

PLEASANT HOURS

A PAPER FOR OUR YOUNG FOLK.

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A Little Scotch Song.

The king he has sillor and gowd;
He greets by himself alane;
Mony a care has he;
My wee bit lassie has nane.

Fow are the tears she lets fa';
Blithe is my birdie and gay,
Saun' as a t-p by nicht
An' gleg as a cricket by day.

Oh, but the king wad gie
A' that a king could earn
If the big heart o' the man
Were like the heart o' my bairn.

Gude are the gifts o' God
That he gies to the wise an' the auld,
But the best gift o' them a'
Is to be a wee lamb in his fauld.

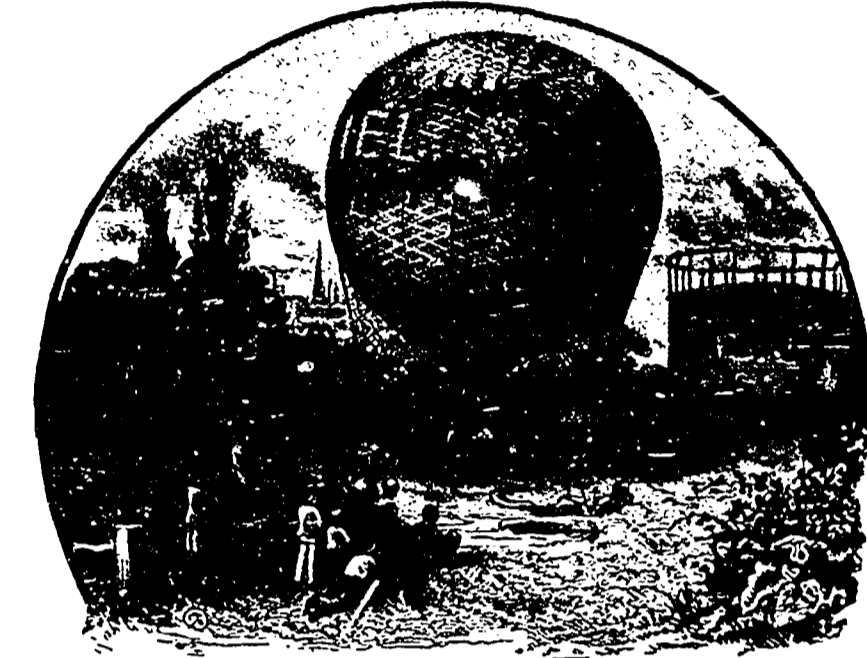
BALLOONS AND BALLOONING.

For over a hundred years men have been trying to navigate the air, but with only indifferent success. It is easy enough to rise several hundred, or thousand, feet; and it is delightful to sail with the wind, and to enjoy a bird's-eye view of the landscape beneath. But to land safely, there's the rub. It is not so pleasant to drift out to sea, or to come bumping along the ground like an india-rubber ball.

In 1782, the brothers Montgolfier, in France, made small balloons of thin silk, which, filled with heated air, rose rapidly. The following year they constructed one on the same principle, thirty-five feet in diameter, which rose high in the air and travelled a mile and a half. The same year Prof. Charles, of Paris, filled a small balloon with hydrogen gas, which travelled many miles. On its descent the peasants thought it a demon from another world, which notion the fetid odour of the gas confirmed. It was exorcised, fired at, and destroyed with clubs.

Gay-Lussac, in one of his ascents, when very high, threw out a common deal chair, which fell in a field where a peasant girl was at work. The balloon was invisible, and it was thought that the chair must have fallen from heaven, but the uncomfortable provision for the celestials was a matter of surprise. The most fantastic notions were conceived as to the possibilities of ballooning—one being a project of invading England with an army descending from the skies.

In 1784, successful ascents were made from Edinburgh and from London. In 1785, a French aeronaut crossed the Channel from Dover to Calais. Air voyaging became very popular. Green, an English aeronaut, made 1,400 ascents, and took up 700 persons, including 120 ladies. He once ascended sitting on a pony suspended from the balloon. He travelled, on one occasion, from London to Wellburg, in Germany, 500 miles, in eighteen hours. M. Nadar, in his balloon "Geant," seventy-four feet in diameter, took up a two-story house,



FILLING THE BALLOON.

weighing three tons. In 1808, a balloon burst at a great height, but spreading like a parachute, let the occupants safely to the ground. This was often afterwards safely done by design. Parachutes were employed with success for descending, even from immense altitudes. One enthusiast, dropping himself from a height of 5,000 feet, with a new-fangled parachute, which failed to work, was dashed to pieces.

The most important recent improvement in the balloon is the guide rope, generally from 500 to 1,000 feet long. When resting on the ground it takes considerable weight of the balloon, and prevents a rapid fall. Its trailing checks the horizontal motion more gently than the anchor, and it gives persons on the ground something to lay hold of in assisting the descent of the aeronaut. The going up is easy enough—*facilis ascensus*—but the coming down, or rather the safe landing, that is the difficulty.

A captive balloon at London, ninety-three feet in diameter, used to take up thirty-two persons at once, 2,000 feet. A 200 horse-power engine was employed to bring it down again. The balloon is yet, for the most part, a huge and dangerous toy, notwithstanding all the efforts made to control its direction. Arago, Coxwell, and Glaisher made it render important service to science. The latter rose to the height of 37,000 feet, or seven miles, in order to examine the constitution of the upper air. He lost consciousness and nearly lost his life at this great altitude. Shortly after

two French scientists died from the rarefaction of the air at those great heights.

