proportion, as follows:

A. As 3273.50 : 976.50 :: 851.50   254.00 + 851.50 = 1105.50
E. As 3273.50 : 976.50 :. 1250   372.88 + 1250 = 1622.88
F. As 3273.50 : 976.50 .. 1172   349.62 + 1172 = 1521.62

	Totals		
	3,273.50	+ 976.50	= 4,250.00
Co. B.	1,000 00		1,000.00
	4273.50	+ 976.50	= 5250.00

We now have the losses upon houses 4 and 5 paid for, and the wounded present the following front to meet the loss on Nos. 1, 2, and 3, viz.:

Company A, $3406—1105.50=2300.50, on 3 houses
Company E, $5000—1622.88=3377.12 on 3 houses
Company F, $2344—1521.62=822.38 on 1 house.

Divided in these ratios he insurances upon houses 1, 2, and 3 will be as given in our table of "final contribution," on page 86 March issue. The insurances on each being in excess of the loss thereon. The several contributions can be readily computed by the rules of proportion; and here the specific policy B, being found in good company, comes in for its pro-rata proportions of the salvage on each of the remaining 3 houses.

A few words about the salvages may not be amiss. Company A, covering, upon all 5 houses, and having but two co-insurers on No. 5, and 3 on No. 4, as a matter of course, fares badly. But when it comes to 1, 2, and 3, with so many co-insurers to share the loss, it fares better. But F, covering upon 3, 4, and only 5, upon which there was the least insurance, and not having the redeeming benefit of the heavy policies on 1 and 2, is almost entirely consumed. While E, covering 4 houses was fortunate in having its lot fall chiefly among the heavy insurances, which helped it out. While C, covering only on two houses, and these among the heaviest over-insurances, suffered the least. Specific C—poor Tray in bad company—had to pay in full on 4 and 5, and what salvage it did make was among the over-insurances. It is as easy as "falling off a log," when you know how to do it.

Worth Remembering.—That "a very convenient rule of thumb which enables an agent for life assurance to roughly approximate the expectation of life at any age when he may not have his table with him" has been copied pretty freely by the insurance press without giving credit to this journal. In some instances it has been credited to a contemporary. The contemporary evidently forgot to give the INSURANCE AND FINANCE CHRONICLE credit.