

Underground Passages and Trap-Doors.

BY GRANT ALLEN.



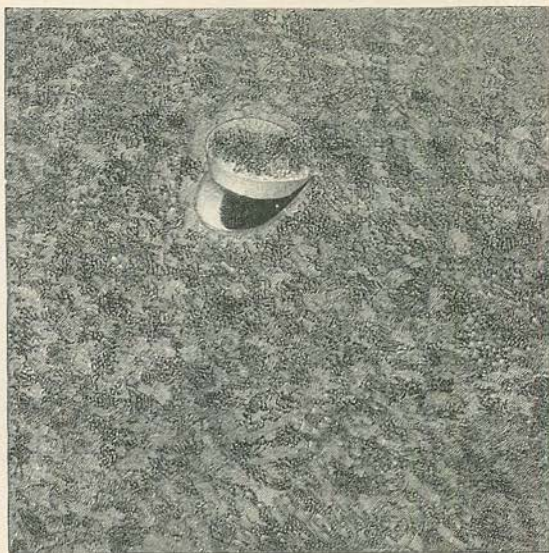
LIKE the Reverend Robert Spalding in the play, "I don't like London." There is so little life there, compared with the country. And I can't get on without life. 'Tis that that makes London so dull. All the streets are flagged with big square stones, or paved with dead pavement of wood or asphalt: hardly a green thing grows; hardly an insect stirs: life is crushed clean out of it. The whole place is given over to two species alone out of the countless myriads that diversify our earth—man, and the cab-horse. In the country, on the contrary, one sees so much life. Every hedge-row teems with it. I go out upon a broad breezy moor near my house, and see living things by the dozen at each step I take. Flies flit among the dry heather; beetles scurry away to their deep holes in the sandstone soil; innumerable spiders' webs glisten and wave in the autumn sunshine from twig to twig of the ling and the brushwood. All is buzzing with activity, from the burly bumble-bees that bluster among the belated flowers to the gauze-winged midges that entangle themselves from time to time in the floating snares so deftly spread for them. You have comedy, tragedy, pantomime, all in one. The insect Columbine in flimsy many-hued dress who just darts for a moment across the stage of our view is caught and devoured next instant by some ruthless enemy, with jaws like the shark and a maw like the hyena.

But it is not above ground alone that Nature displays these her moving dramas: the whole soil beneath our feet is tunnelled and burrowed through to a depth of many inches by the subterranean passages of end-

less half-unknown and unsuspected engineers. It is a hidden city. There the earthworm works unseen in his neatly-lined galleries, or retires for rest to his comfortable cell, which is paved with pebbles as regularly and carefully as the streets of London. There the carnivorous slug or testacella tracks him to his lair like a sleuth-hound, while the centipede hunts him down, and the sand-wasp pursues her prey along the underground corridors. Earth is a series of living catacombs. Most people know the burrows of rabbits, and the long subways which the mole drives through the turf in pursuit of earth-worms; but few people remember also the endless lizards and beetles and mason-bees and devil's coach-horses which equally tunnel through the yielding soil with their ramifying passages. Every inch of sward is honey-combed with life; every square foot is a warren of insect burrows.

I am going in this present article to introduce you to a set of the most remarkable among these unseen subterranean creatures—the trap-door spiders—whose habits and manners I have watched for years in Southern Europe and North Africa.

"Eyes," says our old school friend, Herodotus, "are more trustworthy teachers of fact to men than ears": so before I begin telling you about the habits of the race, I will ask you, in the time-honoured language of the showman, to "cast your eye on the picture," No. 1, where my colleague, Mr. Enock, has represented for us the open door of a neat and commodious nest constructed by one of these singular builders. I call your attention to the door before taking you inside the eligible family residence, both because that is the most ordinary way of entering



1.—DOOR OF AN UNDERGROUND TUNNEL.

the house, and also because it is as a rule the first part of a trap-door spider's nest to attract the tourist's or the naturalist's notice. You may be seated under an olive-tree by some bank of earth in the full southern sunshine at Nice or Cannes, and may happen to observe on the surface of the exposed earth a tiny round line, about the diameter of a sixpence or a shilling. The thing looks like a lid, and somehow suggests to you the idea that it might possibly lift or open. You try it with a pin or the point of a pocket-knife, and sure enough, you find that your hasty surmise was right: it yields to pressure at a certain point, like the door of the Forty Thieves' cave when Ali Baba uttered the mystic words, "Open Sesame!" You discover that the lid is an extremely neat and well-finished trap-door, with a delicately bevelled edge, hinged at one side, and carefully made to resemble the soil around it by means of cunning devices which I shall describe hereafter.

