

eager to learn how they would overcome gravity and solve the problem of the ages. That they could glide downhill like Lillienthal I knew from Miss Kate's accounts and from the photographs which the one of them had taken while the other was in the air—but to put a motor in the biplane, and thus make it fly just above the level ground, or turn a corner or rise and fall and balance itself in the uncertain wind—this was another matter entirely, and remained to be proved to the world of doubting Thomases.

"Knowing the brothers' faith in their invention, remembering the years of patient study and their recent glidings at Kitty Hawk, I tried to make myself feel that I should see the apparatus fly; but I still lacked faith of the real kind, and the stories of Dædalus and of Darius Green flitted through my mind as I first accompanied Miss Kate to the fateful Huffman's Prairie, some six miles east of the city, where the Wrights had put up a substantial shed to house their great white bird, their tools and supplies, and where they often spent the whole day when a knotty mechanical problem arose, scarcely allowing themselves the short time to eat a cold lunch taken along from home.

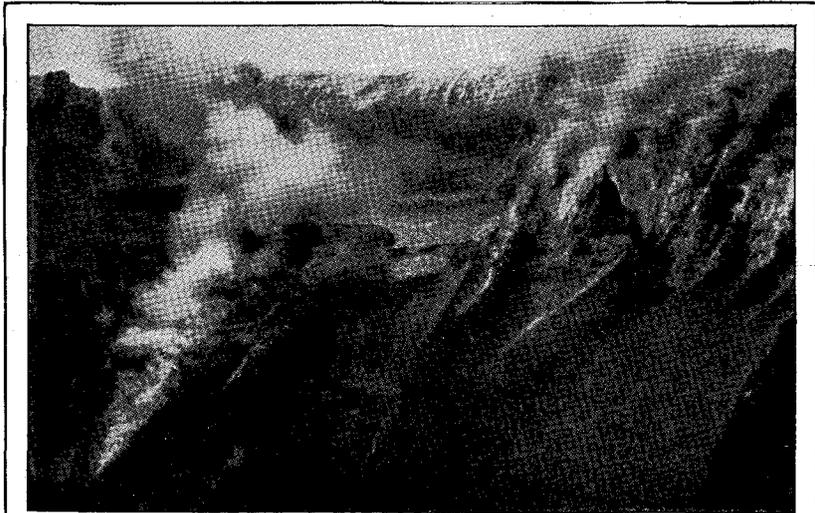
"Here, too, when there was any promise of flight, was always present the venerable, gray-haired Bishop, encouraging his boys by interest in their work and implicit faith in the outcome, and none was more heartily congratulated than he when finally crowning success was theirs.

"As the inventors were still experimenters and not demonstrators, their flights were not advertised, and strangers were never welcome; in fact, sometimes Wilbur posted me at the roadway with positive instructions to see that no one entered the field with a camera, and to look closely that it were not hidden under a coat or in the pocket; for they were not willing to have the unripe results of their studies and experiments published, especially through another's camera.

"At times I was more than mere onlooker; I helped relay the rail, if the wind had shifted, for at this early stage the biplane was always started into the face of the wind supported by a one-wheeled truck on the rail; at other times I helped balance the machine on its truck, while Taylor, their mechanic, and their brother Lorin started the propellers, and the inventor on the field stood by to critically watch how things went.

"These flights, or spurts at flying, they always made in turn; and after every trial the two inventors, quite apart, held long and confidential consultation, with always some new gain; they were getting nearer and nearer the moment when a sustained flight would be made, for a machine that could maintain

and just kept on, round and round, over the field which, in the light of this phenomenal achievement of seven years ago, with propriety might now be called the 'Aviators' Field of the Cloth of Gold.' The spectators, I say, trembled with excitement; but Wilbur, self-controlled by virtue of his faith in the correct theories he and Orville had worked out, looked calmly on; he

