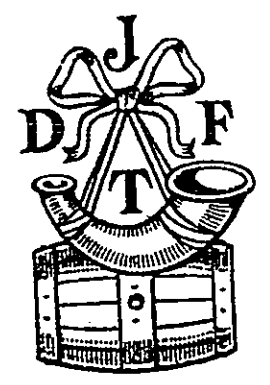


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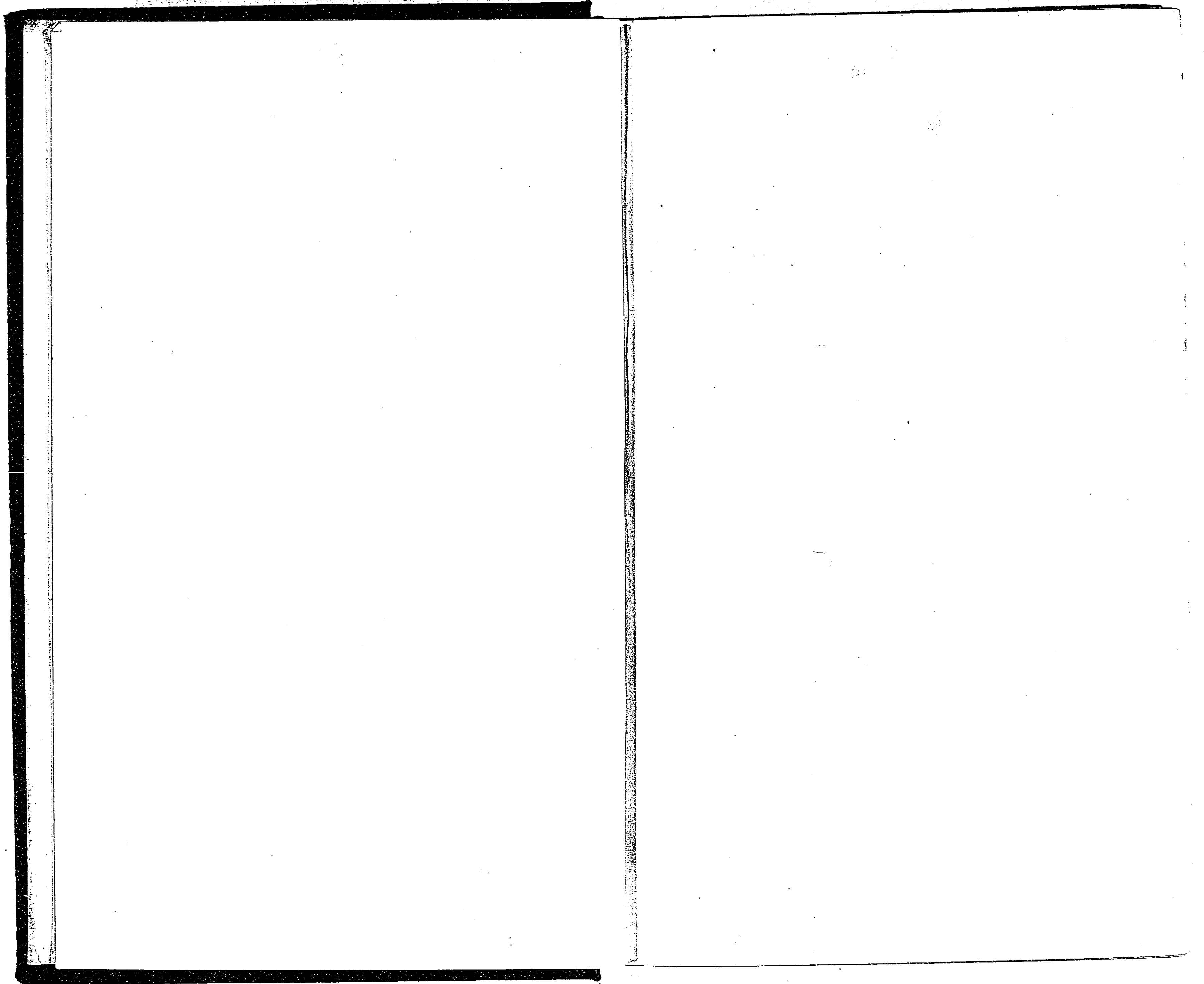
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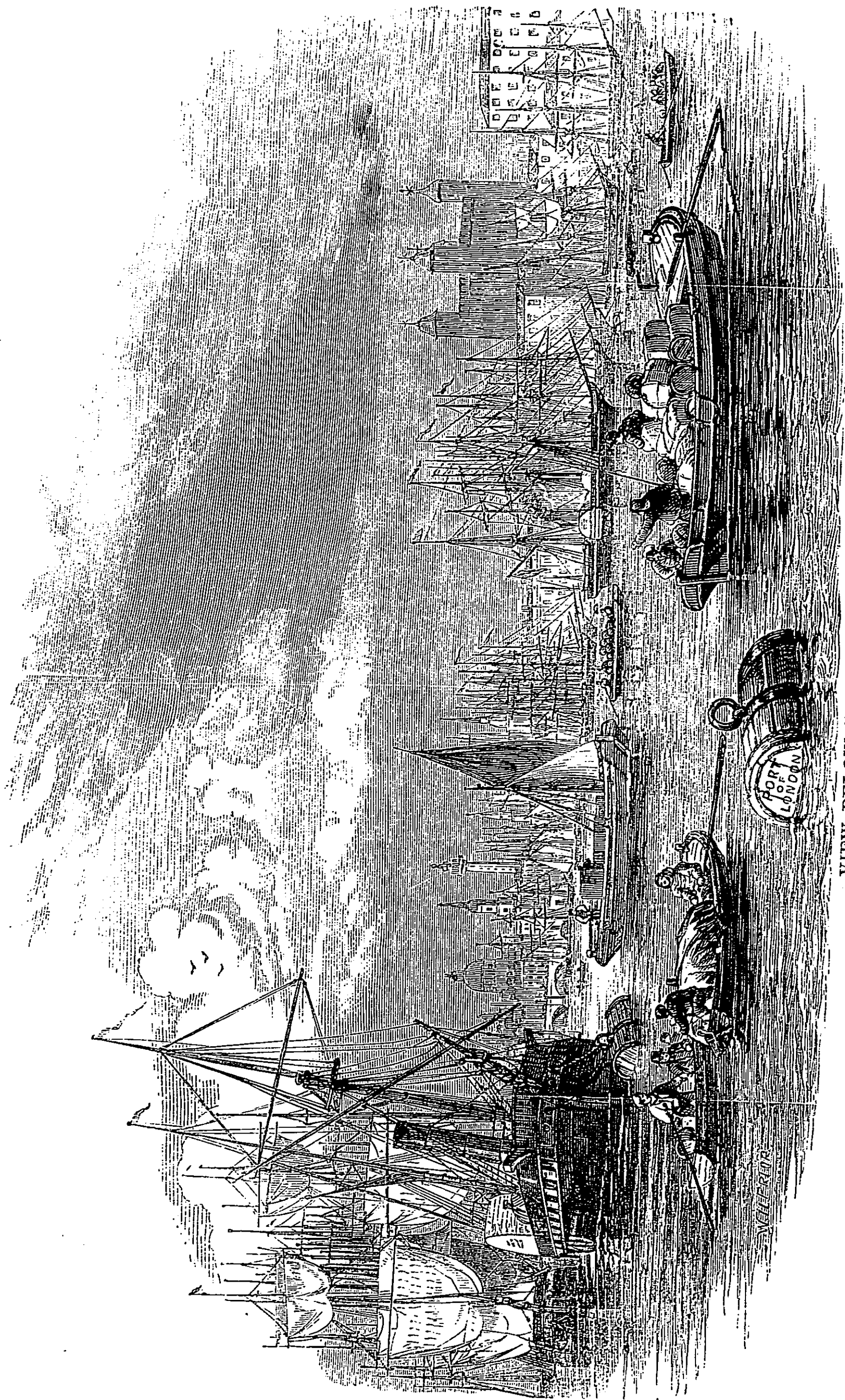


LONDON LABOUR

AND THE

LONDON POOR.





VIEW BELOW LONDON BRIDGE.

LONDON LABOUR AND THE LONDON POOR:

THE CONDITION AND EARNINGS OF

THOSE THAT WILL WORK, CANNOT WORK, AND
WILL NOT WORK.

BY

HENRY MAYHEW.

VOL. III.

LONDON:
CHARLES GRIFFIN AND COMPANY,
STATIONERS' HALL COURT.

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STREET PORTER WITH KNOT.

[From a Photograph.]

LONDON LABOUR

AND

THE LONDON POOR.

THE DESTROYERS OF VERMIN.

THE RAT-KILLER.

IN "the Brill," or rather in Brill-place, Somers'-town, there is a variety of courts branching out into Chapel-street, and in one of the most angular and obscure of these is to be found a perfect nest of rat-catchers—not altogether professional rat-catchers, but for the most part sporting mechanics and costermongers. The court is not easily to be found, being inhabited by men not so well known in the immediate neighbourhood as perhaps a mile or two away, and only to be discovered by the aid and direction of the little girl at the neighbouring cat's-meat shop.

My first experience of this court was the usual disturbance at the entrance. I found one end or branch of it filled with a mob of eager listeners, principally women, all attracted to a particular house by the sounds of quarrelling. One man gave it as his opinion that the disturbers must have earned too much money yesterday; and a woman, speaking to another who had just come out, lifting up both her hands and laughing, said, "Here they are—at it again!"