Your curiosity thus once aroused, you desire further, like Ali Baba after the robbers departed, to inspect the interior. But as the door is somewhat too small to admit you entire, you are compelled to employ your burg-



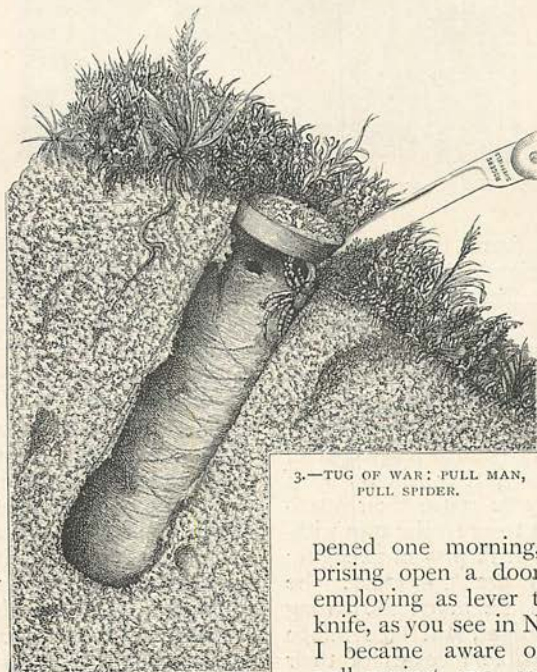
2.—THE TUNNEL WITH PART OF ITS WALL REMOVED.

larious knife in order to lay bare the wall and show you a section of the admirable tunnel to which this strange portal gives instant access. No. 2 represents for you a portion of a nest thus exposed in part, but in part only: for the tunnel runs inward and downward for some eighteen inches or more into the heart of the earth-bank. You now perceive that the neat little door is but the

entrance to a long and exquisitely wrought underground passage—a miniature St. Gotthard—every part of which has been excavated through the soil in a perfectly regular cylindrical tube, and lined throughout with soft silk like the web of a spider. This may haply give you a first clue to the nature of the clever and industrious little engineer who constructs these marvellous nests in the bowels of the earth; but in order to satisfy yourself absolutely as to the truth, you must dig her out—for she is a lady—and examine her carefully.

In my own case, however, that was not exactly the way in which I first became acquainted with this quaint subterranean weaver. I hap-

pended one morning, at Hyères, to begin prising open a door which I had found, employing as lever the end of my pocket-knife, as you see in No. 3; when, suddenly, I became aware of a slight downward pull against me, as if one of the Forty



3.—TUG OF WAR: PULL MAN, PULL SPIDER.

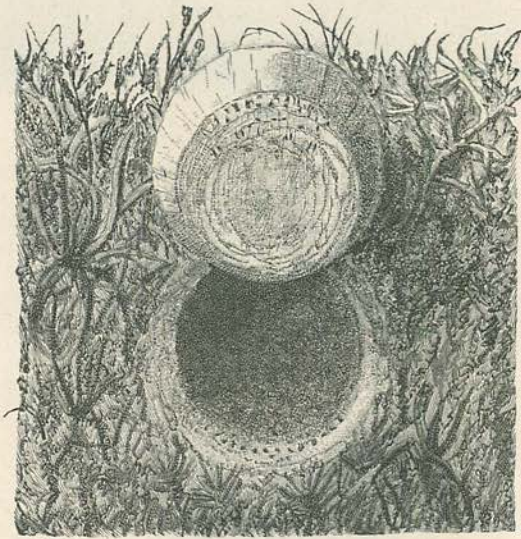
Thieves were holding the door from within, and attempting to resist the magic word of opening. In a moment I divined that the maker of the nest resented my intrusion, and was defending her home with all the legs at her disposal. As these are no less than eight in number, and as she is a remarkably muscular and powerful lady for her size, the amount of resistance I experienced when she pulled against me in this tug of war was far greater than you would imagine. I wanted to catch sight of her, however: so instead of "cracking her crib" by main force with my jemmy (like a big burglar that I was) I withdrew my knife, and pretended to pull rather more gently with a pin, so as to keep her engaged, lest she should retreat and dodge me. Then I opened the large blade of the knife, and plunged it obliquely into the earth about half an inch behind and below her, so as to cut off her retreat to the bottom of her fortress. The spider thus found herself boxed in between her own trap-door and my intercepting knife. After that, I prised the door open with my pin, and captured my specimen without further difficulty. I have always found this the easiest way to secure the animal, though in some cases she resolutely refuses to be "drawn," and then there is nothing for it but to go to work with a spade or trowel and eject her bodily.

