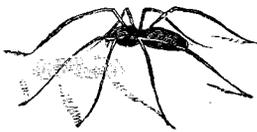


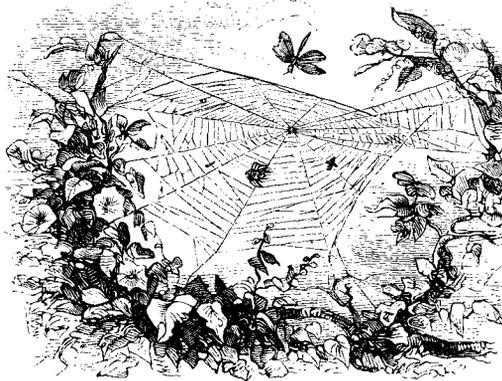
If you will examine the proofs as they exist in the unchangeable public records, you will be satisfied of this. And let us not forget that our history will ultimately be submitted to the judgment of a tribunal over which Englishmen will exercise no influence beyond that which is derived from the truth and justice of their cause, and from whose decision there will be no appeal. I allude, of course, to the collective wisdom and moral sense of future generations of men. In the case before us, however, not only are we constrained by the evidence of facts to confess that we were engaged in an aggressive war, but the multiplied avowals and confessions of its authors and partisans themselves, leave no room to doubt that they entered upon it to put down *opinions* by physical force—one of the worst, if not the very worst, of motives with which a people can embark in war.”

THE DISAGREEABLES!

“I DON’T like spiders,” said a young female; “I never did: they are such hideous, disgusting-looking creatures, the very idea of them



makes me shudder;” and she seemed ready to faint, as a “hunter” ran across the floor. Certainly, the spider is not a creature which one would desire to have as a near neighbor: it has such a plotting, creeping way, and such a sort of vicious expression about it. We like what is frank and open. In a battle between a spider and a fly, one always sides with the fly; and yet of the two, the latter is certainly the most troublesome insect to man. But the fly is frank and free in all its doings; it seeks its food and pursues its pastime openly; suspicion of others, or covert designs against them, are quite unknown to it, and there is something almost confiding in the way in which it sails around you, when a single stroke of your hand might destroy it. The spider, on



the contrary, lives by snares and plots; and is, at the same time, very designing and suspicious, both cowardly and fierce; it always moves

stealthily, as though among enemies, retreating before the least appearance of danger. Its whole appearance corresponds with its character, and it is not surprising, therefore, that while the fly is more mischievous to us than the spider, we yet look upon the former with more favor than the latter.

Nevertheless, perhaps it would be well if all who “creep about this world of ours,”

Tho’ uglier than most he be,
Were useful in their kind as he.

The spider has provided the astronomer with his measuring-line. Its web has determined the distances of the heavenly bodies, and by it the movements of what were till lately considered fixed stars have been ascertained. By its agency the comet has been tracked in its wanderings, and it is not too much to assert that it has contributed to the preservation of human life, and that by its slender cord vessels have been turned aside from dangerous rocks. It may be asked, How could the spider’s web produce such results? We reply, Inasmuch as it has led to an accuracy of observation which might never have been attained without it. The astronomer must have delicate instruments, the essential feature of which is some means of determining the precise instant when a heavenly body crosses the central line, or axis as it is called, of the telescope. For this purpose, a line of some kind, or, more correctly, a system of lines, must be stretched across the tube, in or near the focus of the eye-glass, marking precisely the axis of the instrument. A fine thread of silk or linen, or even the finest human hair, or the most delicate wire, is too coarse and uneven for the purpose, where great exactness is required. A spider’s thread is found to answer perfectly, being exceedingly fine and regular. On a minute examination, a spider will be found to have four protuberances or spinners, furnished with a large number of tubes, from each of which a very slender thread proceeds, which immediately after unites with all the other threads in one. Thus, the proper thread is formed of these four

and these again of a number of smaller

threads; and it is calculated that one spider’s thread consists of no fewer than 4000 lesser threads! And yet so delicate is it, that the eye can not detect any coarseness or roughness in it, and it is fitted for the nicest calculations! Hence it is used in nearly all the better class

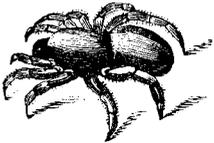


MAGNIFIED
CLAW.

of astronomical instruments; and daily, in various parts of the world, astronomers are watching the passage of the sun, the moon, the planets, and the fixed stars, behind the fine spider lines that stretch across the tubes of their telescopes. What must be the touch of the claws which guide and arrange these threads as they proceed from the spinners!