The rat-killer whom we were in search of was out at his stall in Chapel-street when we called, but his wife soon fetched him. He was a strong, sturdy-looking man, rather above the middle height, with light hair, ending in sandy whiskers, reaching under his chin, sharp deep-set eyes, a tight-skinned nose that looked as if the cuticle had been stretched to its utmost on its bridge. He was dressed in the ordinary corduroy costermonger habit, having, in addition, a dark blue Guernsey drawn over his waistcoat.

The man's first anxiety was to show us that rats were not his only diversion; and in consequence he took us into the yard of the house, where in a shed lay a bull-dog, a bull-bitch, and a litter of pups just a week old. They did

not belong to him, but he said he did a good deal in the way of curing dogs when he could get 'em.

On a shelf in this shed were two large dishes, the one containing mussels without the shells, and the other eels; these are the commodities in which he deals at present, so that he is properly what one would call a "pickled-eel seller."

We found his room on the first-floor clean and tidy, of a good size, containing two bedsteads and a large sea-chest, besides an old-fashioned, rickety, mahogany table, while in a far corner of the room, perhaps waiting for the cold weather and the winter's fire, was an arm-chair. Behind the door hung a couple of dog-leads, made of strong leather, and ornamented with brass. Against one side of the wall were two framed engravings of animals, and a sort of chart of animated nature, while over the mantel-shelf was a variety of most characteristic articles. Among these appeared a model of a bull-dog's head, cut out of sandstone, and painted in imitation of nature—a most marvellous piece of ugliness. "He was the best dog I ever see," said the host, "and when I parted with him for a ten-pound note, a man as worked in the New Road took and made this model—he was a real beauty, was that dog. The man as carved that there, didn't have no difficulty in holdin' him still, becous he was very good at that sort o' thing; and when he'd looked at anything he couldn't be off doin' it."

There were also a great many common prints about the walls, "a penny each, frame and all," amongst which were four dogs—all rattin'—a game cock, two Robinson Crusoes, and three scripture subjects.

There was, besides, a photograph of another favourite dog which he'd "had give him."

The man apologised for the bareness of the room, but said, "You see, master, my brother went over to 'Merica contracting for a railway

under Peto's, and they sends to me about a year ago, telling me to get together as many likely fellows as I could (about a dozen), and take them over as excavators; and when I was ready, to go to Peto's and get what money I wanted. But when I'd got the men, sold off all my sticks, and went for the money, they told me my brother had got plenty, and that if he wanted me he ought to be ashamed of hisself not to send some over hisself; so I just got together these few things again, and I ain't heard of nothing at all about it since."

After I had satisfied him that I was not a collector of dog-tax, trying to find out how many animals he kept, he gave me what he evidently thought was "a treat"—a peep at his bull-dog, which he fetched from upstairs, and let it jump about the room with a most unpleasant liberty, informing me the while how he had given five pound for him, and that one of the first pups he got by a bull he had got five pounds for, and that cleared him. "That Punch" (the bull-dog's name), he said, "is as quiet as a lamb—wouldn't hurt nobody; I frequently takes him through the streets without a lead. Sartinly he killed a cat the t'other afternoon, but he couldn't help that, 'cause the cat flew at him; though he took it as quietly as a man would a woman in a passion, and only went at her just to save his eyes. But you couldn't easy get him off, master, when he once got a holt. He was a good one for rats, and, he believed, the stanchest and trickiest dog in London."

When he had taken the brute upstairs, for which I was not a little thankful, the man made the following statement:—

"I ain't a Londoner. I've travelled all about the country. I'm a native of Iver, in Buckinghamshire. I've been three year here at these lodgings, and five year in London altogether up to last September.

"Before I come to London I was nothink, sir—a labouring man, an eshkewator. I come to London the same as the rest, to do anythink I could. I was at work at the eshkewations at King's Cross Station. I work as hard as any man in London, I think.

"When the station was finished, I, having a large family, thought I'd do the best I could, so I went to be foreman at the Caledonian Sawmills. I stopped there a twelvemonth; but one day I went for a load and a-half of lime, and where you fetches a load and a-half of lime they always gives you fourpence. So as I was having a pint of beer out of it, my master come by and saw me drinking, and give me the sack. Then he wanted me to ax his pardon, and I might stop; but I told him I wouldn't beg no one's pardon for drinking a pint of beer as was give me. So I left there.

"Ever since the Great Western was begun, my family has been distributed all over the country, wherever there was a railway making. My brothers were contractors for Peto, and I generally worked for my brothers; but they've

gone to America, and taken a contract for a railway at St. John's, New Brunswick, British North America. I can do anything in the eshkewating way—I don't care what it is.

"After I left the Caledonian Sawmills I went to Billingsgate, and bought anythink I could see a chance of gettin' a shilling out on, or to'ards keeping my family.

"All my lifetime I've been a-dealing a little in rats; but it was not till I come to London that I turned my mind fully to that sort of thing. My father always had a great notion of the same. We all like the sport. When any on us was in the country, and the farmers wanted us to, we'd do it. If anybody heard tell of my being an activish chap like, in that sort of way, they'd get me to come for a day or so.

"If anybody has a place that's eaten up with rats, I goes and gets some ferruts, and takes a dog, if I've got one, and manages to kill 'em. Sometimes I keep my own ferruts, but mostly I borrows them. This young man that's with me, he'll sometimes have an order to go fifty or sixty mile into the country, and then he buys his ferruts, or gets them the best way he can. They charges a good sum for the loan of 'em—sometimes as much as you get for the job.

"You can buy ferruts at Leadenhall-market for 5s. or 7s.—it all depends; you can't get them all at one price, some of 'em is real cowards to what others is; some won't even kill a rat. The way we tries 'em is, we puts 'em down anywhere, in a room maybe, with a rat, and if they smell about and won't go up to it, why they won't do; 'cause you see, sometimes the ferrut has to go up a hole, and at the end there may be a dozen or sixteen rats, and if he hasn't got the heart to tackle one on 'em, why he ain't worth a farden.

"I have kept ferruts for four or five months at a time, but they're nasty stinking things. I've had them get loose; but, bless you, they do no harm, they're as hinnocent as cats; they won't hurt nothink; you can play with them like a kitten. Some puts things down to ketch rats—sorts of pison, which is their secret—but I don't. I relies upon my dogs and ferruts, and nothink else.

"I went to destroy a few rats up at Russell-square; there was a shore come right along, and a few holes—they was swarmed with 'em there—and didn't know how it was; but the cleverest men in the world couldn't ketch many there, 'cause you see, master, they run down the hole into the shore, and no dog could get through a rat-hole.

"I couldn't get my living, though, at that business. If any gentleman comes to me and says he wants a dog cured, or a few rats destroyed, I does it.

"In the country they give you fourpence a rat, and you can kill sometimes as many in a farmyard as you can in London. The most I ever got for destroying rats was four bob, and

then I filled up the brickwork and made the holes good, and there was no more come.

"I calls myself a coster; some calls themselves general dealers, but I doesn't. I goes to market, and if one thing don't suit, why I buys another.

"I don't know whether you've heerd of it, master, or not, but I'm the man as they say kills rats—that's to say, I kills 'em like a dog. I'm almost ashamed to mention it, and I shall never do it any more, but I've killed rats for a wager often. You see it's only been done like for a lark; we've bin all together daring one another, and trying to do something as nobody else could. I remember the first time I did it for a wager, it was up at —, where they've got a pit. There was a bull-dog a killing rats, so I says,

"'Oh, that's a duffin' dog; any dog could kill quicker than him. I'd kill agan him myself.'

"Well, then they chaffed me, and I warn't goin' to be done; so I says,

"'I'll kill again that dog for a sov'rin.'

"The sov'rin was staked. I went down to kill eight rats again the dog, and I beat him. I killed 'em like a dog, with my teeth. I went down hands and knees and bit 'em. I've done it three times for a sov'rin, and I've won each time. I feels very much ashamed of it, though.

"On the hind part of my neck, as you may see, sir, there's a scar; that's where I was bit by one; the rat twisted hisself round and held on like a vice. It was very bad, sir, for a long time; it festered, and broke out once or twice, but it's all right now."

RATS.

"THE rat, though small, weak, and contemptible in its appearance, possesses properties that render it a more formidable enemy to mankind, and more injurious to the interests of society, than even those animals that are endued with the greatest strength and the most rapacious dispositions. To the one we can oppose united powers and superior arts; with regard to the other, experience has convinced us that no art can counteract the effects of its amazing fecundity, and that force is ineffectually directed against an animal possessed of such variety of means to elude it.

"There are two kinds of rats known in this country,—the black rat, which was formerly universal here, but is now very rarely seen, having been almost extirpated by the large brown kind, which is generally distinguished by the name of the *Norway rat*.

"This formidable invader is now universally diffused through the whole country, from whence every method has been tried in vain to exterminate it. This species is about nine inches long, of a light-brown colour, mixed with tawny and ash; the throat and belly are

of a dirty white, inclining to grey; its feet are naked, and of a pale flesh-colour; the tail is as long as the body, covered with minute dusky scales, thinly interspersed with short hairs. In summer it frequents the banks of rivers, ponds, and ditches, where it lives on frogs, fishes, and small animals. But its rapacity is not entirely confined to these. It destroys rabbits, poultry, young pigeons, &c. It infests the granary, the barn, and the storehouse; does infinite mischief among corn and fruit of all kinds; and not content with satisfying its hunger, frequently carries off large quantities to its hiding-place. It is a bold and fierce little animal, and when closely pursued, will turn and fasten on its assailant. Its bite is keen, and the wound it inflicts is painful and difficult to heal, owing to the form of its teeth, which are long, sharp, and of an irregular shape.

"The rat is amazingly prolific, usually producing from twelve to eighteen young ones at one time. Their numbers would soon increase beyond all power of restraint, were it not for an insatiable appetite, that impels them to destroy and devour each other. The weaker always fall a prey to the stronger; and a large male rat, which usually lives by itself, is dreaded by those of its own species as their most formidable enemy.