It is the habit of these spiders, when disturbed, to rush up to the door in this fashion and hold the fort, if possible, against all comers. That is to say, they will do so if you first knock gently to rouse their attention, and then attempt to open the trap without unnecessary haste or display of strength; for trap-door spiders are no fools: the moment they see you are much too strong for them, they bolt outright, and take refuge sulkily in the inaccessible recesses of their buried stronghold. But that is only when

an unwonted enemy like man appears upon the scene—a foe as unexpected to the dweller in the tunnel as Mr. Wells's mechanical Martians were to the inhabitants of London. With their natural enemies, on the contrary, the spiders show fight as long as possible. The hereditary raiders of their houses are centipedes, lizards, and wasps, which enter the nests with a general view to devouring its inhabitants. To guard against these hungry assailants, the spiders make little foot-holds with their sharp claws and jaws both in the trap-door itself and in the wall of the tunnel opposite the hinge: these foot-holds are well shown in No. 4: they give the householder the benefit of the leverage, and as she is mus-

cularly strong, and has gravity on her side, she can usually keep her front door firmly locked by their means against all ordinary intruders. It is only when miraculous naturalists, armed with Sheffield blades, tumble upon her from the sky, so to speak, that she finds herself wholly unable to continue the unequal contest.

The nests are seldom or never built on quite level soil: in nine cases out of ten they are constructed in sloping or perpendicular banks, such as



85.

4.—CORK-LIKE TRAP-DOOR, WITH CLAW-MARKS.

about in countries where olives are cultivated. In all such cases, the hinge is at the top, and the door, when left to itself, shuts by its own weight, thus saving the occupier the trouble and expense of an indiarubber spring. It is clever of the little beasts thus to utilize the force of gravity. The door is first constructed of a few threads of web, stretched across the open mouth of the tunnel; it is then cemented together with bits of earth and moss, moistened, I think, by a gummy secretion, and as soon as it is complete, the scaffolding threads which prevent it from opening are cut across, while the hinge is thickened. But the whole of the tunnel and door are not made at one time. The spider begins when it is a baby with a very small tube, having a door scarcely bigger than a

pin's head : it goes on adding to and enlarging its house and portal till in some cases which I have measured the corridors attain a diameter of nearly two inches. The number of layers of silk in the lid correspond roughly to the number of successive enlargements.

Trap-door spiders are mostly nocturnal. They stop at home by day, but seem to wander out at night in search of prey, which they probably stalk on the open.

All trap-door spiders, however, are not of one kind. There are many genera and species, more or less advanced in engineering knowledge. Some of them make their trap-doors in the manner already described, with bevelled edges, thick and hard, so as to fit the tube like a cork ; and these are usually spoken of as forming doors of the cork type. But there are others, less highly civilized, which construct loose membranous doors, composed of plates of silk, woven together with fragments of moss, and not tight-fitting. These somewhat inferior traps are generally described as of the wafer type. One of them is illustrated in No. 5 ; its lid shuts down loosely on the tube, and is far less artistic than the cork-like pattern. At the same time, I may add that in Algeria, where I have observed these wafer-lidded nests very closely, they are often much harder to find than the cork-type doors. They have no definite circular edge to betray them, and as they are usually built in mossy banks and plastered over with living and growing moss for concealment, they are most difficult of detection. All the doors alike require sharp eyes to find them, but the wafer kind sometimes almost elude the keenest enemy. You will observe that in No. 5, too, the door is marked internally by claw-holes, which enable the owner to hold it against all comers.

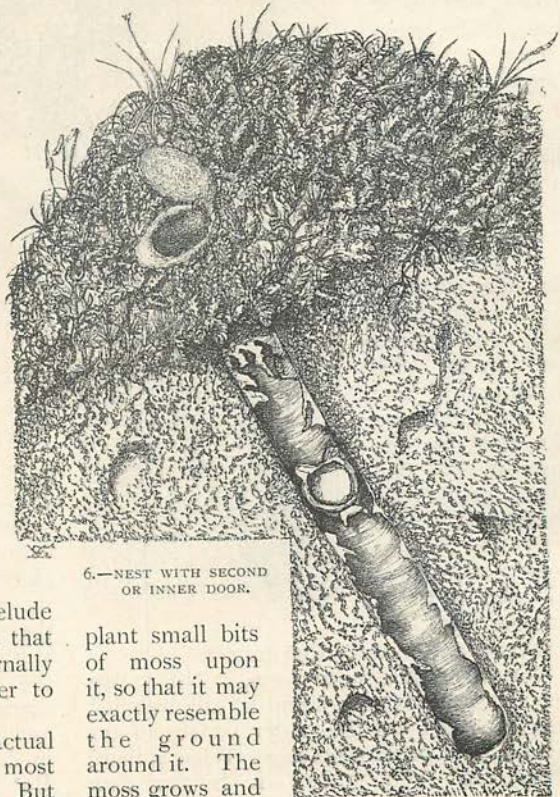
So far, I have only considered the actual trap-doors, which are externally the most visible part of the whole structure. But

some spiders have pushed their constructive ingenuity a step further. They make an outer door to keep off intruders from without, and then they arrange a second line of defence a few inches down the tunnel. Mr. Moggridge, an indomitable naturalist, who passed the last years of an invalid life at Mentone in watching and describing these quaint little beasts, has pointed out in his admirable work a number of such protective devices. One of these clever secondary barricades is shown in No. 6. Here, the outside door stands concealed among a

little thicket of moss : and so ingenious are the eight-legged architects that, when they have completed their front door, they actually



5.—WAFER TRAP-DOOR, ALSO WITH CLAW-MARKS.