Professor Mitchell, by an invention of his own, has been able to divide a second into a thousand appreciable parts. To do this he converts time into space, seconds into inches, by causing the beats of the clock to be recorded (by means of a little magnetic telegraph) on a revolving disk, so that the distance between the marks thus made represents a second. The instant a star crosses one of the spider lines in the telescope, the observer touches the telescope key with his finger, and thus causes a mark to be made on the same revolving disk. The position of this mark among those made by the beat of the clock, gives the time of the observation, and as its distance from the preceding second's mark can be very accurately measured, the time is obtained with corresponding exactness. The great difficulty in this arrangement was to break and connect the galvanic circuit, at every stroke of the pendulum, by an apparatus so delicate as not to interfere with the regularity of the clock's motions. A very delicate wire lever was constructed, which, by being made to vibrate, alternately broke and completed the circuit. How to connect this with the clock, without interfering with its rate of motion, was the next question. A very fine human hair was tried; but it was "too rough, too coarse, too cable-like," to answer the purpose. A fibre of silk was next tried with no better success. At length a spider's thread was selected, and it worked to entire satisfaction. For twenty months that slender line has been moving to and fro in the Cincinnati Observatory, measuring off second after second on the revolving disk, and in this way exhibiting accurately the time of a multitude of astronomical observations, thus connecting, as it were, the heavens and the earth.

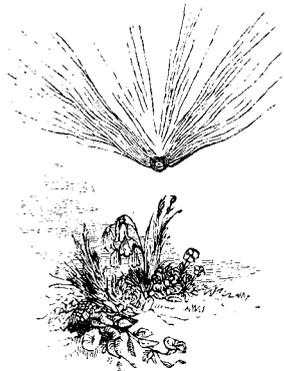
Reader, when next thou brushest the cobweb from the wall, or thine eyes light upon the circular webs, glittering with pearly dew-drops on the hedge-row and the grass by the way-side, remember what the spider's thread has accomplished.



"But, whatever you may say about the spider's web, there certainly can be nothing interesting in the spider itself." In reply, we shall give a few illustrations of the achievements and ingenious qualities of this remarkable insect. Mr. Jesse, in his "Country Life," gives an account of a spider which he observed crawling at night over the ceiling of the room in search of flies, which it devoured as it caught them, and appeared, unlike most spiders, to have no place of retreat. During the day, it remained motionless at some spot on the ceiling in the middle of three fine threads, which it had thrown out, one end of each of which had its termination at the place where the spider was resting. If one of the threads were ever so slightly touched, the spider instantly disappeared. "I at first thought," says Mr. J., "that it had suddenly let itself fall to the ground, but after a

short time I saw it in its original position. On disturbing it a second time, I was enabled to ascertain that by means of its two fore-feet, which alone suspended it from one of the threads, the insect spun itself round with so much rapidity as to become perfectly invisible. This lasted for about half a minute, when I again saw the spider hanging on the thread by its two feet. There can," he adds, "be no doubt that this power of producing instantaneous concealment must be the means of preserving the spider from becoming a prey to its many enemies, especially as it has no place to which it can retreat as many spiders have." It seems fully aware that its safety depends upon the threads it throws out, which it leaves with reluctance.

Talk we of air balloons, that little aeronaut, the gossamer spider, adopted the principle long before it was discovered by man, that a body heavier than air could be upborne by a substance lighter than that element.



THE GOSSAMER SPIDER.

It constructs its balloon of silken threads which are considerably lighter than air, and folding its legs, with its back downward, it is wafted along with ease and rapidity in its airy chariot. These creatures mount to such great altitudes that Dr. Lister, when he ascended York Minster, still saw them floating far above him.

The manœuvres of the spider to escape from an object surrounded by water are very interesting. Kirby placed a large field spider on a stick in the middle of a vessel of water. The creature, after fastening a thread to the top of the stick, crept down the side till its fore-feet touched the water. It then swung itself off the stick, which was slightly bent, and ran up the rope it had made; this it repeated several times. At length, it let itself drop from the top of the stick by two threads, each distant from the other about one-twelfth of an inch, guided as usual by one of its hind feet, one of the threads being apparently smaller than the other. Having nearly reached the water, it stopped short, and broke off close to the spinners the smallest thread, which still adhering by the end to the top of the stick, floated in the air. Soon after, Kirby discovered one of these threads extending from the top of the stick to a cabinet about eight inches distant—and lo, the spider was gone, having used it as a bridge, over which to escape the watery element.