"It is a singular fact in the history of those animals, that the skins of such of them as have been devoured in their holes have frequently been found curiously turned inside out, every part being completely inverted, even to the ends of the toes. How the operation is performed it would be difficult to ascertain; but it appears to be effected in some peculiar mode of eating out the contents.

"Besides the numbers that perish in these unnatural conflicts, they have many fierce and inveterate enemies, that take every occasion to destroy them. Mankind have contrived various methods of exterminating these bold intruders. For this purpose traps are often found ineffectual, such being the sagacity of the animals, that when any are drawn into the snare, the others by such means learn to avoid the dangerous allurements, notwithstanding the utmost caution may have been used to conceal the design. The surest method of killing them is by poison. *Nux vomica* ground and mixed with oatmeal, with a small proportion of oil of rhodium and musk, have been found from experience to be very effectual.

"The water-rat is somewhat smaller than the Norway rat; its head larger and its nose thicker; its eyes are small; its ears short; scarcely appearing through the hair; its teeth are large, strong, and yellow; the hair on its body thicker and longer than that of the common rat, and chiefly of a dark brown colour mixed with red; the belly is grey; the tail five inches long, covered with short black hairs, and the tip with white.

"The water-rat generally frequents the sides of rivers, ponds, and ditches, where it burrows and forms its nest. It feeds on frogs, small fish and spawn, swims and dives remarkably fast, and can continue a long time under water."*

In Mr. Charles Fothergill's *Essay on the Philosophy, Study, and Use of Natural History* (1813), we find some reflections which remind us of Ray and Derham. We shall extract a few paragraphs which relate to the subject in hand.

"Nothing can afford a finer illustration of the beautiful order and simplicity of the laws which govern the creation, than the certainty, precision, and regularity with which the natural checks in the superabundant increase of each tribe of animals are managed; and every family is subject to the operation of checks peculiar to the species—whatever it may be—and established by a wise law of the Most High, to counteract the fatal effects that might arise from an ever-active populatative principle. It is by the admirable disposition of these checks, the contemplation of which is alone sufficient to astonish the loftiest and most comprehensive soul of man, that the whole system of animal life, in all its various forms, is kept in due strength and equilibrium.

"This subject is worthy of the naturalist's most serious consideration."

"This great law," Mr. F. proceeds, "pervades and affects the whole animal creation, and so active, unwearied, and rapid is the principle of increase over the means of subsistence amongst the inferior animals, that it is evident whole genera of carnivorous beings amongst beasts, birds, fish, reptiles, and insects, have been created for the *express purpose* (?) of suppressing the redundancy of others, and restraining their numbers within proper limits.

"But even the natural checks are insufficient to restrain the effects of a too-rapid populatative principle in some animals, which have, therefore, certain destructive propensities given to them by the Creator, that operate powerfully upon themselves and their offspring, as may be particularly observed in the natural history of the *rabbit*, but which is still more evidently and strikingly displayed in the life and economy of the *rat*.

"It has been calculated by Mr. Pennant, and there can be no doubt of the truth of the statement, that the astonishing number of 1,274,840 may be produced from a single pair of rabbits in the short space of four years, as these animals in their wild state breed seven times in a-year, and generally produce eight young ones each time. They are capable of procreation at the age of five or six months, and the doe carries her burthen no more than thirty days.

"But the principle of increase is much

* Bewick's *History of Quadrupeds*, 1790, 354 et seq.

more powerful, active, and effective in the common grey rat than in any other animal of equal size. This destructive animal is continually under the *furor* of animal love. The female carries her young for one month only; and she seldom or never produces a less number than twelve, but sometimes as many as eighteen at a litter—the medium number may be taken for an average—and the period of gestation, though of such short continuance, is confined to no particular season of the year.

"The embraces of the male are admitted immediately after the birth of the vindictive progeny; and it is a fact which I have ascertained beyond any doubt, that the female suckles her young ones almost to the very moment when another litter is dropping into the world as their successors.

"A celebrated Yorkshire rat-catcher whom I have occasionally employed, one day killed a large female rat, that was in the act of suckling twelve young ones, which had attained a very considerable growth; nevertheless, upon opening her swollen body, he found thirteen quick young, that were within a few days of their birth. Supposing, therefore, that the rat produces ten litters in the course of a year, and that no check on their increase should operate destructively for the space of four years, a number not far short of 3,000,000 might be produced from a single pair in that time!

"Now, the consequence of such an active and productive principle of increase, if suffered continually to operate without check, would soon be fatally obvious. We have heard of fertile plains devastated, and large towns undermined, in Spain, by rabbits; and even that a military force from Rome was once requested of the great Augustus to suppress the astonishing numbers of the same animal overrunning the island of Majorca and Minorca. This circumstance is recorded by Pliny.

"If, therefore, rats were suffered to multiply without the restraint of the most powerful and positive natural checks, not only would fertile plains and rich cities be undermined and destroyed, but the whole surface of the earth in a very few years would be rendered a barren and hideous waste, covered with myriads of famished grey rats, against which man himself would contend in vain. But the same Almighty Being who perceived a necessity for their existence, has also restricted their numbers within proper bounds, by creating to them many very powerful enemies, and still more effectually by establishing a propensity in themselves, the gratification of which has continually the effect of lessening their numbers, even more than any of their foreign enemies.

"The male rat has an insatiable thirst for the blood of his own offspring; the female, being aware of this passion, hides her young in such secret places as she supposes likely to escape notice or discovery, till her progeny are old enough to venture forth and stand upon

their own energies; but, notwithstanding this precaution, the male rat frequently discovers them, and destroys as many as he can; nor is the defence of the mother any very effectual protection, since she herself sometimes falls a victim to her temerity and her maternal tenderness.

"Besides this propensity to the destruction of their own offspring, when other food fails them, rats hunt down and prey upon each other with the most ferocious and desperate avidity, inasmuch as it not unfrequently happens, in a colony of these destructive animals, that a single male of more than ordinary powers, after having overcome and devoured all competitors with the exception of a few females, reigns the sole bloody and much-dreaded tyrant over a considerable territory, dwelling by himself in some solitary hole, and never appearing abroad without spreading terror and dismay even amongst the females whose embraces he seeks. In this relentless and bloody character may be found one of the most powerful and positive of the checks which operate to the repression of this species within proper bounds; a character which attaches, in a greater or less degree, to the whole *Mus* genus, and in which we may readily perceive the cause of the extirpation of the old black rats of England, *Mus rathus*; for the large grey rats, having superior bodily powers united to the same carnivorous propensities, would easily conquer and destroy their black opponents wherever they could be found, and whenever they met to dispute the title of possession or of sovereignty."

When the young rats begin to issue from their holes, the mother watches, defends, and even fights with the cats, in order to save them. A large rat is more mischievous than a young cat, and nearly as strong: the rat uses her fore-teeth, and the cat makes most use of her claws; so that the latter requires both to be vigorous and accustomed to fight, in order to destroy her adversary.

The weasel, though smaller, is a much more dangerous and formidable enemy to the rat, because it can follow it into its retreat. Its strength being nearly equal to that of the rat, the combat often continues for a long time, but the method of using their arms by the opponents is very different. The rat wounds only by repeated strokes with his fore-teeth, which are better formed for gnawing than biting; and, being situated at the extremity of the lever or jaw, they have not much force. But the weasel bites cruelly with the whole jaw, and, instead of letting go its hold, sucks the blood from the wounded part, so that the rat is always killed.

A NIGHT AT RAT-KILLING.

CONSIDERING the immense number of rats which form an article of commerce with many of the lower orders, whose business it is to

keep them for the purpose of rat matches, I thought it necessary, for the full elucidation of my subject, to visit the well-known public-house in London, where, on a certain night in the week, a pit is built up, and regular rat-killing matches take place, and where those who have sporting dogs, and are anxious to test their qualities, can, after such matches are finished, purchase half a dozen or a dozen rats for them to practise upon, and judge for themselves of their dogs' "performances."

To quote the words printed on the proprietor's card, "he is always at his old house at home, as usual, to discuss the FANCY generally."

I arrived at about eight o'clock at the tavern where the performances were to take place. I was too early, but there was plenty to occupy my leisure in looking at the curious scene around me, and taking notes of the habits and conversation of the customers who were flocking in.

The front of the long bar was crowded with men of every grade of society, all smoking, drinking, and talking about dogs. Many of them had brought with them their "fancy" animals, so that a kind of "canine exhibition" was going on; some carried under their arm small bull-dogs, whose flat pink noses rubbed against my arm as I passed; others had Skye-terriers, curled up like balls of hair, and sleeping like children, as they were nursed by their owners. The only animals that seemed awake, and under continual excitement, were the little brown English terriers, who, despite the neat black leathern collars by which they were held, struggled to get loose, as if they smelt the rats in the room above, and were impatient to begin the fray.

There is a business-like look about this tavern which at once lets you into the character of the person who owns it. The drinking seems to have been a secondary notion in its formation, for it is a low-roofed room without any of those adornments which are now generally considered so necessary to render a public-house attractive. The tubs where the spirits are kept are blistered with the heat of the gas, and so dirty that the once brilliant gilt hoops are now quite black.

Sleeping on an old hall-chair lay an enormous white bulldog, "a great beauty," as I was informed, with a head as round and smooth as a clenched boxing-glove, and seemingly too large for the body. Its forehead appeared to protrude in a manner significant of water on the brain, and almost overhung the short nose, through which the animal breathed heavily. When this dog, which was the admiration of all beholders, rose up, its legs were as bowed as a tailor's, leaving a peculiar pear-shaped opening between them, which, I was informed, was one of its points of beauty. It was a white dog, with a sore look, from its being peculiarly pink round the eyes, nose, and indeed at all the edges of its body.