6.—NEST WITH SECOND OR INNER DOOR.

plant small bits of moss upon it, so that it may exactly resemble the ground around it. The moss grows and

spreads, sometimes externally overlapping the edge of the door. Inside, the spider weaves from her spinnerets a continuous web of silk; with this she papers, as it were, the walls of her tunnels, which are thus covered by a perfect-fitting cylinder of tapestry. Still, even so, those troublesome ichneumon-fly creatures *will* intrude and poke their noses into other people's business; and if they find the natural owner of the burrow, they will promptly devour her. To deceive these persistent and inquisitive foes, this particular species of spider builds a second trap-door, which acts in fact as a false bottom.

The false bottom is made of mud, well concreted together, and surrounded by a bag, or net-work, of spider-silk. You will observe that it is slightly hollowed on its upper surface, so that when it is closed it produces an illusive appearance of being the end of the tube—has the same effect as the bottom of the tunnel. If an undesirable visitor manages to open the front door, and intrudes on her privacy, our spider closes this inner door upward, slamming it hard, so that it jams tight against the silk wall of the tunnel. She then puts her back firmly against the door, holds on by her eight claws to the surrounding wall, and resists the invader with all her power. The enemy thinks he has got to the bottom of the nest, and concludes that the lady is not at home; so he turns tail after a while, emerges by the hall-door, and tries another tunnel.

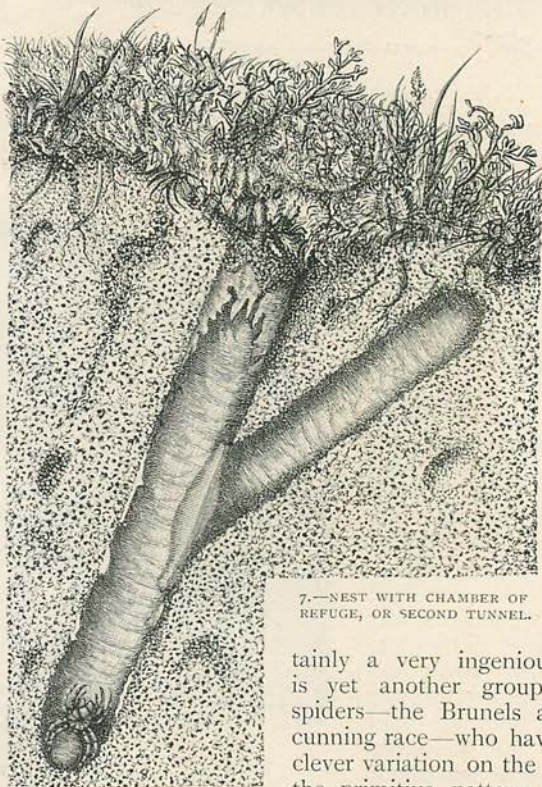
You will notice, once more, in No. 6, that there is a tab or ragged end of silk web left hanging below on the under surface of the second door or false bottom. What is that? Why, can't you guess?—it is the door

handle! The upper or front door opens *upward*, you see; and, inasmuch as it can be pushed open from below by the spider, and shuts down again by its own weight, it has no need of a handle beneath; while above, it does not require one, because the spider never shuts it when she quits her nest—that would be too dangerous: she leaves it open so that she may bolt back at once in case of need, like a rabbit to its burrow. She doesn't want to be shut out of her own house at a moment of peril. But the lower or inner door opens *downward*, and when it is shut, the spider is always below it. Hence, she has to leave a handle by which she may pull it down again when the danger is past: especially as she always slams this inner door very tight, so as to prevent her enemy from suspecting the stratagem. Everything depends upon its looking like the real

bottom of the tunnel. It is like those hidden doors in the walls of houses which give access to a secret chamber.

You will observe that I speak always of the female spider alone. The male of these types does not seem to construct a nest, but hunts his prey in the open. I shall speak of the male spider more fully, however, when I come to consider our English tunnel-maker.

