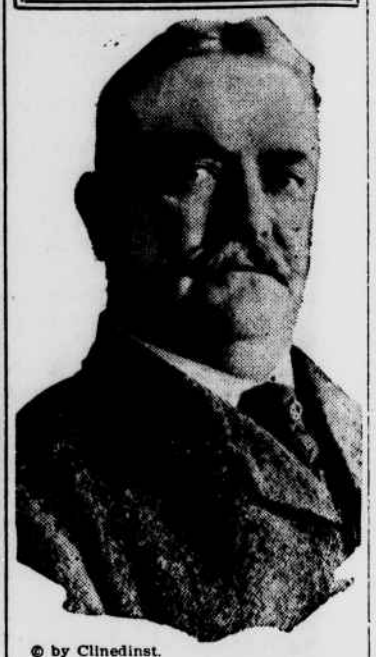
SNAPSHOTS AT NOTABLE PERSONS

General G. P. Scriven, Chief Signal Officer, U. S. A.



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Brigadier General George P. Scriven, chief signal officer of the United States army, is a warm advocate of the extension of the aviation service. In his last annual report General Scriven urged the training of men of the national guard in aerial warfare and the establishment of reserve corps of aeronauts throughout the country.

"Not only is the aeroplane invaluable," he says, "in locating the position of the enemy, but it has especial value to a commander in finding his own troops, in keeping him informed when movements are taking place, with the position of his flanks and center, his outposts, to inform his cavalry of the positions attained by a detached body—in short, of keeping him constantly in touch with the locations and movements of all his troops."

Born in Pennsylvania in 1854, Brigadier General Scriven was appointed to the West Point Military academy in 1874. On his graduation four years later he was assigned as a second lieutenant to the Eighth infantry. Later he was transferred to the artillery, and in 1890 he was appointed to the signal corps. In January, 1912, he attained the rank of colonel in the signal corps and was the only officer of that rank in the organization. He succeeded Brigadier General James Allen as chief signal officer in February of last year. During the Boxer trouble in China in 1900 General Scriven (then captain) served as chief signal officer of the relief expedition and was recommended for the brevet of lieutenant colonel for gallant conduct at Yangstun.

Commands Cruiser Squadron.

Rear Admiral William B. Caperton, commander of the cruiser squadron of the Atlantic fleet, has spent more than twenty-three years at sea since he was graduated from the Naval academy in 1875. The cruiser squadron was organized last fall, and Admiral Caperton hoisted his flag on the armored cruiser Washington on Nov. 15 last.

A native of Tennessee, Admiral Caperton will be sixty years old on June 30. Before being assigned to his present duty he was in command of the Atlantic reserve fleet at League Island navy yard and previous to that had been commandant of the naval station at Newport. During his long service the admiral has performed nearly every duty that comes to a naval officer both afloat and ashore. He has been a member of the naval examining board, secretary to the lighthouse board and lighthouse inspector. At one time he commanded the battleship Maine, which he took when the Maine reached the Philippines toward the end of its trip around the world in 1907.

REAR ADMIRAL WILLIAM B. CAPERTON.

In the Spanish-American war Admiral Caperton was commander of the gunboat Marietta, which went on ahead of the Oregon as an auxiliary for the greater part of its dash around the Horn to Santiago.

THUNDERSTORMS.

Simple Scientific Explanation of How They Occur.

ELECTRICITY IN THE CLOUDS.

The Processes by Which the Masses of Unequally Charged Vapor Are United, the Lightning Flashes Generated and the Downpour Started.

Lightning is the result of electric discharges from the clouds, says the Electrical Experimenter in printing what it calls "a thunderstorm primer." Every cloud, like every other object, contains electricity. This makes no disturbance so long as the quantity contained is normal. When the quantity becomes greater than normal the object is positively charged; when it becomes less than normal the object is negatively charged. The equilibrium of the electric force in the clouds is disturbed by evaporations from the surface of the earth, by changes of temperature in the atmospheric vapor, by chemical action on the earth's surface and by the friction of volumes of air of different densities against each other.

When clouds charged with the opposite electricities approach, the forces rush toward each other and combine to restore the state of equilibrium, for all bodies charged with opposite electricities attract each other. Between the clouds is air, an excellent nonconductor, through which the electricity has to force a passage. The violence with which it does this produces the lightning and the accompanying crash of thunder.

Clouds are good conductors, while the air about them is a nonconductor; therefore the electricity accumulates in the clouds. It is probably this electricity which prevents the particles of water from uniting together and falling down in the form of rain.

Imagine two clouds near to each other in the sky, one positively and the other negatively electrified, for there cannot in all nature be such a condition as that of one body positively excited without the coexistence of another body negatively excited. If the positively charged cloud were all alone in the sky the circumjacent atmosphere would assume the negative function. But as the other cloud is near by it becomes negative, and both are mutually attracted. They approach each other until the space of air between them can no longer resist their electric tension, when the discharge takes place.

The equilibrium of the clouds being thus restored, there is nothing to keep the particles of water apart; they coalesce into drops and fall as rain.

When only the clouds are involved the equilibrium is quickly restored by a few flashes and the storm is over. When the air also is involved it continues to charge the clouds with electricity, and the discharges continue until the various strata of air are brought into their normal state.

Sometimes, when the clouds are charged with an opposite electricity to that of the earth, a discharge takes place from clouds to earth or from earth to clouds. It is only when there is a great disturbance of the electrical forces that the lightning flashes to the earth or vice versa.

The flash and the thunder peal are simultaneous, and we see the one before we hear the other because light waves move far more swiftly than sound waves. The peal of thunder is instantaneous, but comes to us as a roll through being echoed from clouds or mountains. The noise is caused by the vibrations of the air rushing to fill up the spaces where the electrical discharge has rarefied it and condensed its vapors.

Lightning is zigzag when it travels through a long distance, because it compresses the air, which interferes with its direct course. It is straight when it passes through only a short distance. It is forked when, being resisted by the air, it divides into two or three points. It is sheet when the flash is too distant to be visible, and its reflection alone is seen.

By remembering that sound travels a quarter of a mile in a second, while light travels so swiftly that we see it instantaneously, we can tell how far off a thunder clap is. If we hear a thunder clap four seconds after seeing the flash we know it is a mile away. For such calculations our own pulse is a sufficiently accurate measure of time, for the pulse of an adult beats about once a second. A person under forty should count five beats to the mile; a person under twenty should count six beats to the mile.

A Rough Criticism.

Lord Houghton's epigram on "Sordello," probably the most obscure of Browning's poems, though it has often gone the rounds, is worth recalling. Said Lord Houghton, then only Dicky Milnes, "There are but two lines in 'Sordello' I can understand—the first and last—'Who will may hear Sordello's story told' and 'Who would hath heard Sordello's story told,' and both are false."

Finger Print Love.

"Why do you think you'll be happy if you marry that young man, daughter?" asked the father.

"Because, father, we've had our finger prints examined and they almost match," was the sweet young thing's reply.—Yonkers Statesman.

Let us remember that justice must be observed even to the lowest.—Cicero.

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