The application of balloons to the art of war presents great interest on account of the remarkable success with which they were used by the Parisians, in the siege of their city. As early as 1793, an attempt was made to send news by a balloon across investing lines. Napoleon took balloons to Egypt, but the English captured the filling apparatus. The Americans used them with advantage in their civil war, the signals being communicated to the earth by telegraph wires.

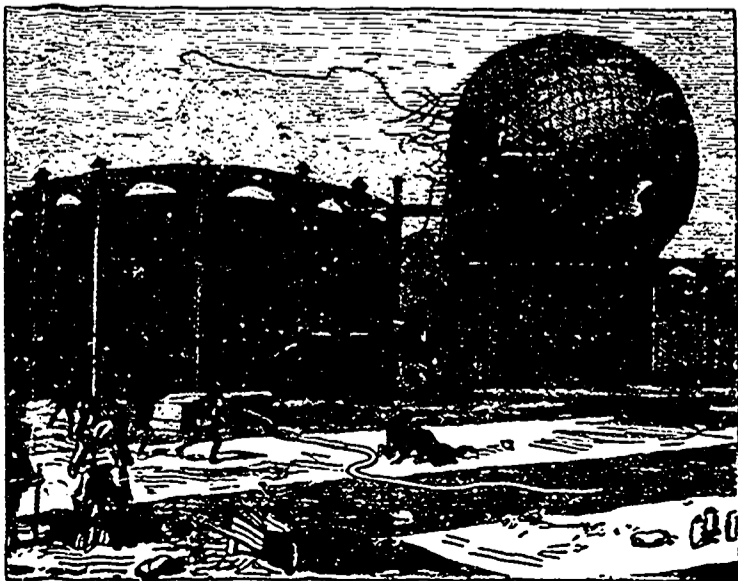
Paris, at the time of its investment, contained several experienced aeronauts. One of these, Godard, had made 800 ascents. The Government established a balloon post, and began the manufacture of a large number of balloons at the railway stations. It was easier, however, to make the vessels than to find captains for them, for experienced aeronauts are comparatively rare, and when once they had left Paris there was no returning. A large number of sailors were employed for this air voyaging. "Our topsail is high, sir," said a tar to his Admiral, "and difficult to reef, but we can sail all the same, and, please God, we'll arrive." The employment of some acrobats from the Hippodrome was less fortunate, as they made use of their skill, when in difficulty, to slip down the guide-rope to the earth, leaving the passengers and despatches to care for themselves.

In four months sixty-four balloons were sent off. Of these fifty-seven fulfilled their mission, the despatches reaching their destination. The total number of persons who left was 165, the weight of despatches was nine tons, and the number of letters was 3,000,000. A speed of eighty miles an hour was reached in a high wind. Gambetta was fired at by the Prussians, and narrowly escaped capture. Several balloons were brought down. The Uhlans gave chase whenever one came in sight, and rifled cannon were brought to bear on them. Thenceforth the ascents were made at night, which added greatly to their danger. The "Ville d'Orleans" drifted out over the sea. At daybreak it was out of sight of land. To avoid falling into the water the aeronauts threw out their despatches.

They scudded rapidly north, and approached land. It was covered with snow and dense forests. The first living creatures they saw were three wolves. They found themselves in Norway. Two of the balloons drifted out over the Atlantic, and were never heard of more.

It was comparatively easy to send messages out of Paris, but how to get the messages back—that was the question. Trusty foot passengers penetrated the Prussian lines with despatches in cipher, concealed in hollow coins, in keys, inserted in a hollow tooth. A balloon took out some trained dogs, but they never reappeared. An attempt was made to connect the broken ends of the telegraph wires by almost invisible metallic threads, but without success. Divers and submarine boats were tried on the Seine; and little globes of blown glass, which it was impossible to distinguish from the bubbles on the water, were floated down the stream, but the frost set in and spoiled the surface of the river for this purpose.

The difficulty was overcome by the use of carrier pigeons. A pigeon post was organized with great success. The charge for private despatches was about eight cents a word, but the Parisians were urged to send their friends questions which could be answered by the single words "Yes," or "No." Post-cards for such answers were prepared and four were conveyed for a franc. These were collected, and printed on large sheets, and photographed one-eighth-hundredth of the original size, on a thin film of collodion, two inches long and one and a quarter inch wide, weighing three-fourths of a grain. This small pellicle contained as much matter as twenty of the large pages of this paper. Each pigeon carried twenty of these sheets, carefully rolled up in a quill, and attached to the tail feathers of the airy courier. They contained as much matter as four hundred pages of this paper, and yet weighed only fifteen grains. When the pigeon arrived at his cot in Paris his precious burden was taken to the Government office. The collodion films were placed between glass plates, and their enlarged image thrown on a screen, like the pictures of a magic lantern. They were then copied and sent to their destination. Some of the messages were of great domestic interest and pathos. We translate the following examples: "Baby is better, she sends a kiss to papa." "All well, you will find charcoal in the cellar." There were many money orders payable to persons in the city. The pigeon post was often interrupted. Of three hundred and sixty-three pigeons sent out of Paris, only fifty-seven returned. Many were lost in fogs or chilled with cold, and it is said the Prussians chased them



A FALSE START.



AN ASCENT.