This second trap-door or false-bottom nest is certainly a very ingenious device; but there is yet another group of very advanced spiders—the Brunels and Edisons of their cunning race—who have hit out a still more clever variation on the simple long tunnel of the primitive pattern. The nest built by these most inventive little beasts is excellently illustrated in No. 7. You see here the round, outer door at the top of the corridor, the long silk-lined straight tube, and the spider herself lurking at ease in her comfortable den at the bottom. But besides her main tunnel this acute little



7.—NEST WITH CHAMBER OF REFUGE, OR SECOND TUNNEL.

creature constructs a second subterranean passage, leading off upward obliquely at an angle. It is a chamber of refuge. Its passage is closed by a hanging door, hinged at its upper side, and composed of a mud cushion inclosed in a thick silken cover like a pillow-case. When an enemy enters, having managed somehow to prise open the first or outer door, the spider lifts the second door, and blocks the main passage, as in the case already noted. But if the enemy is too strong for her, then she lets the second door drop quietly, and takes refuge herself in the inner or upward-pointing gallery. The door in that case slips back of itself against the wide mouth of this gallery of escape, and the unsuspecting enemy walks straight down the main tunnel, only to find at the end that his quarry has mysteriously disappeared and that the nest is empty. You will see at once that this is precisely the policy of the subterranean passages which in the Middle Ages often connected the keep of a castle with some secondary fortress or some revered sanctuary.

It is easy for the spider who has taken refuge in the second or oblique corridor to push down the door again by her own weight, because she is inside: but it would be very difficult for the enemy to force it open from outside, as it is weighted by the heavy lump of clay, and also it fits the mouth of the tube so well that he is not likely to discover it. Note that in this instance too the door has a flapping handle of loose silk, so that when it is used to close the main tunnel it may be readily opened again from below. Sometimes the second tunnel actually affords a means of escape into the open air; it is continued right up to the surface. But when this is done, the wily proprietor takes great care to cover the exposed end with dead leaves and mosses, so that while *she* can crawl out by it, no inquisitive enemy can make use of it as a means of attacking the inner fortress by the back-door or postern.

For years the trap-door spiders of the Riviera and the West Indies have been

popular objects of observation and research; but till a very recent period it was not known that we possessed in England a native specimen of these tunnel-building little beasts. Quite lately, however, a species of tunnel-digger closely allied to the trap-door spiders has been discovered in England; and though it cannot be properly called by their name, because it does not actually construct a door to its nest, its habits in other ways are quite as curious and interesting as those of its better-known southern relations. It has been thoroughly studied by our friend Mr. Enock, who has done more to tell us all about its queer life-history than any other naturalist.

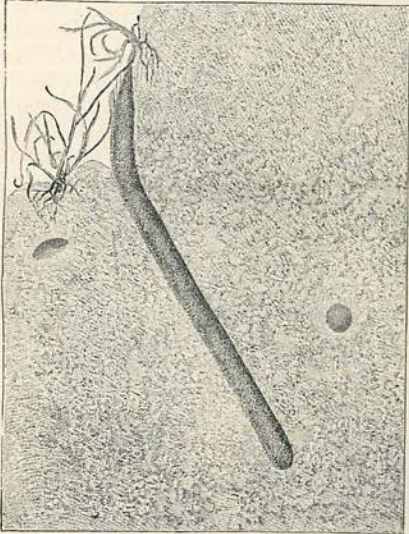
A portrait, I hold, ought always to be prefixed to a biography; so in No. 8 I have induced Mr. Enock to give us the counterfeit presentment of this singular English tunnel-making spider. Our distinguished fellow-subject's scientific name is *Atypus*; she inhabits sandy moors and basking earth-banks, and she is so far from shy of the busy haunts of men, that numbers of her comrades are to be found as near London as Hampstead Heath. The portrait here published is taken from below—that is to say, it represents our friend's under-surface. You can easily see the eight strong legs, the swollen, glossy, egg-shaped body, and the curious spinnerets behind, with which she spins the white silken lining to her tunnel. But what I want you particularly to notice just now is her immense head. This por-



8.—THE ENGLISH TUNNEL-SPIDER

tion of the body is always exceptionally big in tunnel-building spiders, because the work of excavating the corridor is chiefly or entirely performed by the huge jaws or falces. These jaws are, to the whole group of trap-door spiders, pretty much what hands are to human beings. They are sharp, strong, and powerful, and are represented in the portrait as one sees them when at rest—that is to say, folded against the neck, so to speak, at moments of leisure. A later picture will show you how these formidable weapons look when their possessor raises them to strike a blow at a victim. It is a peculiarity of the

whole tunnel-making group of spiders, indeed, that the jaws strike downwards, not sideways. In ordinary house or field spiders, the movement is lateral; but this special power of downward movement, with fangs like the teeth and jaws of a tiger, elevates



9.—NEST OF THE ENGLISH TUNNEL-SPIDER, PARTLY ABOVE THE SURFACE.

