SUNSTRUCK.

BY GEORGE MANVILLE FENN.

CHAPTER XIII.

Burns bent down and tried to raise Josephine to her feet, that he might lead her to a chair; but she resisted.

"No," she said in a low passionate voice; "you have not cast me down. It is he who has done this."

"Yes," said Greville sternly. "It is I who have done this, by my charge; and it is I who should raise you up, and humble myself to you, child, but not yet—not yet."

He turned and walked slowly to the door, to stand there with his back to them, waiting; and Burns followed almost directly, to turn before he passed out, and meet Josephine's eyes fixed upon his with a grateful look.

"It is impossible, Captain Greville," he said in a quick angry whisper, as they approached Manton's room; but his host made no reply, merely going on before him with bowed head and a look of agony in his countenance which seemed to have aged him by ten years. They entered the room very gently; but Renee heard them, and started up to look piteously in her father's eyes; while Manton opened his, and gazed from one to the other questioningly, as if asking for help and relief.

Greville felt his head and hands, and then bent lower over him. "Still in so much pain?" he whispered,

Manton made no answer but a smile, which told all; and the captain wiped the clammy dew from his temples.

"Can't—can't you do something?" came in a hoarse whisper.

"I am doing something," said the captain "but we must wait. When did you drink that water?"

"Some time toward morning, I think—or was it morning?" said the sufferer faintly. "I don't think I touched it in the night, and yet I seem to fancy I heard the glass strike against the vessel."

"Yes; in the night," said Burns quickly. "I heard you."

"No," said Manton, after a few minutes' pause, during which he had struggled hard to bear a terrible paroxysm of pain—"no; I did not touch it in the night. I am sure it was morning."

"He is wrong," said Burns in a whisper to Greville. "I distinctly heard him touch the bottle and glass."

Greville looked from one to the other curiously, and then walked to the window, and stood there thinking whether there was anything he could do to help his guest.

As he left the bedside, Renee let her head sink again in despair, for she could gather no hope from the face before her, and once more a terrible silence fell upon the group; while Burns, after looking intently at the pain-drawn countenance of his friend, crossed on tiptoe to speak to Greville, who was leaning out of the window, and seemed to be trying to reach something below him amongst the flowers which covered the top of the veranda and climbed up round the jalousies.

The next moment he was standing upright examining a kind of chaplet or necklace formed of the bright red seeds of the snake-wood.

"Have you seen this before?" he whispered to Burns.

"That? Yes. I have seen our nurse, 'Miramis, wearing it constantly. Why?"

"The creeper is broken and torn down about the window," said Greville hurriedly; "and the person who did it seems to have dropped the necklace on the veranda top. What should you say it meant?"

"Some one must have climbed out."

"Or climbed up," said Greville excitedly. —"Come down with me. We can do nothing here."

Puzzled and wondering, Burns followed him into the room where Josephine crouched upon the matting in the same attitude as that in which they had left her.

"Josephine, my child," said Greville so sharply that the girl started up and looked at him wildly, "Whose is this?"

She took the necklace he held out, and Greville watched her closely as she replied: "It belongs to 'Miramis."

"When did you see it last?"

"Last night, I think, when she came to my window."

"Ah!" cried Greville. "She came to your window!—When

"It was when I went up to bed

"Why?—Tell me the truth."

"I am telling you the truth," said the girl coldly. "She often comes to my window of a night. It is nonsense; but she thinks she is a wise woman, and she makes me tell her my troubles, and promises me that they shall all depart."

"Hah!" said Greville sharpely; "and you told her of your trouble last night?"

Josephine was silent for a few moments.

"Why do you not speak, girl?" said Greville sternly.

"I was thinking," said Josephine slowly. "I was in so much trouble that I hardly know what I said. She told me, though, that my troubly should not last."

"You foolish girl!" cried the captain angrily "I believe you innocent, child; but it is through you that this horror has been caused."

"I—I—don't understand."

"Then I will not explain.—Burns, come with me."

The young man gazed at him wonderingly, and then followed him out into the garden where the rough palm stem which supported the veranda beneath Manton's window showed traces such as would have been made by one who had climbed up. The piece of trunk was rugged with the great dry footstalks of the old palm-leaves, which had been left so as to form a support to the creeper that had been planted to run up, so that an ascent was easy enough, but not without disturbing the clustering stems and leafage of a beautiful Bougainvillea which was in several places broken and torn away.

