"I will never believe," she said one day to Miss Hastings, "that Sir Oswald meant what he said. I am beginning to think it was merely a threat—the Darrells are all hot-tempered."

But Miss Hastings had heard more than she loved to tell her pupil, and she knew that what the baronet had said was not only quite true, but that preparations for the marriage had actually commenced.

"I am afraid it was no threat, Pauline," she said, sadly.

"Then let the new comer beware," said the girl, her face darkening. "Whoever she may be, let her beware. I might have been a good woman, but this will make me a wicked one. I shall live only for revenge."

A change came over her. The improvement that Miss Hastings had so fondly noticed, and of which she had been so proud, died away. Pauline seemed no longer to take any interest in reading or study She would sit for hours in gloomy, sullen silence, with an abstracted look on her face. What was passing in her mind no one knew. Miss Hastings would go to her, and try to rouse her; but Pauline grew impatient

"Do leave me in peace," she would say. "Leave me to my own thoughts. I am framing my plans."

And the smile that came with the words filled poor Miss Hastings with terrible apprehensions as to the future of her strange, wilful pupil.

The captain was still at the Court. He had had some vague idea of rushing off to London; but a letter from one of his most intimate friends warned him to keep out of the way until some arrrangements could be made about his affairs. More than one angry creditor was waiting for him; indeed, the gallant captain had brought his affairs to such a pass that his appearance in London without either money or the hope of it would have been highly dangerous.

He was desperate. Sir Oswald had hinted to him, since the failure of their plan, that he should not be forgotten in his will. He would have borrowed money from him but for that hint; but he did not care to risk the loss of many thousand pounds for the sake of fifteen hundred.

Fifteen hundred—that was all he wanted. If he could have gone back to London the bethrothed husband of Pauline Darrell, he could have borrowed as many thousands; but that chance was gone; and he could have cursed the girlish caprice that deprived him of so splendid a fortune. In his heart fierce love and fierce hate warred together; there were times when he felt that he loved Pauline with a passion words could not describe; and at other times he hated her with something passing common hate. They spoke but little; Miss Darrell spent as much time as possible in her own rooms. Altogether the domestic atmosphere at Darrel Court had in it no sunshine; it was rather the brooding, sullen calm that comes before a storm.

The day came when the Court was invaded by an army of workmen, when a suit of rooms was fitted up in the most superb style, and people began to talk of the coming change. Pauline Darrell kept so entirely aloof from all gossip, from all friends and visitors, that she was the last to hear on whom Sir Oswald's choice had fallen. But one day the baronet gave a dinner-party at which the ladies of the house were present, and there was no mistaking the allusions made.

Pauline Darrell's face grew dark as she listened. So, then, the threat was to be carried out, and the grand old place that she had learned to love with the deepest love of her heart was never to be her's! She gave no sign; the proud face was very pale, and the dark eyes had in them a scornful gleam, but no words passed her lips.

Sir Oswald was radiant. he had never been seen in such high spirits; his friends had congratulated him, every one seemed to approve so highly of his resolution; a fair and gentle wife was ready for him—one so fair and gentle that it seemed to the old man as though the lost love of his youth had returned to him. Who remembered the bitter, gnawing disappointment of the girl who had cared so little about making herself friends?

The baronet was so delighted and everything seemed so bright and smiling, that he resolved upon an act of unusual generosity. His guests went away early, and he retired to the library for a few minutes The captain followed the ladies to the drawing-room, and, while pretending to read, sat watching Pauline's face, and wondering how he was to pay his debts.

To ask for the loan of fifteen hundred pounds would be to expose his affairs to Sir Oswald. He must confess then that he had gambled on the turf and at play. If once the stately old baronet had even suspected such a thing, there was no further hope of a legacy—the captain was quite sure of that. His anxiety was terrible, and it was all occasioned by that proud, wilful girl whose beautiful face was turned resolutely from him.

Sir Oswald entered the room with a smile on his face, and, going up to Aubrey Langton, slipped a folded paper into his hands.

"Not a word of thanks," he said· "if you thank me I shall be offended."

And Aubrey, opening the paper, found that it was a check for five hundred pounds.

"I know what life in London costs," said Sir Oswald; "and you are my old friend's son."

Five hundred pounds! He was compelled to look exceedingly grateful, but it was difficult. The gift was very welcome, but there was this great drawback attending it—it was not half sufficient to relieve him from his embarrassments, and it would quite prevent his asking Sir Oswald for a loan. He sighed deeply in his dire perplexity.