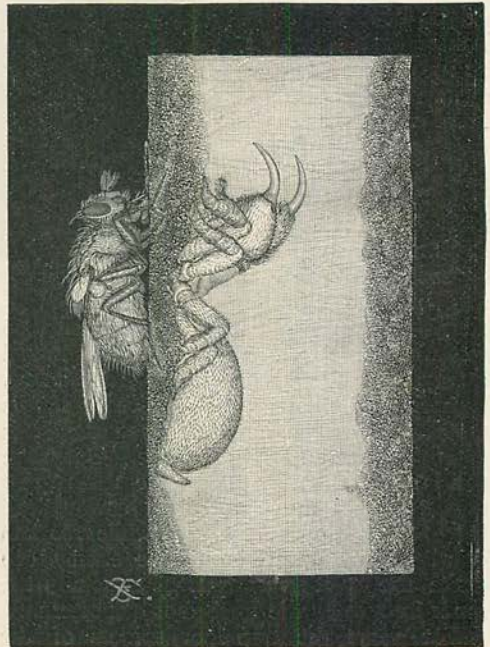
the trap-door spider group into the veritable tigers of the subterranean world. I believe the true trap-door spiders rely mainly upon their jaws for holding their doors shut against the attacks of enemies.

No. 9 is a small view of the underground home of our English species. It is from eight to twelve inches in depth. You will see at once that here there is no door at all—a peculiarity closely connected with the habits and manners of this particular spider. Most of the nest in this case is buried in the ground; it consists only of a tunnel, with a woven tube lining the corridor; but the upper or aerial portion protrudes from the soil, and is made up of brownish web alone, plastered with sand, and imitating a stick or dry twig; it is indeed so inconspicuous that both men and flies are continually deceived by it. In point of fact, it takes sharp eyes like Mr. Enock's to see through the deception. The upper end of the tunnel, or rather of the projecting woven web, is pointed and conical. It is fastened to the ground or to some neighbouring bush by threads of silk at its top. There is absolutely no door for egress or ingress.

How then, you will say, does the spider

get out to catch her prey? The answer is, she does not. She lives permanently in her nest, which she never quits for any purpose. How she fed was a mystery till Mr. Enock solved the problem. The walls of the web are loose and thin, and they can be readily broken when their owner desires it. And she does desire it from time to time, as the next illustration will amply show you.

This graphic and dramatic scene—No. 10—gives you at once an interior and exterior view of the top of the tube when prey approaches. The outer part is lined with grains of sand, brought from the bottom of the tube, and pushed through the meshes of the silken covering. The spider usually lurks in the bottom of the nest when nothing is stirring, but she keeps her feet fixed on a certain silken thread like a telegraphic wire, which gives her information of what is happening on the surface. By-and-by an incautious fly happens to alight on the exposed conical portion of the tube. Instantly, some little tremor of the telegraphic web informs the lurking beast of prey of the presence of a victim. She rushes up to the top, and stands, as you see in the illustration (No. 10), just opposite him, though *inside* the tube, and with her deadly fangs raised, in act to strike him. This vivid picture sets before you very admirably the formidable nature of the big sharp fangs, and the



10.—THE SPIDER WAITING TO STRIKE ITS VICTIM.

powerful jaws which work them : you can also observe what force is given to the blow by the up-and-down movement. The spider does not *see* her prey ; she merely feels it through the silken web. The unconscious blow-fly, meanwhile, is wholly unaware of its enemy's near presence ; it feels, if anything, only a faint tremor of the supposed twig on which it has alighted—such a tremor as blow-flies are accustomed to feel on the surface of the wind-swept plants that form their habitual resting-places. In a second more, the deadly fangs descend with a frightful force, and strike through the web to the victim's body, both wounding and poisoning it.

The poison disables the fly at once ; but how now can the spider get at her victim ? She has a way of meeting this obvious difficulty. She tears apart the loose web of her own wall, and drags the wounded fly through it into her hidden tunnel. This leaves a gaping hole in the wall of the exposed tube, of course ; but to so mighty a spinner, that is a matter of small moment. For the present she disregards it : a little later, she becomes once more the careful housewife : her existing attitude is merely that of the blood-thirsty slaughterer.