On the other side of the fire-place was a white bull-terrier dog, with a black patch over the eye, which gave him rather a disreputable look. This animal was watching the movements of the customers in front, and occasionally, when the entrance-door was swung back, would give a growl of inquiry as to what the fresh-comer wanted. The proprietor was kind enough to inform me, as he patted this animal's ribs, which showed like the hoops on a butter-firkin, that he considered there had been a "little of the greyhound in some of his back generations."

About the walls were hung clusters of black leather collars, adorned with brass rings and clasps, and pre-eminent was a silver dog-collar, which, from the conversation of those about me, I learnt was to be the prize in a rat-match to be "killed for" in a fortnight's time.

As the visitors poured in, they, at the request of the proprietor "not to block up the bar," took their seats in the parlour, and, accompanied by a waiter, who kept shouting, "Give your orders, gentlemen," I entered the room.

I found that, like the bar, no pains had been taken to render the room attractive to the customers, for, with the exception of the sporting pictures hung against the dingy paper, it was devoid of all adornment. Over the fire-place were square glazed boxes, in which were the stuffed forms of dogs famous in their day. Pre-eminent among the prints was that representing the "Wonder" Tiny, "five pounds and a half in weight," as he appeared killing 200 rats. This engraving had a singular look, from its having been printed upon a silk handkerchief. Tiny had been a great favourite with the proprietor, and used to wear a lady's bracelet as a collar.

Among the stuffed heads was one of a white bull-dog, with tremendous glass eyes sticking out, as if it had died of strangulation. The proprietor's son was kind enough to explain to me the qualities that had once belonged to this favourite. "They've spoilt her in stuffing, sir," he said; "made her so short in the head; but she was the wonder of her day. There wasn't a dog in England as would come nigh her. There's her daughter," he added, pointing to another head, something like that of a seal, "but she wasn't reckoned half as handsome as her mother, though she was very much admired in her time."

"That there is a dog," he continued, pointing to one represented with a rat in its mouth, "it was as good as any in England, though it's so small. I've seen her kill a dozen rats almost as big as herself, though they killed her at last; for sewer-rats are dreadful for giving dogs canker in the mouth, and she wore herself out with continually killing them, though we always rinsed her mouth out well with peppermint and water while she were at work. When rats bite they are pisonous, and

an ulcer is formed, which we are obleeged to lance; that's what killed her."

The company assembled in "the parlour" consisted of sporting men, or those who, from curiosity, had come to witness what a rat-match was like. Seated at the same table, talking together, were those dressed in the costermonger's suit of corduroy, soldiers with their uniforms carelessly unbuttoned, coachmen in their livery, and tradesmen who had slipped on their evening frock-coats, and run out from the shop to see the sport.

The dogs belonging to the company were standing on the different tables, or tied to the legs of the forms, or sleeping in their owners' arms, and were in turn minutely criticised—their limbs being stretched out as if they were being felt for fractures, and their mouths looked into, as if a dentist were examining their teeth. Nearly all the little animals were marked with scars from bites. "Pity to bring him up to rat-killing," said one, who had been admiring a fierce-looking bull-terrier, although he did not mention at the same time what line in life the little animal ought to pursue.

At another table one man was declaring that his pet animal was the exact image of the celebrated rat-killing dog "Billy," at the same time pointing to the picture against the wall of that famous animal, "as he performed his wonderful feat of killing 500 rats in five minutes and a half."

There were amongst the visitors some French gentlemen, who had evidently witnessed nothing of the kind before; and whilst they endeavoured to drink their hot gin and water, they made their interpreter translate to them the contents of a large placard hung upon a hatpeg, and headed—

"EVERY MAN HAS HIS FANCY.

RATTING SPORTS IN REALITY."

About nine o'clock the proprietor took the chair in the parlour, at the same time giving the order to "shut up the shutters in the room above, and light up the pit." This announcement seemed to rouse the spirits of the impatient assembly, and even the dogs tied to the legs of the tables ran out to the length of their leathern thongs, and their tails curled like eels, as if they understood the meaning of the words.

"Why, that's the little champion," said the proprietor, patting a dog with thighs like a grasshopper, and whose mouth opened back to its ears. "Well, it is a beauty! I wish I could gammon you to take a 'fiver' for it." Then looking round the room, he added, "Well, gents, I'm glad to see you look so comfortable."

The performances of the evening were somewhat hurried on by the entering of a young gentleman, whom the waiters called "Cap'an."

"Now, Jem, when is this match coming off?" the Captain asked impatiently; and despite

the assurance that they were getting ready, he threatened to leave the place if kept waiting much longer. This young officer seemed to be a great "fancier" of dogs, for he made the round of the room, handling each animal in its turn, feeling and squeezing its feet, and scrutinising its eyes and limbs with such minuteness, that the French gentlemen were forced to inquire who he was.

There was no announcement that the room above was ready, though everybody seemed to understand it; for all rose at once, and mounting the broad wooden staircase, which led to what was once the "drawing-room," dropped their shillings into the hand of the proprietor, and entered the rat-killing apartment.

"The pit," as it is called, consists of a small circus, some six feet in diameter. It is about as large as a centre flower-bed, and is fitted with a high wooden rim that reaches to elbow height. Over it the branches of a gas lamp are arranged, which light up the white painted floor, and every part of the little arena. On one side of the room is a recess, which the proprietor calls his "private box," and this apartment the Captain and his friend soon took possession of, whilst the audience generally clambered upon the tables and forms, or hung over the sides of the pit itself.

All the little dogs which the visitors had brought up with them were now squalling and barking, and struggling in their masters' arms, as if they were thoroughly acquainted with the uses of the pit; and when a rusty wire cage of rats, filled with the dark moving mass, was brought forward, the noise of the dogs was so great that the proprietor was obliged to shout out—"Now, you that have dogs do make 'em shut up."

The Captain was the first to jump into the pit. A man wanted to sell him a bull-terrier, spotted like a fancy rabbit, and a dozen of rats was the consequent order.

The Captain preferred pulling the rats out of the cage himself, laying hold of them by their tails and jerking them into the arena. He was cautioned by one of the men not to let them bite him, for "believe me," were the words, "you'll never forget, Cap'an; these 'ere are none of the cleanest."

Whilst the rats were being counted out, some of those that had been taken from the cage ran about the painted floor and climbed up the young officer's legs, making him shake them off and exclaim, "Get out, you varmint!" whilst others of the ugly little animals sat upon their hind legs, cleaning their faces with their paws.

When the dog in question was brought forth and shown the dozen rats, he grew excited, and stretched himself in his owner's arms, whilst all the other animals joined in a full chorus of whining.

"Chuck him in," said the Captain, and over went the dog; and in a second the rats were

running round the circus, or trying to hide themselves between the small openings in the boards round the pit.

Although the proprietor of the dog endeavoured to speak up for it, by declaring "it was a good 'un, and a very pretty performer," still it was evidently not worth much in a rat-killing sense; and if it had not been for his "second," who beat the sides of the pit with his hand, and shouted "Hi! hi! at 'em!" in a most bewildering manner, we doubt if the terrier would not have preferred leaving the rats to themselves, to enjoy their lives. Some of the rats, when the dog advanced towards them, sprang up in his face, making him draw back with astonishment. Others, as he bit them, curled round in his mouth and fastened on his nose, so that he had to carry them as a cat does its kittens. It also required many shouts of "Drop it—dead 'un," before he would leave those he had killed.

We cannot say whether the dog was eventually bought; but from its owner's exclaiming, in a kind of apologetic tone, "Why, he never saw a rat before in all his life," we fancy no dealings took place.

The Captain seemed anxious to see as much sport as he could, for he frequently asked those who carried dogs in their arms whether "his little 'un would kill," and appeared sorry when such answers were given as—"My dog's mouth's a little out of order, Cap'an," or "I've only tried him at very small 'uns."

One little dog was put in the pit to amuse himself with the dead bodies. He seized hold of one almost as big as himself, shook it furiously till the head thumped the floor like a drumstick, making those around shout with laughter, and causing one man to exclaim, "He's a good 'un at shaking heads and tails, ain't he?"

Preparations now began for the grand match of the evening, in which fifty rats were to be killed. The "dead 'uns" were gathered up by their tails and flung into the corner. The floor was swept, and a big flat basket produced, like those in which chickens are brought to market, and under whose iron wire top could be seen small mounds of closely packed rats.

This match seemed to be between the proprietor and his son, and the stake to be gained was only a bottle of lemonade, of which the father stipulated he should have first drink.

It was strange to observe the daring manner in which the lad introduced his hand into the rat cage, sometimes keeping it there for more than a minute at a time, as he fumbled about and stirred up with his fingers the living mass, picking out, as he had been requested, "only the big 'uns."

When the fifty animals had been flung into the pit, they gathered themselves together into a mound which reached one-third up the sides, and which reminded one of the heap of hair-sweepings in a barber's shop after a heavy day's cutting. These were all sewer and water-

ditch rats, and the smell that rose from them was like that from a hot drain.

The Captain amused himself by flicking at them with his pocket handkerchief, and offering them the lighted end of his cigar, which the little creatures tamely snuffed at, and drew back from, as they singed their noses.

It was also a favourite amusement to blow on the mound of rats, for they seemed to dislike the cold wind, which sent them fluttering about like so many feathers; indeed, whilst the match was going on, whenever the little animals collected together, and formed a barricade as it were to the dog, the cry of "Blow on 'em! blow on 'em!" was given by the spectators, and the dog's second puffed at them as if extinguishing a fire, when they would dart off like so many sparks.

