

## CHAPTER XXV.

### FINAL DETAILS.

It was the 22<sup>nd</sup> of November. The supreme departure was to take place ten days later. One operation still remained to bring it to a happy termination, a delicate and perilous operation exacting infinite precautions, and against the success of which Captain Nicholl had laid his third bet. It was, in fact, nothing less than the loading of the gun and the introduction into it of 400,000 lbs. of gun-cotton. Nicholl had thought, not without reason, perhaps, that the handling of so large a quantity of pyroxyly would cause grave catastrophes, and that in any case this eminently explosive mass would ignite of itself under the pressure of the projectile.

There were also grave dangers increased by the carelessness of the Americans, who, during the Federal war, used to load their cannon cigar in mouth. But Barbicane had set his heart on succeeding, and did not mean to founder in port; he therefore chose his best workmen, made them work under his superintendence, and by dint of prudence and precautions he managed to put all the chances of success on his side.

First he took care not to bring all his charge at once to the inclosure of Stony Hill. He had it brought little by little carefully packed in sealed cases. The 400,000 lbs. of pyroxyly had been divided into packets

of 500 lbs., which made 800 large cartridges made carefully by the cleverest artisans of Pensacola. Each case contained ten, and they arrived one after the other by the railroad of Tampa Town; by that means there were never more than 500 lbs. of pyroxyle at once in the inclosure. As soon as it arrived each case was unloaded by workmen walking barefoot, and each cartridge transported to the orifice of the Columbiad, into which they lowered them by means of cranes worked by the men. Every steam-engine had been excluded, and the least fires extinguished for two miles round. Even in November it was necessary to preserve this gun-cotton from the ardour of the sun. So they worked at night by light produced in a vacuum by means of Rühmkorff's apparatus, which threw an artificial brightness into the depths of the Columbiad. There the cartridges were arranged with the utmost regularity, fastened together by a wire destined to communicate the electric spark to them all simultaneously.

In fact, it was by means of electricity that fire was to be set to this mass of gun-cotton. All these single wires, surrounded by isolating material, were rolled into a single one at a narrow hole pierced at the height the projectile was to be placed; there they crossed the thick metal wall and came up to the surface by one of the vent-holes in the masonry made on purpose. Once arrived at the summit of Stony Hill, the wire supported on poles for a distance of two miles met a powerful pile of Bunsen passing through a non-conducting apparatus. It would, therefore, be enough to press with the finger the knob of the apparatus for the electric current to be at once established, and to set fire to

the 400,000 lbs. of gun-cotton. It is hardly necessary to say that this was only to be done at the last moment.

On the 28th of November the 800 cartridges were placed at the bottom of the Columbiad. That part of the operation had succeeded. But what worry, anxiety, and struggles President Barbicane had to undergo! In vain had he forbidden entrance to Stony Hill; every day curious sightseers climbed over the palisading, and some, pushing imprudence to folly, came and smoked amongst the bales of gun-cotton. Barbicane put himself into daily rages. J.T. Maston seconded him to the best of his ability, chasing the intruders away and picking up the still-lighted cigar-ends which the Yankees threw about--a rude task, for more than 300,000 people pressed round the palisades. Michel Ardan had offered himself to escort the cases to the mouth of the gun, but having caught him with a cigar in his mouth whilst he drove out the intruders to whom he was giving this unfortunate example, the president of the Gun Club saw that he could not depend upon this intrepid smoker, and was obliged to have him specially watched.

At last, there being a Providence even for artillerymen, nothing blew up, and the loading was happily terminated. The third bet of Captain Nicholl was therefore much imperilled. There still remained the work of introducing the projectile into the Columbiad and placing it on the thick bed of gun-cotton.

But before beginning this operation the objects necessary for the

journey were placed with order in the waggon-compartment. There were a good many of them, and if they had allowed Michel Ardan to do as he pleased he would soon have filled up all the space reserved for the travellers. No one can imagine all that the amiable Frenchman wished to carry to the moon--a heap of useless trifles. But Barbicane interfered, and refused all but the strictly necessary.

Several thermometers, barometers, and telescopes were placed in the instrument-case.

The travellers were desirous of examining the moon during their transit, and in order to facilitate the survey of this new world they took an excellent map by Boer and Moedler, the *Mappa Selenographica*, published in four plates, which is justly looked upon as a masterpiece of patience and observation. It represented with scrupulous exactitude the slightest details of that portion of the moon turned towards the earth. Mountains, valleys, craters, peaks, watersheds, were depicted on it in their exact dimensions, faithful positions, and names, from Mounts Doerfel and Leibnitz, whose highest summits rise on the eastern side of the disc, to the Mare Frigoris, which extends into the North Polar regions.