"There is no doubt here," said Burns sharply. "Some one has climbed up by this post."

"Yes," replied Greville, as he bent down to examine the creeper; "and look here; some of this has been clumsily thrust back. Here is a piece tucked in that has been broken right off."

There was a hard, set look in Greville's face as he turned from the veranda.

"What are you going to do?" said Burns, who was startled by the fierce look in his companion's eyes.

"Do, boy? What would you do to the reptile you have fostered—to the half-savage creature you have fed and tended for years, when it has turned and stung you to the heart? Hunt it out and crush it.—Ah!" he added after a pause, "it is not the first. Such a creature is not fit to live."

He hurried Burns on to the deusely wooded part where the cottages of the blacks were clustered. As they approached one of the best of the cottages, superior to the rest, and with the garden better kept, Greville uttered an ejaculation. "I might have known," he said. "I was mad not to have had it destroyed."

"What—what it it!" cried Burns.

"There it is," said Greville bitterly, as he pointed to a good-sized tree rising behind the cottage—"the machineel."

Burns looked eagerly at the tree with its small apple-like fruit.

"A deadly Euphorbia, teeming with virulent poison."

He was about to enter the garden, when a black woman came toward them from one of the cottages with a curious shrinking ster.

"Where is Semiramis?" said Greville clooly.

"Don't know, Massah. Think she go to de house."

"No: we have come from there. She is hiding."

He went on, followed by Burns.

"I have been a father to these people," said Greville angrily, "and yet there is no one I can trust. That women lies to me at once. They say anything to escape blame."

He thrust open the door of the cabin and entered.

"Not here," he said fiercely. "But she shall be found. They will try and hide her."

"From love?"

"From hate. There is not a black on the island who will not help her; for fear that she should work some spell—in other words, drug food or the water, out of revenge."

He hurried Burns to where the men and women were at work in his fields, and every where there was a shake of the head in answer to his questions. No one had see "Misamis" that morning; and at last, faint wirheat, Greville turned back. th

Burns followed him, and at the gate they were met by one of the black labourers.

"Yes: what is it?" cried Greville.

"Massah look for "Miramis, dey say. She gone."

"Gone?—Gone where?"

The man pointed to the sea.

"'Rutus go fishin' dis mawnin', sah; and 'Miramis come down and shout to man wiv a boat; and he come ashore and talk, talk; and den 'Miramis got in de boat, and de man lif' in um big bundle and set de sail and go right away."

"Is this true?" cried Greville, catching the man by the throat.

"Oh 'ss, massah, all de troof. 'Miramis gone right away."

"Ah!—and why?"

"'Cause a buckra massah very ill."

"That will do. Go!" said Greville; and the man who was trembling in every limb, hurried away.

"Her confession of her guilt," said the captain slowly.

"Then you will have her followed and punished for the crime?" said Burns.

"If he dies—yes, If I save him—no. The chances are that I should never have her found. The woman has the reputation of being a follower of Obeah; and, as I have told you, such as she are supposed to bring death to tkose who are their enemies, and the people fear them. No: we shall never see her more."

Greville whispered to Burns to stay where he was while he went back to the room where Josephine was seated alone; and ten minutes passed before he returned, to sign to the young man to follow him to the bedroom, where to all appearance, the minutes of Manton's life were drawing to a close.

CHAPTER XIV.

After a short stay, they left the room once more and went out into the garden.

"I cannot bear it, Burns," cried Greville in agony. "It will kill her too. I must do something."

He stopped short, with his brow rugged and teeth set, thinking intently. Then, with a look of rage, he turned suddenly upon his companion.

"It was a lie," he said—"I ought to have known—a beggarly, transparent invention; but it tricked me for the time."

"I do not understand you, sir."

"That black scoundel, Brutus: she sent him with that tale to put me off the scent. She has not left the island, but is hiding in the woods.

"But the man"——

"I tell you they will all lie, and invent childish stories to save one another from punishment. I know them by heart. Come to the plantation again. I'll have the truth from them, or"——

At that moment a low, deep-mouthed baying rose from beyond the house. "Ah!" said Greville, "he never lies! Come quickly. Now I shall know the truth."

Burns followed him as he hurried to the far side of the house, where Renee's great heavy-chested Cuban bloodhound was chained, and which now rose up on its hind-legs and pawed and fought to get at its master.