The company was kept waiting so long for the match to begin that the impatient Captain again threatened to leave the house, and was only quieted by the proprietor's reply of "My dear friend, be easy, the boy's on the stairs with the dog;" and true enough we shortly heard a wheezing and a screaming in the passage without, as if some strong-winded animal were being strangled, and presently a boy entered, carrying in his arms a bull-terrier in a perfect fit of excitement, foaming at the mouth and stretching its neck forward, so that the collar which held it back seemed to be cutting its throat in two.

The animal was nearly mad with rage—scratching and struggling to get loose. "Lay hold a little closer up to the head or he'll turn round and nip yer," said the proprietor to his son.

Whilst the gasping dog was fastened up in a corner to writhe its impatience away, the landlord made inquiries for a stop-watch, and also for an umpire to decide, as he added, "whether the rats were dead or alive when they're killed," as Paddy says."

When all the arrangements had been made the "second" and the dog jumped into the pit, and after "letting him see 'em a bit," the terrier was let loose.

The moment the dog was "free," he became quiet in a most business-like manner, and rushed at the rats, burying his nose in the mound till he brought out one in his mouth. In a short time a dozen rats with wetted necks were lying bleeding on the floor, and the white paint of the pit became grained with blood.

In a little time the terrier had a rat hanging to his nose, which, despite his tossing, still held on. He dashed up against the sides, leaving a patch of blood as if a strawberry had been smashed there.

"He doesn't squeal, that's one good thing," said one of the lookers-on.

As the rats fell on their sides after a bite they were collected together in the centre, where they lay quivering in their death-gasps!

"Hi, Butcher! hi, Butcher!" shouted the second, "good dog! bur-r-r-r-h!" and he beat the sides of the pit like a drum till the dog flew about with new life.

"Dead 'un! drop it!" he cried, when the terrier "nosed" a rat kicking on its side, as it slowly expired of its broken neck.

"Time!" said the proprietor, when four of the eight minutes had expired, and the dog was caught up and held panting, his neck stretched out like a serpent's, staring intently at the rats which still kept crawling about.

The poor little wretches in this brief interval, as if forgetting their danger, again commenced cleaning themselves, some nibbling the ends of their tails, others hopping about, going now to the legs of the lad in the pit, and sniffing at his trousers, or, strange to say, advancing, smelling, to within a few paces of their enemy the dog.

The dog lost the match, and the proprietor, we presume, honourably paid the bottle of lemonade to his son. But he was evidently displeased with the dog's behaviour, for he said, "He won't do for me—he's not one of my sort! Here, Jim, tell Mr. G. he may have him if he likes; I won't give him house room."

A plentiful shower of halfpence was thrown into the pit as a reward for the second who had backed the dog.

A slight pause now took place in the proceedings, during which the landlord requested that the gentlemen "would give their minds up to drinking; you know the love I have for you," he added jocularly, "and that I don't care for any of you;" whilst the waiter accompanied the invitation with a cry of "Give your orders, gentlemen," and the lad with the rats asked if "any other gentleman would like any rats."

Several other dogs were tried, and amongst them one who, from the size of his stomach, had evidently been accustomed to large dinners, and looked upon rat-killing as a sport and not as a business. The appearance of this fat animal was greeted with remarks such as "Why don't you feed your dog?" and "You shouldn't give him more than five meals a day."

Another impatient bull-terrier was thrown into the midst of a dozen rats. He did his duty so well, that the admiration of the spectators was focussed upon him.

"Ah," said one, "he'd do better at a hundred than twelve;" whilst another observed, "Rat-killing's his game, I can see;" while the landlord himself said, "He's a very pretty creature, and I'd back him to kill against anybody's dog at eight and a half or nine."

The Captain was so startled with this terrier's "cleverness," that he vowed that if she could kill fifteen in a minute "he'd give a hundred guineas for her."

It was nearly twelve o'clock before the evening's performance concluded. Several of the

spectators tried their dogs upon two or three rats, either the biggest or the smallest that could be found: and many offers as to what "he wanted for the dog," and many inquiries as to "who was its father," were made before the company broke up.

At last the landlord, finding that no "gentleman would like a few rats," and that his exhortations to "give their minds up to drinking" produced no further effect upon the company, spoke the epilogue of the rat tragedies in these words;—

"Gentlemen, I give a very handsome solid silver collar to be killed for next Tuesday. Open to all the world, only they must be novice dogs, or at least such as is not considered *phenomenons*. We shall have plenty of sport, gentlemen, and there will be loads of rat-killing. I hope to see all my kind friends, not forgetting your dogs, likewise; and may they be like the Irishman all over, who had good trouble to catch and kill 'em, and took good care they didn't come to life again. Gentlemen, there is a good parlour down-stairs, where we meets for harmony and entertainment."

JIMMY SHAW.

The proprietor of one of the largest sporting public-houses in London, who is celebrated for the rat-matches which come off weekly at his establishment, was kind enough to favour me with a few details as to the quality of those animals which are destroyed in his pit. His statement was certainly one of the most curious that I have listened to, and it was given to me with a readiness and a courtesy of manner such as I have not often met with during my researches. The landlord himself is known in pugilistic circles as one of the most skilful boxers among what is termed the "light weights."

His statement is curious, as a proof of the large trade which is carried on in these animals, for it would seem that the men who make a business of catching rats are not always employed as "exterminators," for they make a good living as "purveyors" for supplying the demands of the sporting portion of London.

"The poor people," said the sporting landlord, "who supply me with rats, are what you may call barn-door labouring poor, for they are the most ignorant people I ever come near. Really you would not believe people could live in such ignorance. Talk about Latin and Greek, sir, why English is Latin to them—in fact, I have a difficulty to understand them myself. When the harvest is got in, they go hunting the hedges and ditches for rats. Once the farmers had to pay 2*d.* a-head for all rats caught on their grounds, and they nailed them up against the wall. But now that the rat-ketchers can get 3*d.* each by bringing the vermin up to town, the farmers don't pay

them anything for what they ketch, but merely give them permission to hunt them in their stacks and barns, so that they no longer get their 2*d.* in the country, though they get their 3*d.* in town.

"I have some twenty families depending upon me. From Clavering, in Essex, I suppose I have hundreds of thousands of rats sent to me in wire cages fitted into baskets. From Enfield I have a great quantity, but the ketchers don't get them all there, but travel round the country for scores of miles, for you see 3*d.* a-head is money; besides, there are some liberal farmers who will still give them a halfpenny a-head into the bargain. Enfield is a kind of head-quarters for rat-ketchers.

"It's dangerous work, though, for you see there is a wonderful deal of difference in the specie of rats. The bite of sewer or water-ditch rats is very bad. The water and ditch rat lives on filth, but your barn-rat is a plump fellow, and he lives on the best of everything. He's well off. There's as much difference between the barn and sewer-rats as between a brewer's horse and a costermonger's. Sewer-rats are very bad for dogs, their coats is poisonous.

"Some of the rats that are brought to me are caught in the warehouses in the City. Wherever there is anything in the shape of provisions, there you are sure to find Mr. Rat an intruder. The ketchers are paid for ketching them in the warehouses, and then they are sold to me as well, so the men must make a good thing of it. Many of the more courageous kind of warehousemen will take a pleasure in hunting the rats themselves.

"I should think I buy in the course of the year, on the average, from 300 to 700 rats a-week." (Taking 500 as the weekly average, this gives a yearly purchase of 26,000 live rats.) "That's what I kill taking all the year round, you see. Some first-class chaps will come here in the day-time, and they'll try their dogs. They'll say, 'Jimmy, give the dog 100.' After he's polished them off they'll say, perhaps, 'Hang it, give him another 100.' Bless you!" he added, in a kind of whisper, "I've had noble ladies and titled ladies come here to see the sport—on the quiet, you know. When my wife was here they would come regular, but now she's away they don't come so often.

"The largest quantity of rats I've bought from one man was five guineas' worth, or thirty-five dozen at 3*d.* a-head, and that's a load for a horse. This man comes up from Clavering in a kind of cart, with a horse that's a regular phenomena, for it ain't like a beast nor nothing. I pays him a good deal of money at times, and I'm sure I can't tell what he does with it; but they *do* tell me that he deals in old iron, and goes buying it up, though he don't seem to have much of a head-piece for that sort of fancy neither.

"During the harvest-time the rats run scarcer you see, and the ketcher turns up rat-

ketching for harvest work. After the harvest rats gets plentiful again.

"I've had as many as 2000 rats in this very house at one time. They'll consume a sack of barley-meal a week, and the brutes, if you don't give 'em good stuff, they'll eat one another, hang 'em!"

"I'm the oldest canine fancier in London, and I'm the first that started ratting; in fact, I know I'm the oldest caterer in rat-killing in the metropolis. I began as a lad, and I had many noble friends, and was as good a man then as I am now. In fact, when I was seventeen or eighteen years of age I was just like what my boy is now. I used at that time to be a great public character, and had many liberal friends—very liberal friends. I used to give them rat sports, and I have kept to it ever since. My boy can handle rats now just as I used to then.

"Have I been bit by them? Aye, hundreds of times. Now, some people will say, 'Rub yourself over with caraway and stuff, and then rats won't bite you.' But I give you my word and honour it's all nonsense, sir.

"As I said, I was the first in London to give rat sports, and I've kept to it ever since. Bless you, there's nothing that a rat won't bite through. I've seen my lads standing in the pit with the rats running about them, and if they haven't taken the precaution to tie their trousers round with a bit of string at the bottom, they'd have as many as five or six rats run up their trouser-legs. They'll deliberately take off their clothes and pick them out from their shirts, and bosoms, and breeches. Some people is amused, and others is horror-struck. People have asked them whether they ain't rubbed? They'll say 'Yes,' but that's as a lark; 'cos, sometimes when my boy has been taking the rats out of the cage, and somebody has taken his attention off, talking to him, he has had a bite, and will turn to me with his finger bleeding, and say, 'Yes, I'm rubbed, ain't I, father? look here!'