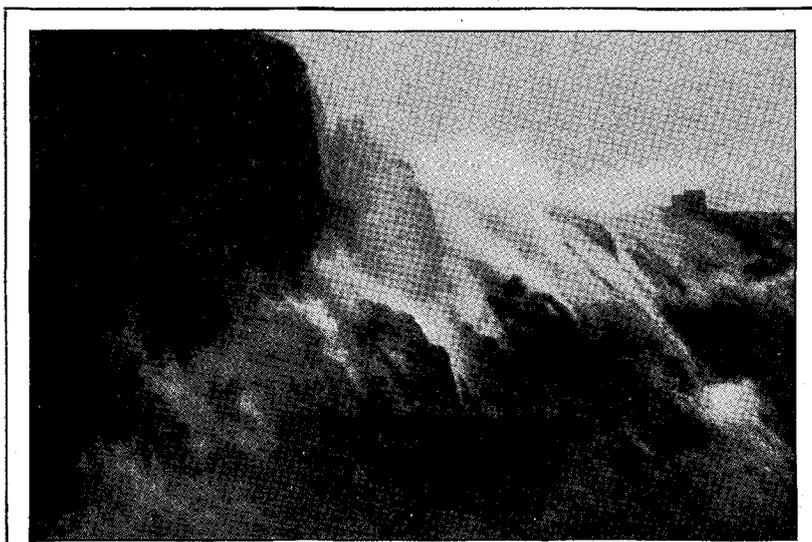


DISCHARGES FROM THE MERCALLI "CHIMNEY" (ON THE LEFT) AND ON THE SOUTHWEST WALL.

saw it all happen as he knew from the first it had to happen. And on this prairie stretch, historic since those flights of 1905, the local memorial committee proposes the erection of two Greek columns to commemorate the first flight of a heavier-than-air machine. Mr. Torrence Huffman will donate several acres of land, and funds are forthcoming to finance the carrying out of the unique scheme in the near future."

A TWO-VOICED SINGER — The tale of a man with two voices, who can sing a duet with himself, is told—not in a new edition of Alice in Wonderland—but in the minutes of the staid and serious Berlin Laryngological Society. "It was agreed," says a writer in *The Medical Record* (New York, June 22), "that the phenomenon was absolutely unique," and doubtless our readers will assent. Says the paper just named:

"The subject was an opera singer who had long appeared in vaudeville as the 'man with the double throat.' His normal voice was a baritone of wide range. In singing, he is able at will to accompany himself in a higher key. Thus far diplophonia has been regarded as a phenomenon which is purely pathological and the case in question is the first known exception to this generalization. The singer has been examined by many well-known laryngologists, but as yet no light has been thrown on the double-voice production. The vocal cords reddened during the act. In demonstrating his faculty he sings an air first in the normal, then in the double voice. Unfortunately, when the laryngoscope is in position for study the double singing is produced with great difficulty, and the artist would not permit the use of cocaine. The possession of the double voice makes it easy for him to imitate various instruments. As this class of mimetics and also ventriloquists have already been studied profitably with radiography, the thought lay near to use this diagnostic resource in the present subject. The skiagram showed enough to suggest . . . that the double voice was produced by the simultaneous action of the vocal chords and epiglottis. Others have suggested that the extra voice might have been produced with the soft palate or ventricular bands. It is highly improbable that it can be produced by the vocal cords alone. As the vibrations can not be seen their causation must remain conjectural."



PART OF THE SOUTH AND SOUTHWEST WALL OF THE CRATER.

itself aloft two minutes might just as well stay there an hour, if everything were as was intended.

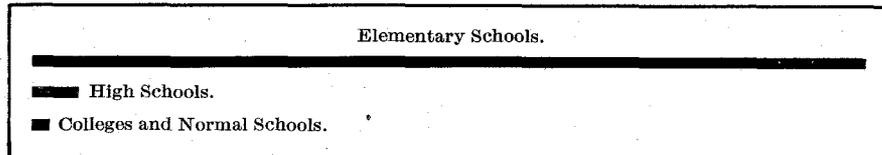
"And so it did, one day; the few spectators were beside themselves as the great white bird, with Orville lying on the lower plane, lifted itself into the air, gave no indication of dropping,

of the vocal chords and epiglottis. Others have suggested that the extra voice might have been produced with the soft palate or ventricular bands. It is highly improbable that it can be produced by the vocal cords alone. As the vibrations can not be seen their causation must remain conjectural."



OUR PUBLIC-SCHOOL SYSTEM A FAILURE

THE MOST momentous failure in our American life to-day is the public school, declares Ella Frances Lynch in the pages of *The Ladies' Home Journal* for August. Not only does the author of this startling statement speak from long experience as a teacher, but she backs her arguments with figures supplied by the United States Commissioner of Education. Briefly stated, the situation to which she challenges the public's attention is this: The whole system of the elementary public school is devised to prepare the pupil for graduation to high school, yet only seven out of every one hundred elementary school pupils enter the high schools. The remaining ninety-three out of every hundred have wasted eight years of their lives, since they emerge from the elementary schools "fitted for nothing practical." "The present idiotic system, which costs over four hundred and three million dollars a year, is either wrongly educating, mal-educating, or absolutely harming nearly eighteen million children every year," asserts Miss Lynch, who goes on to say:



SMALL PROPORTION OF ELEMENTARY PUPILS ENTERING HIGH SCHOOL AND COLLEGE.
All the rest leave school and enter life with no real preparation for it.