It is not the habit of the *Atypus* spider, however, to eat her flies on the spot where she catches them. She is far too much of a lady for that. She drags them down to the bottom of her nest, into what I will venture to describe (after a popular poem) as her own parlour, and there parleys with them. The proceedings, I fear, are very one-sided. As soon as she has quite disabled her victim, she hangs it up in her larder ; then she mounts her tube again, moves very cautiously towards the rent edges, and brings the ragged ends together once more with her powerful jaws, which are thus employed like pincers or nippers. When she has arranged the

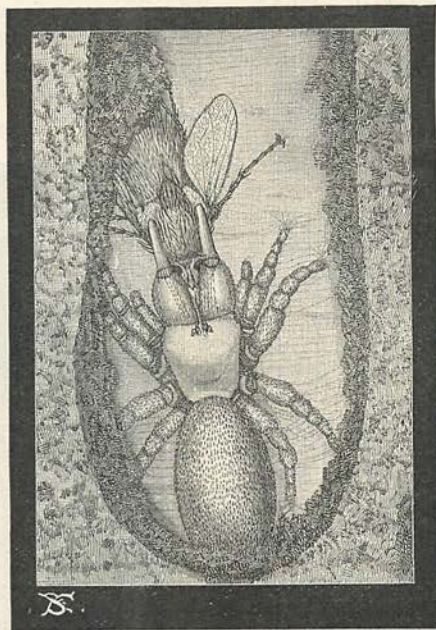
torn portions neatly in this manner, she next backs down a little, twists herself round the other way, and brings her spinner apparatus close up to the torn edge on one side. She can move her spinnerets about almost as easily and flexibly as we move our fingers ; so by their aid she takes hold of the broken edge, pulls it still tighter together, and then proceeds to weave a number of cross-strands which effectually darn the hole, thus leaving the tube in its original condition. The jaws in this case act like pins or tacking threads in a lady's needlework ; while the spinnerets perform the more important function of the final hemming or stitching.

You will see from what I have said that the female spider can never quit her home, and also that she can never eat without tearing down part of the wall of her house to let the food come in—a strangely wasteful arrangement. Every time she catches a fly or bee, she rends her tube in this curious way, and then patches the breach up again, first with silk and afterwards with particles of

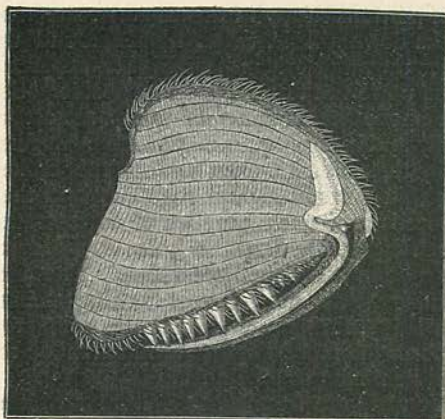
earth and sand, plastered over it and patted with her feet, so as to complete the deception.

In No. 11 we see the unhappy blow-fly safely landed in the fatal pantry, while the formidable captor is just about to make a meal of her helpless victim. If you examine the action of the jaws in these two last figures you will realize that the trap-door or tunnel-digging group of spiders are really what I have called them : the tigers of the smaller world in which they live. No great existing beast of prey has teeth proportionately so big ; the only parallel is to be found in that huge extinct carnivore, the

sabre-toothed lion—a hunter of the prime so excessively perfect for his own purpose that he seems first to have eaten up all the herbivorous creatures of his own epoch which were suited for his food, and then



11.—THE SPIDER BRINGS ITS PREY INTO ITS LITTLE PARLOUR.



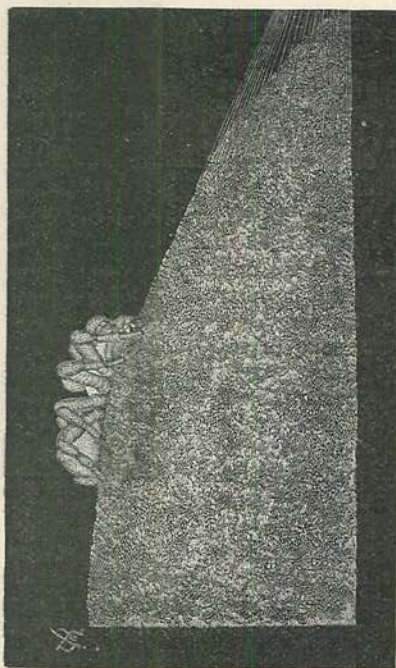
12.—THE JAW SEEN IN A CROSS-SECTION.

incontinently to have died of starvation in the desert which he had himself depopulated.

These prodigious jaws of the tunnel-digging spider are such marvellous instruments and implements, used alike for excavation, for slaughter, and for domestic purposes, that Mr. Enock has given us in No. 12 a very enlarged view of how one of them looks under the microscope when cut down the middle to exhibit its structure. The main portion of the jaw consists of the very close and solid striated muscle, which is used to move the whole mechanism, and which gives the spider the necessary force for her fierce downward blow when she strikes her victim. At the end of this claw-like jaw comes a movable fang, which can be raised or retracted much like a cat's claws. The fang, you will observe, is hollow throughout, and is connected by a duct with the big poison-bag, which secretes the dangerous venom. The tip of the fang is, of course, perforated, so as to let the poison dart out. When the spider strikes, as in illustrations 10 and 11, she elevates the fang, brings it down with a great muscular spasm, and buries it through her web in the victim, at the same time ejecting a small drop of the poisonous fluid. The poison-bag is, in fact, a gland which secretes its own venom. The edge of the jaw is also saw-like, and is provided with toothed processes: these seem to be used in tearing the prey, and also in arranging the silk of the web when torn or ruptured. The food of these spiders consists chiefly of flies and various wild bees, though late in the season they will eat "earwigs, flavoured with a few wood-lice."