"A rat's bite is very singular, it's a three-cornered one, like a leech's, only deeper, of course, and it will bleed for ever such a time. My boys have sometimes had their fingers go dreadfully bad from rat-bites, so that they turn all black and putrid like—aye, as black as the horse-hair covering to my sofa. People have said to me, 'You ought to send the lad to the hospital, and have his finger took off;' but I've always left it to the lads, and they've said, 'Oh, don't mind it, father; it'll get all right by and by.' And so it has.

"The best thing I ever found for a rat-bite was the thick bottoms of porter casks put on as a poultice. The only thing you can do is to poultice, and these porter bottoms is so powerful and draws so, that they'll actually take thorns out of horses' hoofs and feet after steeplechasing.

"In handling rats, it's nothing more in the world but nerve that does it. I should faint

now if a rat was to run up my breeches, but I have known the time when I've been kivered with 'em.

"I generally throw my dead rats away now; but two or three years since my boys took the idea of skinning them into their heads, and they did about 300 of them, and their skins was very promising. The boys was, after all, obliged to give them away to a furrier, for my wife didn't like the notion, and I said, 'Throw them away;' but the idea strikes me to be something, and one that is lost sight of, for the skins are warm and handsome-looking—a beautiful grey.

"There's nothing turns so quickly as dead rats, so I am obliged to have my dustmen come round every Wednesday morning; and regularly enough they call too, for they know where there is a bob and a pot. I generally prefers using the authorised dustmen, though the others come sometimes—the flying dustmen they call 'em—and if they're first, they has the job.

"It strikes me, though, that to throw away so many valuable skins is a good thing lost sight of.

"The rats want a deal of watching, and a deal of sorting. Now you can't put a sewer and a barn-rat together, it's like putting a Roossian and a Turk under the same roof.

"I can tell a barn-rat from a ship-rat or a sewer-rat in a minute, and I have to look over my stock when they come in, or they'd fight to the death. There's six or seven different kinds of rats, and if we don't sort 'em they tear one another to pieces. I think when I have a number of rats in the house, that I am a lucky man if I don't find a dozen dead when I go up to them in the morning; and when I tell you that at times—when I've wanted to make up my number for a match—I've given 21s. for twenty rats, you may think I lose something that way every year. Rats, even now, is occasionally 6s. a-dozen; but that, I think, is most inconsistent.

"If I had my will, I wouldn't allow sewer ratting, for the rats in the shores eats up a great quantity of sewer filth and rubbish, and is another specie of scavenger in their own way."

After finishing his statement, the landlord showed me some very curious specimens of tame rats—some piebald, and others quite white, with pink eyes, which he kept in cages in his sitting-room. He took them out from their cages, and handled them without the least fear, and even handled them rather rudely, as he showed me the peculiarities of their colours; yet the little tame creatures did not once attempt to bite him. Indeed, they appeared to have lost the notion of regaining their liberty, and when near their cages struggled to return to their nests.

In one of these boxes a black and a white rat were confined together, and the proprietor, pointing to them, remarked, "I hope they'll

breed, for though white rats is very scarce, only occurring in fact by a freak of nature, I fancy I shall be able, with time and trouble, to breed 'em myself. The old English rat is a small jet-black rat; but the first white rat as I heard of come out of a burial-ground. At one time I bred rats very largely, but now I leaves that fancy to my boys, for I've as much as I can do continuing to serve my worthy patrons."

JACK BLACK.

As I wished to obtain the best information about rat and vermin destroying, I thought I could not do better now than apply to that eminent authority "the Queen's ratcatcher," and accordingly I sought an interview with Mr. "Jack" Black, whose hand-bills are headed—"V.R. Rat and mole destroyer to Her Majesty."

I had already had a statement from the royal bug-destroyer relative to the habits and means of exterminating those offensive vermin, and I was desirous of pairing it with an account of the personal experience of the Queen of England's ratcatcher.

In the sporting world, and among his regular customers, the Queen's ratcatcher is better known by the name of Jack Black. He enjoys the reputation of being the most fearless handler of rats of any man living, playing with them—as one man expressed it to me—"as if they were so many blind kittens."

The first time I ever saw Mr. Black was in the streets of London, at the corner of Hart-street, where he was exhibiting the rapid effects of his rat poison, by placing some of it in the mouth of a living animal. He had a cart then with rats painted on the panels, and at the tailboard, where he stood lecturing, he had a kind of stage rigged up, on which were cages filled with rats, and pills, and poison packages.

Here I saw him dip his hand into this cage of rats and take out as many as he could hold, a feat which generally caused an "oh!" of wonder to escape from the crowd, especially when they observed that his hands were un-bitten. Women more particularly shuddered when they beheld him place some half-dozen of the dusty-looking brutes within his shirt next his skin; and men swore the animals had been tamed, as he let them run up his arms like squirrels, and the people gathered round beheld them sitting on his shoulders cleaning their faces with their front-paws, or rising up on their hind legs like little kangaroos, and sniffing about his ears and cheeks.

But those who knew Mr. Black better, were well aware that the animals he took up in his hand were as wild as any of the rats in the sewers of London, and that the only mystery in the exhibition was that of a man having courage enough to undertake the work.

I afterwards visited Jack Black at his house in Battersea. I had some difficulty in dis-

covering his country residence, and was indebted to a group of children gathered round and staring at the bird-cage in the window of his cottage for his address. Their exclamations of delight at a grey parrot climbing with his beak and claws about the zinc wires of his cage, and the hopping of the little linnets there, in the square boxes scarcely bigger than a brick, made me glance up at the door to discover who the bird-fancier was; when painted on a bit of zinc—just large enough to fit the shaft of a tax cart—I saw the words, "J. Black, Rat Destroyer to Her Majesty," surmounted by the royal initials, V.R., together with the painting of a white rat.

Mr. Black was out "sparrer ketching," as his wife informed me, for he had an order for three dozen, "which was to be shot in a match" at some tea-gardens close by.

When I called again Mr. Black had returned, and I found him kneeling before a big, rusty iron-wire cage, as large as a sea-chest, and transferring the sparrows from his bird-catching apparatus to the more roomy prison. He transacted a little business before I spoke to him, for the boys about the door were asking, "Can I have one for a penny, master?"

There is evidently a great art in handling birds; for when Mr. Black held one, he took hold of it by the wings and tail, so that the little creature seemed to be sitting upright and had not a feather ruffled, while it stretched out its neck and looked around it; the boys, on the contrary, first made them flutter their feathers as rough as a hair ball, and then half smothered them between their two hands, by holding them as if they wished to keep them hot.

I was soon at home with Mr. Black. He was a very different man from what I had expected to meet, for there was an expression of kindness in his countenance, a quality which does not exactly agree with one's preconceived notions of ratcatchers. His face had a strange appearance, from his rough, uncombed hair, being nearly grey, and his eyebrows and whiskers black, so that he looked as if he wore powder.

Mr. Black informed me that the big iron-wire cage, in which the sparrows were fluttering about, had been constructed by him for rats, and that it held over a thousand when full—for rats are packed like cups, he said, one over the other. "But," he added, "business is bad for rats, and it makes a splendid havery; besides, sparrers is the rats of birds, sir, for if you look at 'em in a cage they always huddles up in a corner like rats in a pit, and they are a'most vermin in colour and habits, and eats anything."

The ratcatcher's parlour was more like a shop than a family apartment. In a box, with iron bars before it, like a rabbit-hutch, was a white ferret, twisting its long thin body with a snake-like motion up and down the length of its prison, as restlessly as if it were a miniature polar bear.

When Mr. Black called "Polly" to the ferret, it came to the bars and fixed its pink eyes on him. A child lying on the floor poked its fingers into the cage, but Polly only smelt at them, and, finding them not good to eat, went away.

Mr. Black stuffs animals and birds, and also catches fish for vivaria. Against the walls were the furred and feathered remains of departed favourites, each in its glazed box and appropriate attitude. There was a famous polecat—"a first-rater at rats" we were informed. Here a ferret "that never was equalled." This canary "had earned pounds." That linnet "was the wonder of its day." The enormous pot-bellied carp, with the miniature rushes painted at the back of its case, was caught in the Regent's Park waters.

"In another part of the room hung fishing-lines, and a badger's skin, and lead-bobs and curious eel-hooks—the latter as big as the curls on the temples of a Spanish dancer, and from here Mr. Black took down a transparent-looking fish, like a slip of parchment, and told me that it was a fresh-water smelt, and that he caught it in the Thames—"the first he ever heard of." Then he showed me a beetle suspended to a piece of thread, like a big spider to its web, and this he informed me was the Thames beetle, "which either live by land or water."

"You ketch 'em," continued Mr. Black, "when they are swimming on their backs, which is their nature, and when they turns over you finds 'em beautifully crossed and marked."

Round the room were hung paper bags, like those in which housewives keep their sweet herbs. "All of them there, sir, contain cured fish for eating," Mr. Black explained to me.

"I'm called down here the Battersea otter," he went on, "for I can go out at four in the morning, and come home by eight with a barrowful of freshwater fish. Nobody knows how I do it, because I never takes no nets or lines with me. I assure them I ketch 'em with my hands, which I do, but they only laughs incredulous like. I knows the fishes' harnts, and watches the tides. I sells fresh fish—perch, roach, dace, gudgeon, and such-like, and even small jack, at threepence a pound, or what they'll fetch; and I've caught near the Wandsworth 'Black Sea,' as we calls it, half a hundred weight sometimes, and I never took less than my handkerchey full."