"Down, Nep!—down, Nep!" he cried; and the dog crouched at once while his chain was slipped from his collar.

"But surely you are not going to hunt the woman, sir, with that savage beast?"

"I am not going to hunt a woman, sir, but a vile murderer. You need not be alarmed: a word from me is enough to restrain that dog."

Burns was silent; and at a word, the dog bounded before them on their way back to the woman's cabin, about which several women were grouped as they approached; but all fled in horror at the sight of the dog.

Greville laughed bitterly. "You see," he said. "One would think I hunted my people with this hound.—Here, Nep! In with you boy!"

He strode right into the cabin, and after a few moments' consideration, snatched up a gown lying on the bed.

"Here, boy, here!" he cried, shaking the cotton dress; and the dog made a plunge, buried his head in it, snuffed up other articles of attire which lay about as if their owner had just made a change; and the dog tore at them seized them in his powerful jaws, and shook and turned them over, growling and snuffling about.

"That will do now—steady!"

Greville took a leather thong from his pocket, fastened it to the dog's collar and led him to the door. "Now, hep is a "you will soon see."

The dog tried to bound off, but settled down directly with its nose close to the ground, and led them in and out to one of the cottages, where a woman within set up a wild cry; but the dog came out again directly, and made for another, threading the narrow pathway quickly, and dashing through the low doorway at once.

"Hah!" cried Greville; "that's good."

The dog ran round the room, came out, and, nose down, made straight for the plantation, where a group of labourers stood to watch them approach; and as the dog paid no heed to them, but went on along a narrow path by a patch of cane-ground, they one by one left their work and followed at a distance.

"Another proof," said Greville in a low voice; "they tell me plainly that she has taken to the forest. They will follow us to see her taken.—Look at Nep."

Burns was already watching the sagacious beast, which was straining hard at the thong as, with nose down, he followed a narrow winding track right in among the trees beyond the captain's clearings; and, forgetting the heat in his excitement, Burns hurried on behind in the dark overgrown track, one which was rarely used.

"Where does this lead to?" said Burns at last.

"To a kind of meeting-house in the forest. I never interfere with them in this. It is of no use. Tired?"

"No, I think not," said Burns, who seemed to be endued with fresh strength. For the next hour neither spoke, but with the dog tugging silently at the throng, followed the path in and out among the trees, till, all at once a large roughly thatched hut blocked further progress, the path going in under the low doorway, and Burns's heart leapt to his mouth as the dog uttered a growl and bounded upon something dimly seen in the windowless shelter at the farther end.

"Hah!" ejaculated Greville as the dog seized what proved to be a gaily coloured handkerchief. "We are on the right track. —Good dog!" he continued, patting the animal and taking the kerchief from his jaws.—"Seek her, then."

The dog made a plunge forward through a screened opening at the back out into the forest again; but the path had ceased. There were, though faintly visible, footsteps on the moist earth, and the scent was strong enough for the dog to go on as rapidly as he could, with the shade growing less deep, the trees more open, and it was evident now that they were ascending a steep slope, but diagonally.

"She has made for the mountain," said Greville quietly.

Few words were spoken in their breathless ascent, but from time to time the scent seemed so fresh, and the dog tugged so that Greville grew excited.

"Keep a lookout forward," he said. "We must be near her now. I want to run her down before she can reach the woods again."

Greville uttered a cry of satisfaction as he drew Burns's attention to a curl of smoke rising up some little distance ahead.

"There she is," he whispered.—"Quiet, Nep!—She has not heard us. Keep level with me now," he continued; "and as soon as we are close up, seize her. I'll hold the dog."

It was a time of breathless interest as they drew nearer the softly rising vapour which betrayed the woman's halting-place, and, making every effort not to tread on the loose stones which promised to rattle beneath their feet, they gained the mouth of a hollow, out of which the smoke rose; but to their surprise, the dog turned off to their left, and suddenly threw up its head, whined angrily, and snapped at a tiny curl of smoke which rose from between its feet.

"Sulphur!" cried Greville. "Pah!"

Burns had already stepped aside, for he had inhaled the choking fumes which they could now see were escaping from cracks in the loose volcanic soil, upon which the vapour was being condensed in a pale yellow efflorescence.