"Can you imagine a more grossly stupid, a more genuinely asinine system tenaciously persisted in to the fearful detriment of over seventeen million children and at a cost to you of over four hundred and three million dollars each year—a system that not only is absolutely ineffective in its results, but also actually harmful in that it throws every year ninety-three out of every one hundred children into the world of action absolutely unfitted for even the simplest tasks in life? Can you wonder that we have so many inefficient men and women; that in so many families there are so many failures; that our boys and girls can make so little money that in the one case they are driven into the saloons from discouragement, and in the other into the brothels to save themselves from starvation? Yet that is exactly what the public-school system is to-day doing, and has been doing."

She admits that the situation has been slightly mitigated by sporadic attempts in the schools to introduce manual training for boys and domestic science for girls. "But these attempts are scattered; they are not sufficiently general to make an impression." Enlarging on this point, she continues:

"Yet wherever these courses have been introduced hundreds of pupils have flocked to them, and in every case these manual-training and domestic-science courses have been overcrowded. But these courses are again being grafted on; they do not form, as they should, the basis on which the whole idea of public education—which is now not to fit boys and girls for colleges, but for practical life in the world—should rest. They are made a branch of the educational tree, whereas they should be made the trunk. This practical idea of a practical fitting of our boys and girls for a practical life should permeate the whole system from top to bottom. Even where it is being introduced it must not be overlooked that it is principally in the high schools, and I have already shown that only seven out of every one hundred boys and girls ever reach the high school. In other words, not a particle of practical education reaches those ninety-three boys and girls who stop at the elementary school and who leave all school at about the age of sixteen."

To the inefficiency resulting from this system Miss Lynch traces most of our social evils:

"No matter whether we go into the question of the prevailing marital unhappiness, of divorce, of cruelty to children, of the mortality of children, of the saloon, of high prices, of the low

wages paid to the average person, or of the social evil, the root of any one of these questions can be traced straight back to one point: *inefficiency*; the inefficient girl who does not know how to run her home or care for her baby; the inefficient boy, who, knowing no trade, finds it either hard or impossible to get lucrative work and becomes discouraged. Inefficiency is to-day the chief curse of American life, and it is because the public school is turning out thousands of inefficient workers: the girl inefficient for the home; the boy inefficient for work."

While she leaves it to others to find the remedy, she says:

"But one thing must come first, before any suggestions can wisely be made for the reorganization of the public-school system: the American parent must fully awaken to the truth that in the American public school he has not something to glorify or be proud of, but a

system that is to-day a shame to America, a system that is antiquated, absolutely out of touch with the times, and, therefore, stupid and wholly ineffective. For every one hundred children it teaches it fails in the case of every ninety-three to give the children what they should have and to which they have an indisputable right: a practical preparation for their lives. This the system, as at present conducted, utterly fails to do, and in that respect it is the most momentous and dangerous failure in our American life to-day."

In an editorial foreword to Miss Lynch's article, *The Ladies' Home Journal* promises a series of articles dealing with different phases of the same problem, the next to take up the case of the high school. In the meantime, it has this to say of the general educational situation in this country:

"In all the schools in the United States there are over nineteen million children; a school army representing one-fifth of the entire population of the United States. Nearly eighteen million of these children are in the elementary schools. . . . The real work of education, therefore, must be done in the elementary grades. For every seven students in the higher schools there are ninety-three children in the lower or elementary grades. The proportion is amazing, but these are the facts. So if we wish to educate the American children it is evident that we must go to the primary grades to do it.

"The staggering fact confronts us, therefore, that ninety-three out of every one hundred children never get beyond the elementary or lower-grade schools—that they leave school at about the age of fourteen or sixteen years! Is this the public-school system, then, that our forefathers dreamed of when they established free education?

"The public-school system is intended for all the children of all the people. Yet there are to-day in America over five million and a half of people absolutely unable to read or write. No, not all negroes and foreigners—two-thirds are negroes and foreigners, but one million and a half of native-born white Americans can not read nor write, and a much larger number can barely read or write!

"There are in all about twenty-five million children of school age in America, and yet fewer than twenty millions are in school.

"Now consider these amazing facts: In the country districts of our land children by the thousands are quitting school forever before they learn to read easily and readily ordinary English, or to do the problems in arithmetic arising in the daily life on the farm. Few learn enough of the history of their country and its institutions to fit them for intelligent citizenship, and fewer still have any adequate introduction to the great stores of literature, or form the habit of reading good books so desirable in a country whose institutions are founded on the idea of the intelligence and self-directing power of the individual."