It was, therefore, a precious document for the travellers, for they could study the country before setting foot upon it.

They took also three rifles and three fowling-pieces with powder and

shot in great quantity.

"We do not know with whom we may have to deal," said Michel Ardan. "Both men and beasts may be displeased at our visit; we must, therefore, take our precautions."

The instruments of personal defence were accompanied by pickaxes, spades, saws, and other indispensable tools, without mentioning garments suitable to every temperature, from the cold of the polar regions to the heat of the torrid zone.

Michel Ardan would have liked to take a certain number of animals of different sorts, not male and female of every species, as he did not see the necessity of acclimatising serpents, tigers, alligators, or any other noxious beasts in the moon.

"No," said he to Barbicane, "but some useful animals, ox or cow, ass or horse, would look well in the landscape and be of great use."

"I agree with you, my dear Ardan," answered the president of the Gun Club; "but our projectile is not Noah's Ark. It differs both in dimensions and object, so let us remain in the bounds of possibility."

At last after long discussions it was agreed that the travellers should be content to take with them an excellent sporting dog belonging to Nicholl and a vigorous Newfoundland of prodigious strength. Several

cases of the most useful seeds were included amongst the indispensable objects. If they had allowed him, Michel Ardan would have taken several sacks of earth to sow them in. Any way he took a dozen little trees, which were carefully enveloped in straw and placed in a corner of the projectile.

Then remained the important question of provisions, for they were obliged to provide against finding the moon absolutely barren. Barbicane managed so well that he took enough for a year. But it must be added, to prevent astonishment, that these provisions consisted of meat and vegetable compressed to their smallest volume by hydraulic pressure, and included a great quantity of nutritive elements; there was not much variety, but it would not do to be too particular in such an expedition. There was also about fifty gallons of brandy and water for two months only, for, according to the latest observations of astronomers, no one doubted the presence of a large quantity of water in the moon. As to provisions, it would have been insane to believe that the inhabitants of the earth would not find food up there. Michel Ardan had no doubt about it. If he had he would not have gone.

"Besides," said he one day to his friends, "we shall not be completely abandoned by our friends on earth, and they will take care not to forget us."

"No, certainly," answered J.T. Maston.

"What do you mean?" asked Nicholl.

"Nothing more simple," answered Ardan. "Will not our Columbiad be still there? Well, then, every time that the moon is in favourable conditions of zenith, if not of perigee--that is to say, about once a year--could they not send us a projectile loaded with provisions which we should expect by a fixed date?"

"Hurrah!" cried J.T. Maston. "That is not at all a bad idea. Certainly we will not forget you."

"I depend upon you. Thus you see we shall have news regularly from the globe, and for our part we shall be very awkward if we do not find means to communicate with our good friends on earth."

These words inspired such confidence that Michel Ardan with his superb assurance would have carried the whole Gun Club with him. What he said seemed simple, elementary, and sure of success, and it would have been sordid attachment to this earth to hesitate to follow the three travellers upon their lunar expedition.

When the different objects were placed in the projectile the water was introduced between the partitions and the gas for lighting purposes laid in. Barbicane took enough chlorate of potash and caustic potash for two months, as he feared unforeseen delay. An extremely ingenious machine working automatically put the elements for good air in motion. The

projectile, therefore, was ready, and the only thing left to do was to lower it into the gun, an operation full of perils and difficulty.

The enormous projectile was taken to the summit of Stony Hill. There enormous cranes seized it and held it suspended over the metal well.

This was an anxious moment. If the chains were to break under the enormous weight the fall of such a mass would inevitably ignite the gun-cotton.

Happily nothing of the sort happened, and a few hours afterwards the projectile-compartment rested on its pyroxyle bed, a veritable fulminating pillow. The only effect of its pressure was to ram the charge of the gun more strongly.

"I have lost," said the captain, handing the sum of 3,000 dollars to President Barbicane.

Barbicane did not wish to receive this money from his travelling companion, but he was obliged to give way to Nicholl, who wished to fulfil all his engagements before leaving the earth.

"Then," said Michel Ardan, "there is but one thing I wish for you now, captain."

"What is that?" asked Nicholl.



"It is that you may lose your other two wagers. By that means we shall be sure not to be stopped on the road."