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# THE SPECIFIC IMMUNITY OF THE TISSUES AND ITS BEARING ON TREATMENT<sup>1</sup>

At the present time, in this day of rapidly increasing knowledge in all lines of human endeavor, we accept at first as wonders and then more or less as commonplaces the marvels that have been accomplished even during the past fifty years. We tacitly predict the future by the accomplishments of the past, and this has given us an almost unlimited optimism, even to a greater extent than previous generations have ever had. The various lines of study have been brought into closer contact with each other than ever before and have become interdependent.

The above applies equally as well to medical work as to other fields. Advances have been tremendous, and yet it seems that we have only begun to get into very close contact with what we do not know. Advances in surgery have not exceeded those in internal medicine, and the wonderful work done in the field of infection and immunity can be appreciated only by the trained student.

Advances in medicine have been made by improvement in existing theories and methods, and also by the introduction of new theories and methods. The latter has always been due to the utilization of previously existing knowledge, and could not have been possible without it. Modern scientific work abounds with instances of this, of which research in diabetes over the past forty years is a very good one. New ideas are readily tested by research work and the good separated from the worthless. This is putting the scientific imagination to its best use. Improvement in clinical results, even though slight, would be relatively considerable, as it would be in diseases that had previously offered special resistance to our efforts.

There is no more interesting or important subject in the whole field of medicine than that of infection and immunity. Cases of infection comprise most of those with which the practicing physician comes in contact. I mean by that the primary and secondary results of infection, whether they be specific diseases, infection of tissues by organisms that do not cause specific diseases or the general results of the absorption of bacterial toxins. By far the greatest part

<sup>1</sup> Address of the president of the Southwestern Division of the American Association for the Advancement of Science, Boulder, Colorado, June 8, 1925.

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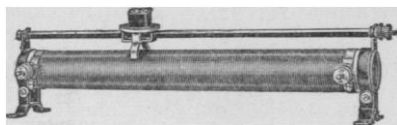
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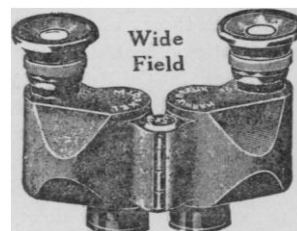
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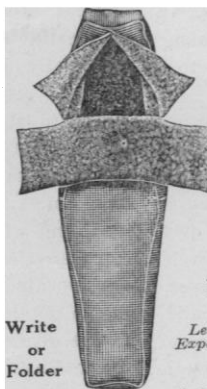
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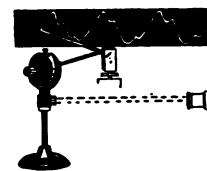
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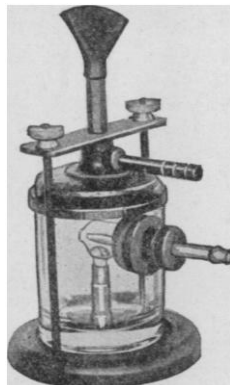
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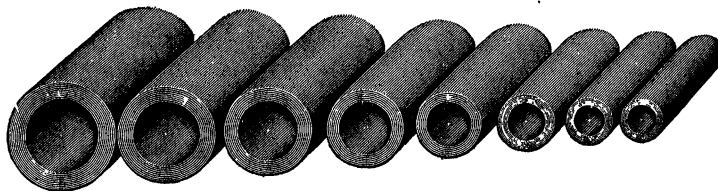
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Wall thickness, inches	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{3}{32}$	$\frac{1}{8}$	$\frac{3}{32}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
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Wall thickness, inches	$\frac{1}{32}$	$\frac{1}{32}$	$\frac{3}{64}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{3}{64}$
Per Foot	.09	.10	.12	.10	.12	.15

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Wall thickness, inches	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{3}{64}$	$\frac{1}{8}$	$\frac{3}{32}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
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Per Foot	.12	.13	.09	.07	.08	.12

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Diameter, inside, inches	$\frac{1}{8}$	$\frac{5}{32}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$
Wall thickness, inches	$\frac{5}{64}$	$\frac{5}{64}$	$\frac{3}{64}$	$\frac{3}{32}$	$\frac{3}{32}$	$\frac{7}{64}$	$\frac{1}{8}$	$\frac{1}{8}$
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