Still smiling, the baronet went to the table where Pauline and Miss Hastings sat. He stood for some minutes looking at them.

(To be continued.)

SCIENTIFIC GLEANINGS.

LOW TEMPERATURE EXPERIMENTS.

Mr. Coleman, president of the chemical section of the Philosophical Society of Glasgow, gives the following as the result of his experiments on flesh at very low temperatures.

At about — 86° C. the flesh of animals, such as mutton, becomes so exceedingly hard that it rings like porcelain when struck with an iron instrument, indeed crushes by the blow of a hammer into a fine powder, in which muscle, fat and bone are intermingled; and, what is still more singular, according to the experiments of myself and Prof. McKendrick, recently communicated to the Society, it appears that microbia alive in the flesh before the freezing operation can be detected still alive after thawing, even after exposure to — 89° C. or — 133° F., for one hundred hours—thus pointing out that potential animal life in the solid state is capable of being brought into activity by heat and by moisture, just as a dry pea shows into activity by heat and moisture of the soil and the heat of the sun.

A NEW HŒMOSTATIC.

At a recent meeting of the Academy of Medicine at Paris, Prof. Bonafoux read a paper on a powder which possesses great hœmostatic powers, and is capable, it is said, of arresting the bleeding of large arteries, so that it will prove serviceable in important surgical operations. This powder is composed of equal parts of colophony, carbon and gum arabic. Experiments have been tried with it on the brachial artery in man, and on the smaller vessels, on the carotid of the horse, and other blood vessels of the same animal, with marked success. It has always prevented consecutive hæmorrhage. The application can be lifted in the course of two or three days, when the vessels are found to be completely obliterated.

HOW TO MAKE A HECTOGRAPH OR GELATINE PAD.

Good ordinary Glue 100 parts. Glycerine 50 parts, Barium Sulphate finely powdered (or the same amount of Kaolin) 25 parts, water 75 parts. Dissolve the Glue in the water, then add the Glycerine, &c., and heat for some time in a salt water bath.

HOW DISEASE IS SPREAD.

Every one knows that scarlet fever is infectious, but it is not often one is able to trace the progress of the disease through simple carelessness so easily as in a case which has just come under the notice of the sanitary world. A young Scottish lassie, in domestic service not far from the town of Elgin, died from scarlet fever, in her place. Her clothes were carefully packed up, and her "kist" containing them conscientiously sent home to her native village. On its arrival at the station there was the usual difficulty of getting it conveyed over the hills to the place of its destination, so there it had to remain awaiting a friendly lift. Meanwhile the infected "kist" formed a happy hunting ground for the station-master's children, who, in due time, all fell ill with scarlet fever. At last the friendly lift came, the box was carried home, and the contents generously distributed among the neighbors. Needless to say that an outbreak of scarlet fever in the village was the result.

WHITEWASH.

The following is a receipt for a whitewash suitable for outbuildings on a farm, &c., which it is said will not rub or wash off, nor injure trees, and can be tinted. For one barrel of color wash use half a bushel of white lime, three pecks of hydraulic cement, ten pounds of ochre, one pound of venetian red, one quarter of a pound of lampblack. Slake the lime, cut the lampblack with vinegar, and mix well together, then add the cement and fill the barrel with water. Let it stand twelve hours before using, and stir frequently while putting on. The wash is not a clear white, but a light stone color, which may be more or less changed by the other colors. This covers well, hardens without scaling, and will not wash off.

OCEAN WAVES.

Mr. Tabor, writing to the *Scientific American*, makes the following observations on ocean waves. During a long experience on the several oceans, I have noticed that the heavy waves caused by winter storms in high latitudes often move far beyond the limits of the winds that produce them. The strong northwest gales that sweep over the north Atlantic abreast the British Provinces and New England often send gigantic waves to the southwest far within the trade wind region. These waves at times invade the western coast of Africa from Morocco to Cape Verd, so that vessels have been swamped by heavy rollers while at anchor in the open roadsteads, notwithstanding light winds and calms prevailed on the African seas. The shores of the tropical Cape Verd Islands are also dashed by heavy waves from the northwest. The island of St. Helena, situated in 16° south latitude, is reached by heavy seas from the same direction, which make it impossible to land while they are in force, and at times vessels anchored near the shore are wrecked. The southwest gales of the Southern Ocean often send their waves far into the tropical latitudes, reaching the shores of Peru and Central America in the Pacific