"I thought we had run her down," said Greville. "Proofs that the old volcano is not quite head:—Go on then, boy. We shall overtake her soon. She must have been here afore, perhaps to fetch sulphur or to perform some mumbo-Jumbo tricks to frighten the weak fools."

For the dog was tugging to get on, and, after dragging them in and out amongst the huge vesiculated masses of pumice, bare of vegetation and glistening in the sunshine, it suddenly made a dash downward for about a hundred feet, turned in at a broad cavernous rift in the mountain side, and then drew back, threw up its head, and uttered a deep-mouthed bay.

"Run to earth!" cried Greville excitedly. "In with you, Burns, and bring her out. No, she is my servant. Hold the dog. I'll go."

Burns, with his heart beating heavily, thrust his hand beneath Nep's collar, and held him fast.

This rift led into quite a little cavern, whose interior was lit up by the sun; and there, not twenty feet from them, lay the figure of the black woman, apparently sleeping after her toilsome climb.

Greville pressed forward into the cavern, and staggered back, choking violently.

"Good heavens!" he ejaculated. "I could not breathe. Burns!—that woman!

He said no more, but turned his head to the sharply blowing breeze, took a deep inhalation, and then plunged into the cave, and staggered out dragging after him the body of the wretched woman, till he was a few yards from the opening, where he lowered her softly down.

"Dead? gasped Burns.

"Yes. There must have been a fresh escape of fumes," said Greville slowly. "There has not been a cloud about the crater for months. Poor foolish wretch! She must ave staggered in there, worn out, to lie down and rest, and been overcome.—Let us get back, and send the people to fetch her down.—Look!"

Ten minutes later Greville and Burns were toiling down the mountain, the latter beginning to feel an exhaustion against which he could hardly fight.

It was quite dark when they reached the plantation house; and upon Greville hurrying to the sick chamber, he found that there had been apparently but little change. Manton was gazing with a fixed stare in Renee's eyes, too much prostrated now to be able to struggle against the paroxysms. But as Greville approached, he read hopeful signs in his patient's face; and a couple of hours later, he drew a long deep breath, and whispered words in Renee's ear which made her start to her feet, fling her arms about her father's neck, and burst into an hysterical fit of weeping, just as a low wailing chorus came through the open window from the direction of the cabins of the blacks which was answered by a mournful howl and the rattle of a chain.

Semiramis had been borne down from the mountain, and was being carried to her hut.

CHAPTER XV.

The next morning dawned with Manton plunged in a deep sleep, which lasted for nearly twenty-four hours, and from this he awoke weak once more as a child.

But the convalescence was one long dream of happiness, from which he seemed to be rudely awakened one day by the return of the ship and the call back to duty.

"Yes," said Greville, as the time for parting came. "Some day, if Renee does not change her name."

Two years after she was Commander Manton's wife; and the captain accompanied her and her young husband back to England, where he had elected to end his days. For the time had came when the dreamy plantation life had begun to pall, and he had found a successor in Burns, who quitted the service upon wresting a long withheld promise from Josephine that she would be his wife.

Ten years had passed away before the young people met again, and it was in answer to a question that Josephine said: "I was a foolish girl, and knew no better then Renee. Yes, I loved him dearly. Then in a minute my love was turned to hate, and I told that wretched woman, as I told her all my troubles then. Yes, I hated him; but I would sooner have died than caused him pain, and if he had——There, say no more, dear; we are sisters and the past is dead."

THE END.

A Small Canadian Trotter.

Dot, 2.33 1-4, was bred on the farm of John Musgrove, Northwest Arm, Cape Breton, N.S., His sire was a horse called Lord Nelson, by Bellfounder Morgan, a very fast and good horse, showing a lot of the Morgan. His dam was a gamey little French-Canadian mare, a great driver, and quite fast for that part of the country. This Musgrove, who raised Dot, was a seafaring man, and left his stock in charge of his friends.

This mare was old when she was bred, and was afterwards turned out in a back pasture to live or die. Late in the fall, when they went out to look for her, they found her lying dead, with a colt, perhaps four days old, sucking one of her ears.

The brother of this Musgrove, a boy twelve or fourteen years old, took the little colt under his arm, carried him home and fed him on cows milk until his brother returned from his voyage. Upon seeing the colt the sailor ordered the boy to kill it, telling him the colt was so small it would never be worth a dollar.