I was inclined—like the inhabitants of Battersea—to be incredulous of the rat-catcher's hand-fishing, until, under a promise of secrecy, he confided his process to me, and then not only was I perfectly convinced of its truth, but startled that so simple a method had never before been taken advantage of.

Later in the day Mr. Black became very communicative. We sat chatting together in his sanded bird shop, and he told me all his

misfortunes, and how bad luck had pressed upon him, and driven him out of London.

"I was fool enough to take a public-house in Regent-street, sir," he said. "My daughter used to dress as the 'Ratcatcher's Daughter,' and serve behind the bar, and that did pretty well for a time; but it was a brewer's house, and they ruined me."

The costume of the "ratcatcher's daughter" was shown to me by her mother. It was a red velvet bodice, embroidered with silver lace.

"With a muslin skirt, and her hair down her back, she looked very genteel," added the parent.

Mr. Black's chief complaint was that he could not "make an appearance," for his "uniform"—a beautiful green coat and red waistcoat—were pledged.

Whilst giving me his statement, Mr. Black, in proof of his assertions of the biting powers of rats, drew my attention to the leathern breeches he wore, "as were given him twelve years ago by Captain B—."

These were pierced in some places with the teeth of the animals, and in others were scratched and fringed like the washleather of a street knife-seller.

His hands, too, and even his face, had scars upon them from bites.

Mr. Black informed me that he had given up tobacco "since a haccident he met with from a pipe. I was smoking a pipe," he said, "and a friend of mine by chance jobbed it into my mouth, and it went right through to the back of my palate, and I nearly died."

Here his wife added, "There's a hole there to this day you could put your thumb into; you never saw such a mouth."

Mr. Black informed me in secret that he had often, "unbeknown to his wife," tasted what cooked rats were like, and he asserted that they were as moist as rabbits, and quite as nice.

"If they are shewer-rats," he continued, "just chase them for two or three days before you kill them, and they are as good as barn-rats, I give you my word, sir."

Mr. Black's statement was as follows:—

"I should think I've been at ratting a'most for five-and-thirty year; indeed, I may say from my childhood, for I've kept at it a'most all my life. I've been dead near three times from bites—as near as a toucher. I once had the teeth of a rat break in my finger, which was dreadful bad, and swole, and putrified, so that I had to have the broken bits pulled out with tweezers. When the bite is a bad one, it festers and forms a hard core in the ulcer, which is very painful, and throbs very much indeed; and after that core comes away, unless you cleans 'em out well, the sores, even after they seemed to be healed, break out over and over again, and never cure perfectly. This core is as big as a boiled fish's eye, and as hard as a stone. I generally cuts the bite

out clean with a lancet, and squeeze the humour well from it, and that's the only way to cure it thorough—as you see my hands is all covered with scars from bites.

"The worst bite I ever had was at the Manor House, Hornsey, kept by Mr. Burnell. One day when I was there, he had some rats get loose, and he asked me to ketch 'em for him, as they was wanted for a match that was coming on that afternoon. I had picked up a lot—indeed, I had one in each hand, and another again my knee, when I happened to come to a sheaf of straw, which I turned over, and there was a rat there. I couldn't lay hold on him 'cause my hands was full, and as I stooped down he ran up the sleeve of my coat, and bit me on the muscle of the arm. I shall never forget it. It turned me all of a sudden, and made me feel numb. In less than half-an-hour I was took so bad I was obleeged to be sent home, and I had to get some one to drive my cart for me. It was terrible to see the blood that came from me—I bled awful. Burnell seeing me go so queer, says, 'Here, Jack, take some brandy, you look so awful bad.' The arm swole, and went as heavy as a ton weight pretty well, so that I couldn't even lift it, and so painful I couldn't bear my wife to ferment it. I was kept in bed for two months through that bite at Burnell's. I was so weak I couldn't stand, and I was dreadful feverish—all warmth like. I knew I was going to die, 'cause I remember the doctor coming and opening my eyes, to see if I was still alive.

"I've been bitten nearly everywhere, even where I can't name to you, sir, and right through my thumb nail too, which, as you see, always has a split in it, though it's years since I was wounded. I suffered as much from that bite on my thumb as anything. It went right up to my ear. I felt the pain in both places at once—a regular twinge, like touching the nerve of a tooth. The thumb went black, and I was told I ought to have it off; but I knew a young chap at the Middlesex Hospital who wasn't out of his time, and he said, 'No, I wouldn't, Jack;' and no more I did; and he used to strap it up for me. But the worst of it was, I had a job at Camden Town one afternoon after he had dressed the wound, and I got another bite lower down on the same thumb, and that flung me down on my bed, and there I stopped, I should think, six weeks.

"I was bit bad, too, in Edwards-street, Hampstead-road; and that time I was sick near three months, and close upon dying. Whether it was the poison of the bite, or the medicine the doctor give me, I can't say; but the flesh seemed to swell up like a bladder—regular blowed like. After all, I think I cured myself by cheating the doctor, as they calls it; for instead of taking the medicine, I used to go to Mr.—'s house in Albany-street (the publican), and he'd say, 'What'll yer have, Jack?'

and I used to take a glass of stout, and that seemed to give me strength to overcome the pison of the bite, for I began to pick up as soon as I left off doctor's stuff.

"When a rat's bite touches the bone, it makes you faint in a minute, and it bleeds dreadful—ah, most terrible—just as if you had been stuck with a penknife. You couldn't believe the quantity of blood that come away, sir.

"The first rats I caught was when I was about nine years of age. I ketched them at Mr. Strickland's, a large cow-keeper, in Little Albany-street, Regent's-park. At that time it was all fields and meaders in them parts, and I recollect there was a big orchard on one side of the sheds. I was only doing it for a game, and there was lots of ladies and gents looking on, and wondering at seeing me taking the rats out from under a heap of old bricks and wood, where they had collected theirselves. I had a little dog—a little red 'un it was, who was well known through the fancy—and I wanted the rats for to test my dog with, I being a lad what was fond of the sport.

"I wasn't afraid to handle rats even then; it seemed to come nat'ral to me. I very soon had some in my pocket, and some in my hands, carrying them away as fast as I could, and putting them into my wire cage. You see, the rats began to run as soon as we shifted them bricks, and I had to scramble for them. Many of them bit me, and, to tell you the truth, I didn't know the bites were so many, or I dare say I shouldn't have been so venturesome as I was.

"After that I bought some ferruts—four of them—of a man of the name of Butler, what was in the rat-ketching line, and afterwards went out to Jamaica, to kill rats there. I was getting on to ten years of age then, and I was, I think, the first that regularly began hunting rats to sterminate them; for all those before me used to do it with drugs, and perhaps never handled rats in their lives.

"With my ferruts I at first used to go out hunting rats round by the ponds in Regent's-park, and the ditches, and in the cow-sheds roundabout. People never paid me for ketching, though, maybe, if they was very much infested, they might give me a trifle; but I used to make my money by selling the rats to gents as was fond of sport, and wanted them for their little dogs.

"I kept to this till I was thirteen or fourteen year of age, always using the ferruts; and I bred from them, too,—indeed, I've still got the 'strain' (breed) of them same ferruts by me now. I've sold them ferruts about everywhere; to Jim Burn I've sold some of the strain; and to Mr. Anderson, the provision-merchant; and to a man that went to Ireland. Indeed, that strain of ferruts has gone nearly all over the world.

"I never lost a ferrut out ratting. I al-

ways let them loose, and put a bell on mine—arranged in a peculiar manner, which is a secret—and I then puts him into the main run of the rats, and lets him go to work. But they must be ferruts that's well trained for working dwellings, or you'll lose them as safe as death. I've had 'em go away two houses off, and come back to me. My ferruts is very tame, and so well trained, that I'd put them into a house and guarantee that they'd come back to me. In Grosvenor-street I was clearing once, and the ferruts went next door, and nearly cleared the house—which is the Honourable Mrs. F——'s—before they came back to me.

"Ferruts are very dangerous to handle if not well trained. They are very savage, and will attack a man or a child as well as a rat. It was well known at Mr. Hamilton's at Hampstead—it's years ago this is—there was a ferrut that got loose what killed a child, and was found sucking it. The bite of 'em is very dangerous—not so pisonous as a rat's—but very painful; and when the little things is hungry they'll attack anything. I've seen two of them kill a cat, and then they'll suck the blood till they fills theirselves, after which they'll fall off like leeches.

"The weasel and the stoat are, I think, more dangerous than the ferrut in their bite. I had a stoat once, which I caught when out ratting at Hampstead for Mr. Cunningham, the butcher, and it bit one of my dogs—Black Bess by name, the truest bitch in the world, sir—in the mouth, and she died three days arterwards at the Ball at Kilburn. I was along with Captain K——, who'd come out to see the sport, and whilst we were at dinner, and the poor bitch lying under my chair, my boy says, says he, 'Father, Black Bess is dying;' and had scarce spoke the speech when she was dead. It was all through the bite of that stoat, for I opened the wound in the lip, and it was all swole, and dreadful ulcerated, and all down the throat it was inflamed most shocking, and so was the lungs quite red and fiery. She was hot with work when she got the bite, and perhaps that made her take the pison quicker.