But what of the male spider meanwhile?

Well, as is usual among spider-kind, he is a much less important and dignified person than his ferocious mate, and less is known about him. In the first place, he is a great deal smaller. He inhabits a separate little nest of his own till he has arrived at years of indiscretion; then he quits his tube once in his life, on the fateful occasion when he goes a-wooing. This, you will soon see, is a very serious and critical business for him. He seems, from Mr. Enock's observations, always to sally forth on his courting by night. When he lights upon the tube of an unmarried lady of his race, he stops to collect his thoughts and brace himself up for his adventurous courtship. It is fraught with peril. The Tour de Nesle was nothing to it. As soon as he can bring himself to begin his serenade of his doubtful partner, he taps gently on the exposed portion of the tube in a manner which the female evidently recognises as an affectionate overture, for she lies by coyly in her parlour when she hears the charmed sound, in maiden meditation, fancy free, instead of rushing up on the war-path, as she would do if the visitor were a fly or a bee. After a moment's pause, to see whether his first advances are met or not, the suitor begins tearing open the tube with his jaws, and effecting a burglarious entry into his lady's bower. In No. 13 you see him on the out-



13.—THE MALE SPIDER KNOCKS AT HIS LADY'S DOOR.

side of his inamorata's front passage, engaged in courting; he is waiting to decide whether or not his proposal is likely to be accepted. No. 14 gives you the next act of the strange small drama. The impatient suitor has now arrived at the end of the serenade, and is eagerly breaking down the wall of the tube in its upper conical portion. The view is, of course, taken from within, and the ardent lover is represented in the very act of pushing his head and fore legs through the breach he has effected, while his egg-shaped body or abdomen and his hind legs are still outside the silken inclosure.

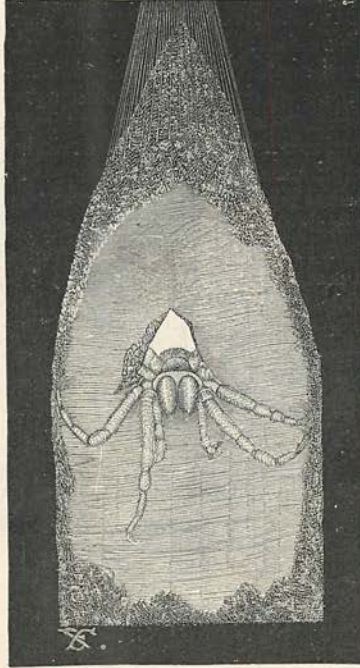
Even if the male spider succeeds in charming the lady on whom he has fixed his young affections, however, his married life, like a policeman's lot, "is not a happy one." He lives, thenceforth—as long as he can—with the wife of his blind choice (for he can never see her before he proposes to her) in the lady's tube, like a mere dependent. The owner of the house repairs the rent made by her husband's burglarious entrance, and keeps him by her side strictly "during good behaviour." As soon as she gets tired of him, she does not appeal to Sir Francis Jeune for a divorce, but summarily settles the question by devouring him off-hand. In one case noted by Mr. Enock, a male spider managed to spend no less than nine months of domestic felicity with his

powerful spouse; at the end of that period, however, his empty skin, lying sucked dry at the top of the tube, showed all too clearly what was the end of his brief dream of wedded happiness. Sometimes, it is true, an exceptionally wary

male manages to escape alive from the clutches of his irate mate; but the usual rule seems to be that his end is to be eaten. Nevertheless, though the pursuit of the well-beloved is so dangerous a pastime, the ardent young spider throws himself into the courtship with such perfect abandonment that if you attempt to dissuade him (with a straw or a pin) while he is engaged in tearing down the barrier that separates him from the lady of his young desire, he makes most ferocious bites at his would-be preserver's fingers or implements.

This is the doom of the spider whom Cupid favours—the lucky youth who has good speed in his wooing. But how about the rejected suitors? Their fate is sooner sealed. Spiderland resembles the Paradise

of the New Women: the fair sex have things there all their own way. If the lady likes the look of her admirer, she accepts him on the spot; if she doesn't, she eats him without further parley. "It is a beautiful arrangement for the good of the race," a fat spider-bride remarked to me one day. "You marry him—or you eat him. Either way, you utilize him."



14.—MARRIAGE BY BURGLARY: THE MALE SPIDER EFFECTS A FORCIBLE ENTRANCE.