The boy begged to have the life of the little orphan spared and finally got permission to put him in a pen with a flock of sheep, where he often gave the colt a part of his own crust of bread and sometimes got him a plate of porridge left over from the breakfast table. In the spring the little colt wandered off with the sheep, summered with them, followed them to the barn in the fall, wintered with them, and ran with them the next summer.

The following winter the boy got an old pair of pung runners and fitted uo a sled. He also made a harness from a few old straps and ends of rope and began driving the little fellow, whose speed at once attracted his brother's attention and pleased him so much that he got a genuine harness made. One day towards spring the sailor went into Sidney, got on a racket, commenced to blow avout the little colt's speed, and finally made a match for $100 a side against the crack trotter of the town, best three in five, mile heats.

On the day of the race crowds went to see the trot, not expecting, of course, that the little sheep, as he was called, would make any show with the crack trotters of Sidney. The betting was slow, 10 to 1 against the sheep, with but few takers. The sailor invested all his summer savings at those odds, and bet his silver watch and gilt chain against $10, then got in and drove the colt himself the first two heats, and was beaten in both. He then called the boy, who had been a silent spectator, and whose eyes were filled with tears by the unfair treatment of his little pet, and told him to get in and drive the colt. The boy cheerfully mounted the old pung runners, and as soon as the word was given for the third heat called on the colt, which responded gamely, shot to the front, won the heat with east and almost shut out the crack trotter. Dot won the next two heats without any trouble which ended the race. The sailor gave the boy $50, and after that the little colt was called Dot, and was the boss of the road.

Dot was often subjected to harsh treatment and severe hardships when the sailor was at home. He was finally sold to a drunken coal-cutter, who often let the little fellow stand all night at the tavern door in cold winter weather without a stitch of covering. At daylight he would run the little fellow seven miles to his home.

When I got Dot he was a sorry-looking pony to a casual observer, but he carried me home, 200 miles, on a saddle in four and a half days, and trotted in 2.30 for me on the ice in less than three months after I bought him.

The spring that he was eight years old I took him to St. John, N.B. and entered him in a free for all on the Torryburn track. There were seven starters. Dot got the word fully 40 yards behind the pole horse, yet he distanced the whole lot of them in the first heat. The judges claimed that he had a "peculiar gait," and ruled him out, for which the people drove the judges from the stand and broke up the day's sports. We never got Dot's winnings nor the money we bet in the pools, amounting to over $2,000. All the New Brunswick horsemen left the track. The morning after the race thirteen horses were loaded on the cars and sent home. The intention of their owners as expressed was never to take horses to that cut-throat track, and they never did to my knowledge.

I took little Dot to Boston, and after showing a fast mile there sold him to the late Wesley P. Balch. He trotted in many races the following summer, and his peculiar gait was never questioned. He never was sent for a record, but a 2.26 clip was an easy thing for him. He was right up to the shoulders of winners in 2.24. Mr. Balch sold Dot to Budd Doble, and a few weeks after he was burned to death in Philadephia, when Doble lost seventeen horses.

Dot's weight was only 670 pounds in condition. He was foaled in 1861.—G. W. S. in American Breeder.

"You won't suit me at all," as the man said to the tailor who refused him credit.

London pays its gas companies annually £4,400,000 for a commodity which costs to produce only £3,100,000, thus giving the monopolies a clear profit of £1,300,000.

NOTES ON SCIENCE AND INDUSTRY.

The oft-discussed problem of a substitute for dynamos in electric lighting by providing a cheap, inodorous, inoffensive electric battery, capable of supplying sufficient light for domestic uses, is again claimed to be solved by M. Poudroux of Paris. By his new battery he claims the ability to employ a great surface of zinc in a cell of the desired moderate capacity containing but a small quantity of liquid, and with the advantage of the ingredients of the solutions, as he states, being very cheap.

According to statements by those practically engaged in the industry, the manufacture of glass bottles by machinery appears to possess some decided advantages over the ordinary method, even with the appliances and processes thus far developed. Gathering the glass metal in the usual manner, it is allowed to run from the rod into an iron cup, which holds the quantity required for making the bottle, when a hollow iron plunger at the bottom of the cup is pushed up through the mass and the cap reserved, leaving the glass in a plastic condition suspended from the hollow plunger, through which air is admitted. The cup, which is hinged, is now removed, and the movement of a level admits a small quantity of air; the bulb is then flattened at the bottom and dropped into the mould, which latter is at once closed and the air applied, this movement completing the bottle, which is taken in hot to the annealing oven.

