Transkription des Briefes von Samuel Cabot an O. Chanute id15823

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S. CABOT,
CHEMIST

MASON BUILDING, 70 KILBY STREET,

BOSTON, MASS, Oct. 27, 1896

O. Chanute, Esg.

413 E. Huron St., Chicago, III.

Dear Mr. Chanute:-

On my return from Europe I feel impelled to write a few lines to vou, both to congratulate you on the work you have been able to do during the Summer, which must have been very interesting and profitable, and also to tell you of my exceedingly interesting, although now retrospectively sad, interview with Lilienthal. I spent a day and a half almost exlusively with him, saw a large number of his flights, and I must say I found him one of the most interesting men I ever met, by reason of his enthusiasm and also his absence of all petty or ignoble motives for his work.

I am going further with my experiments with screws, working with helices of about 5' in diameter in place of the 6' wings modelled on your drawing so kindly sent me. I was greatly disappointed to hear that you had been in Boston just before my return. I trust when you again come you will not lose a moment in letting me know before-hand, as it would give me lively pleasure

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to make Boston agreeable and interesting to you.

I hope it will not shock you for me to confess that after having worked for many years on the idea that aeroplanes alone could solve this problem I am beginning now to have a more or less fixed opinion that at least a partial elevation will have to be done by gas, hot air, or possibly partial vacuum. I fully appreciate the disadvantage of a ballon, but I also, from my experiments with an immense kite made most carefully and I think scientifically, feel the great difficulty of moving large objects at the rate at which they must move in order to float in the air and then bringing them to rest without breaking some of the parts. Of course objections to hydrogen or illuminating gas either of them are manifest and numerous, perhaps chief among them being the explosive character when mixed wirh air, which they almost inevitably are under the circumstances of ballon-making. If only we could obtain steel in sufficiently thin sheets and yet strong and thight, I should advocate strongly Ammonis balloons with use of the heated products of combustion from the explosive engine or from boller so arranged as to heat the interior of the balloon. I do not of course pretend

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to dogmatize on this subject, and make these suggestions as showing the line on which my mind is working. Although a balloon offerse very large surface to the wind its lifting power, as you of course realize, increases as the cube of any one dimension, while its resistance to the air increases only as the square.

I want your advice on one point, namely: In making a kite or aeroplane what method treatment of

surfaces have you found efficacious in preventing the very annoying stretching thatgoes on in ordinary cotton and indeed in silk to an almost equal degree? Do you think a varnish of Cellulose would obviate this trouble? I find in kites that the anterior portion soon stretches so as to make bags lying against the sticks which run across the line of flight, thus increasing the drift very materially and diminsing the effectiveness of the plane for propulsion. I have thought of using sheet Aluminum for the anterior portion, corrugated force and aft so as to get stiffness where it crosses the horizontal sticks. Even a narrow strip thus corrugated under the cloth, say 12 or 24“ wide in an 18' stick, would materially diminish this pocket formation.

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But I schould gratly value any suggestions from your wider information and experience.
Trusting I may ere long have the great pleasure of making your personal acquaintance, I remain,

Yours very truly
[Unterschrift: S. Cabot]