Few facts have more excited our astonishment than the possibility of a man being able to live and move at the bottom of the ocean; this tri-

umph of the diving bell over the unfriendly element was anticipated by the water-spider. Having first spun some loose threads, and attached them to aquatic plants, it varnishes them over with a glutinous secretion resembling glass. This is its house. It then covers its body with the same substance, and beneath this coating introduces a bubble of air. Thus clothed, like a shining ball of quicksilver, it darts to the bottom, and introduces the air from under its pellicle into its habitation, repeating the operation till the lighter element excludes the heavier, and an aerial habitation is formed beneath the water. Hence the spider goes in quest of prey, and having obtained it, carries it to his sub-aquatic mansion, where it is devoured at leisure.



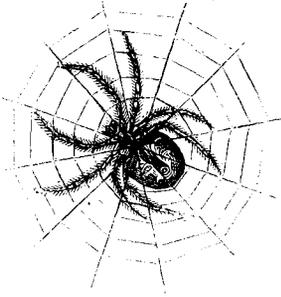
"One species of the spider," says Swainson, "closes the entrance of its retreat with a door formed of particles of earth, and closely resembling the surrounding ground. This door, or rather valve, is united by a silken hinge to the entrance, at its upper side, and is so balanced that when pushed up it shuts again by its own weight. In the forests of Brazil we once met with a most interesting little spider, which sheltered itself in the same manner. Its case was suspended in the middle of the web. Upon being disturbed, the little creature ran to it with swiftness. No sooner had it gained its retreat than the door closed, as if by a spring, and left us in silent

admiration, too great to allow us to capture the ingenious little creature for our collection."

The house-spider chooses a recess in a corner of a room or a piece of furniture: it then fixes a thread to one side, and carries it, according to the dimensions intended, to the opposite side or point, and fastens it. It then pulls it, and renders it tight; and so goes backward and forward several times, in order to make the margin strong, which will have to bear considerable stress. From this margin threads are spun in various directions, and the interstices are filled up as the spider runs along, until the whole assumes the gauze-like texture which we so often admire. The grim artificer then takes up his abode in a chamber constructed in a remote corner, which he connects with the net by "electric wires," which vibrate when booty is within his grasp, and serve as bridges across which he glides to attack his victim.

But the garden, or geometric spider is more ingenious than the house-spider. Having first finished the outline of its web, the spider fills it up by lines like the spokes of a wheel. It proceeds to the centre, and pulls each thread with its feet, in order to insure a proper tension and strength. The concentric circles are next formed. Having completed its work, it runs to the centre and bites off the point at which all the spokes were united, so as to make their security depend on the circular threads, and probably to render the web more elastic. In the circular opening thus

made, it takes its station, and watches for its prey. But it has always a chamber of retreat, where it may lurk unobserved, till the vibration of the threads connected with it indicates that prey has been taken.



GARDEN, OR GEOMETRIC SPIDER.

EXTRACTS FROM THE PORTFOLIO OF AN EXCITEMENT SEEKER.

NUMBER III.

A SEARCH ON THE BATTLE FIELD.

I PAID that man's bill very willingly; though the charges were somewhat high; and, in less than half an hour after, I was on the road toward Brussels, for the first time traveling in a foreign *chaise de poste*.

Notwithstanding the brightness of the moon on the preceding night, the weather had again become rainy, and I never remember a more melancholy drive through any country than I had that day. From Ostend to Ghent the whole country seemed beautifully cultivated, and divided into little fields, like gardens. The hedges were thick: the trees many; but, alas! the mud was deep, and the pendant branches catching the descending deluge, conveyed it to the middle of the road, bespattering the vehicle as it rolled along. On the coast of Belgium little had been seen which would give the traveler any intimation that vast events affecting not only the whole land but the whole world were in preparation: but as I approached Ghent, the scene changed. Notwithstanding the inclemency of the weather, the population seemed all in motion; and among carts and carriages and crowds of Flemings, every here and there appeared the bright uniforms of the British soldiery. The streets of the city itself were filled with a moving mass, for which there seemed hardly room enough in the houses round, and the eager activity and excitement witnessed every where, naturally roused in my heart all sorts of boyish enthusiasm. But I must not pause to dwell upon my own sensations. I was soon plunged into another Flemish inn, where the accommodation was far inferior to that which I had met with at Ostend, and the house so full that it was hardly possible to obtain either food or lodging. The guests were principally Frenchmen, who had followed Louis XVIII. in his flight from Paris; but among them I distinguished several of my own countrymen, and while I was dispatching a very humble supper, obtained after much difficulty, to my great joy I perceived a face I knew. It was that of an elderly officer whom I had seen once or twice at