A much-needed invention has lately been brought to notice in London and received the commendation of the press. It consists of a simple and inexpensive device for automatically shutting off the gas when it has been blown out instead of being turned off in the usual way. The principle upon which this mechanism is based is the expansion and contraction of a metallic loop made of German silver and steel, which is adjusted very close to the gas flame. One end of the loop is free, while the other is secured to the fixture; a valve containing the gas is attached to the free end, and, when the gas is burning, the valve is open and the gas freely escapes. If, however, the gas is blown out, the property of the loop is quickly to cool and contract, and the valve will shut off the gas. The device is said to respond promptly to the change in temperature.

German engineers are of the opinion that quite a success has been achieved by the recent establishment at Offenbach of a system of pipes for the transmission of power by compressed air, the laying down of the pipes having been commenced about a year ago, and the work being consummated in the face of many difficulties. The total length of pipes thus laid amounted to 7,760 yards, of which 1,702 consisted of pipe one foot in diameter, 1,710 yards of eight inches diameter, and 4,347 yards of four inches diameter. The pipes were laid about one and one-half feet below the footpath, the connections of the pipes being made by means of India rubber, according to the method pursued for similar work in Paris, and valves are provided for shutting off the air from separate lengths of pipe. On the initial trial of the system, made by the engineering authorities of the town and by the Boiler Inspection Association, it appeared that there was a loss amounting to 0.11 of an atmosphere in seven and one-half hours, that is, 0.39 of a cubic metre per hour kilometre, a loss equalling 13 per cent. on the daily output, the power transmitted being, on an average, 500 horse power—a very favorable showing.

One of the most notable mechanical achievements of late is the great pulley which has been placed in the mill of the Willimantic, Conn., Manufacturing Company, for transmitting power from the mammoth engine of that plant. This pulley weighs seventy tons, is twenty-eight feet in diameter, and has a face nine feet across; it is cast in twelve sections, each section carrying a spoke and a segment of the rim, the latter being backed in its casting by what is technically known as rib work, in appearance resembling a series of heavy iron panelling. Including the hub pieces, there are twenty-six parts to the wheel. The spokes alone weigh 36,000 pounds, the rim alone 96,000, and the bolting together of the sections is by a series of 180 2½ and 2¼ bolts. The power from the great engine is distributed from this pulley by three belts, one about 49 inches wide and two of 24 inches width each; the wheel makes 60 revolutions per minute, the surface travelling exactly one mile in that space of time. The shaft which this prodigious pulley hangs upon is some 21 feet in length, including the disks at either end, and of itself presents the enormous weight of 27 tons.

The discovery of late, by some foreign chemists, that nickel combines with carbon monoxide to form a nickel-carbon oxide, promises, it is thought, to be useful in connection with the development of nickel plating. At that time the experimenters failed to obtain any similar compound of carbon monoxide with another metal, it is stated, but considering it strange that nickel should be the only metal capable of entering into combination with this particular gas, investigation was continued—more especially with iron, and under very varied conditions—resulting finally in demonstrating the fact that iron is volatizable, although apparently in very small quantities, in a current of carbonic oxide. According to the account given by the experimenters, and published in the *Chemical Journal* briefly, they volatilized some finely divided iron in a current of carbonic oxide at ordinary temperatures, the deposits given all the known reaction of iron in remarkably brilliant colors.

The exhibition at Glasgow, Scotland, of Mr. Mills's new method of propulsion for marine craft has been extensively described, and would appear not dissimilar in its main feature to what had previously been proposed in this country. The plan consists in the placing of the propeller at the bow instead of the stern of the ship, this change from the usual construction being made by the inventor in view of what he regards as two legitimate considerations—first, that the revolution of the screw propeller in its ordinary position at the stern of the vessel produces a vacuum, which must be filled by the inrushing water ere the ship obeys the forward impulse, and second, that the water at the bow of the ship offers resistance to its movement. Concluding, therefore, that the propeller should be placed at the bow, the plan in this case is that the shaft is carried through the bow, bearing a conical propeller with a diameter nearly as great as the beam of the ship. The outside of the cone consists of webs projecting at right angles to the surface, and arranged in a spiral, the action being thus a boring action.