"To give you a proof, sir, of the savage nature of the ferruts, I was one night at Jimmy Shaw's, where there was a match to come off with rats, which the ferrut was to kill; and young Bob Shaw (Jim's son) was holding the ferrut up to his mouth and giving it spittle, when the animal seized him by the lip, and bit it right through, and hung on as tight as a vice, which shows the spitefulness of the ferrut, and how it will attack the human frame. Young Shaw still held the ferrut in his hand whilst it was fastened to his lip, and he was saying, 'Oh, oh!' in pain. You see, I think Jim kept it very hard to make it kill the rats better. There was some noblemen there, and also Mr. George, of Kensal New-town, was there, which is one of the

largest dog-fanciers we have. To make the ferrut leave go of young Shaw, they bit its feet and tail, and it wouldn't, 'cos—as I could have told 'em—it only made it bite all the more. At last Mr. George, says he to me, 'For God's sake, Jack, take the ferrut off.' I didn't like to intrude myself upon the company before, not being in my own place, and I didn't know how Jimmy would take it. Everybody in the room was at a standstill, quite horrified, and Jimmy himself was in a dreadful way for his boy. I went up, and quietly forced my thumb into his mouth and loosed him, and he killed a dozen rats after that. They all said, 'Bravo, Jack, you are a plucked one;' and the little chap said, 'Well, Jack, I didn't like to holla, but it was dreadful painful.' His lip swole up directly as big as a nigger's, and the company made a collection for the lad of some dozen shillings. This shows that, although a ferrut will kill a rat, yet, like the rat, it is always wicious, and will attack the human frame.

"When I was about fifteen, sir, I turned to bird-fancying. I was very fond of the sombre linnets. I was very successful in raising them, and sold them for a deal of money. I've got the strain of them by me now. I've ris them from some I purchased from a person in the Coal-yard, Drury-lane. I give him 2*l.* for one of the periwinkle strain, but afterwards I heard of a person with, as I thought, a better strain—Lawson of Holloway—and I went and give him 30*s.* for a bird. I then ris them. I used to go and ketch the nestlings off the common, and ris them under the old trained birds.

"Originally linnets was taught to sing by a bird-organ—principally among the weavers, years ago,—but I used to make the old birds teach the young ones. I used to molt them off in the dark, by kivering the cages up, and then they'd learn from hearing the old ones singing, and would take the song. If any did not sing perfectly I used to sell 'em as cast-offs.

"The linnets is a beautiful song. There are four-and-twenty changes in a linnets song. It's one of the beautifullest song-birds we've got. It sings 'toys,' as we call them; that is, it makes sounds which we distinguish in the fancy as the 'tollock eeke eeke quake le wheet; single eke eke quake wheets, or eek eek quake chowls; eege pipe chowl: laugh; eege poy chowls; rattle; pipe; fear; pugh and poy.'

"This seems like Greek to you, sir, but it's the tunes we use in the fancy. What we terms 'fear' is a sound like fear, as if they was frightened; 'laugh' is a kind of shake, nearly the same as the 'rattle.'

"I know the sounds of all the English birds, and what they say. I could tell you about the nightingale, the black cap, hedge warbler, garden warbler, petty chat, red start—a beautiful song-bird—the willow wren—little warblers they are—linnets, or any of



VAGRANT FROM THE REFUGE IN PLAYHOUSE YARD, CRIPPLEGATE.

[From a Photograph.]

them, for I have got their sounds in my ear and my mouth."

As if to prove this, he drew from a side-pocket a couple of tin bird-whistles, which were attached by a string to a button-hole. He instantly began to imitate the different birds, commencing with their call, and then explaining how, when answered to in such a way, they gave another note, and how, if still responded to, they uttered a different sound.

In fact, he gave me the whole of the conversation he usually carried on with the different kinds of birds, each one being as it were in a different language. He also showed me how he allured them to him, when they were in the air singing in the distance, and he did this by giving their entire song. His cheeks and throat seemed to be in constant motion as he filled the room with his loud imitations of the lark, and so closely did he resemble the notes of the bird, that it was no longer any wonder how the little things could be deceived.

In the same manner he illustrated the songs of the nightingale, and so many birds, that I did not recognise the names of some of them. He knew all their habits as well as notes, and repeated to me the peculiar chirp they make on rising from the ground, as well as the sound by which he distinguishes that it is "uneasy with curiosity," or that it has settled on a tree. Indeed, he appeared to be acquainted with all the chirps which distinguished any action in the bird up to the point when, as he told me, it "circles about, and then falls like a stone to the ground with its pitch."

"The nightingale," he continued, "is a beautiful song-bird. They're plucky birds, too, and they hear a call and answer to anybody; and when taken in April they're plucked enough to sing as soon as put in a cage. I can catch a nightingale in less than five minutes; as soon as he calls, I calls to him with my mouth, and he'll answer me (both by night or day), either from a spinny (a little copse), a dell, or a wood, wherever he may be. I make my scrapes, (that is, clear away the dirt), set my traps, and catch 'em almost before I've tried my luck. I've ketched sometimes thirty in a day, for although people have got a notion that nightingales is scarce, still those who can distinguish their song in the daytime know that they are plentiful enough—almost like the lark. You see persons fancy that them nightingales as sings at night is the only ones living, but it's wrong, for many on them only sings in the day."

"You see it was when I was about eighteen, I was beginning to get such a judge about birds, sir. I sold to a butcher, of the name of Jackson, the first young un that I made money out of—for two pounds it was—and I've sold loads of 'em since for thirty shillings or two pounds each, and I've got the strain by me now. I've also got by me now the bird that won the match at Mr. Lock-

wood's in Drury-lane, and won the return match at my own place in High-street, Marabum. It was in the presence of all the fancy. He's moulted pied (pie-bald) since, and gone a little white on the head and the back. We only sang for two pounds a side—it wasn't a great deal of money. In our matches we sing by both gas and daylight. He was a master-baker I sang against, but I forget his name. They do call him 'Holy Face,' but that's a nick-name, because he's very much pock-marked. I wouldn't sell that bird at all for anythink; I've been offered ten pounds for it. Captain K— put ten sovereigns down on the counter for him, and I wouldn't pick 'em up, for I've sold lots of his strain for a pound each.

"When I found I was a master of the birds, then I turned to my rat business again. I had a little rat dog—a black tan terrier of the name of Billy—which was the greatest stock dog in London of that day. He is the father of the greatest portion of the small black tan dogs in London now, which Mr. Isaac, the bird-fancier in Princes-street, purchased one of the strain for six or seven pounds; which Jimmy Massey afterwards purchased another of the strain, for a monkey, a bottle of wine, and three pounds. That was the rummest bargain I ever made.

"I've ris and trained monkeys by shoals. Some of mine is about now in shows exhibiting; one in particular—Jimmy.

"One of the strain of this little black tan dog would draw a badger twelve or fourteen lbs. to his six lbs., which was done for a wager, 'cos it was thought the badger had his teeth drawn, but he hadn't, as was proved by his biting Mr. P—from Birmingham, for he took a piece clean out of his trousers, which was pretty good proof, and astonished them all in the room.

"I've been offered a sovereign a-pound for some of my little terriers, but it wouldn't pay me at that price, for they weren't heavier than two or three pounds. I once sold one of the dogs, of this same strain, for fourteen pounds, to the Austrian Ambassador. Mrs. H—the banker's lady, wished to get my strain of terriers, and she give me five pounds for the use of him; in fact, my terrier dog was known to all the London fancy. As rat-killing dogs, there's no equal to that strain of black tan terriers.

"It's fifteen year ago since I first worked for Government. I found that the parks was much infested with rats, which had undermined the bridges and gnawed the drains, and I made application to Mr. Westley, who was superintendent of the park, and he spoke of it, and then it was wrote to me that I was to fulfil the siterwation, and I was to have six pounds a-year. But after that it was altered, and I was to have so much a-head, which is threepence. After that, Newtou, what was a warmint destroyer to her Majesty,

dying, I wrote in to the Board of Hordnance, when they appointed me to each station in London—that was, to Regentsey-park-barracks, to the Knightsbridge and Portland-barracks, and to all the other barracks in the metropolis. I've got the letter now by me, in which they says 'they is proud to appint me.'

"I've taken thirty-two rats out of one hole in the islands in Regentsey-park, and found in it fish, birds, and loads of eggs—duck-eggs, and every kind."

"It must be fourteen year since I first went about the streets exhibiting with rats. I began with a cart and a'most a donkey; for it was a pony scarce bigger; but I've had three or four big horses since that, and ask anybody, and they'll tell you I'm noted for my cattle. I thought that by having a kind of costume, and the rats painted on the cart, and going round the country, I should get my name about, and get myself knowed; and so I did, for folks 'ud come to me, so that sometimes I've had four jobs of a-day, from people seeing my cart. I found I was quite the master of the rat, and could do pretty well what I liked with him; so I used to go round Finchley, Highgate, and all the sububs, and show myself, and how I handled the warmint."

"I used to wear a costume of white leather breeches, and a green coat and scarlet waist-kit, and a goold band round my 'hat, and a belt across my shoulder. I used to make a first-rate appearance, such as was becoming the uniform of the Queen's rat-ketcher."

"Lor' bless you! I've travell'd all over London, and I'll kill rats again anybody. I'm open to all the world for any sum, from one pound to fifty. I used to have my belts painted at first by Mr. Bailey, the animal painter—with four white rats; but the idea come into my head that I'd cast the rats in metal, just to make more appearance for the belt, to come out in the world. I was nights and days at it, and it give me a deal of bother. I could manage it no how; but by my own ingenuity and persewance I succeeded. A man axed me a pound a-piece for casting the rats—that would ha' been four pound. I was very certain that my belt, being a handsome one, would help my business tremenjous in the sale of my composition. So I took a mould from a dead rat in plaster, and then I got some of my wife's sarsepans, and, by G—, I casted 'em with some of my own pewter-pots."

The wife, who was standing by, here exclaimed—

"Oh, my poor sarsepans! I remember 'em. There was scarce one left to cook our wittels with."

"Thousands of moulders," continued Jack Black, "used to come to see me do the casting of the rats, and they kept saying, 'You'll never do it, Jack.' The great difficulty, you see, was casting the heye—which is a black bead—into the metal."

"When the belt was done, I had a great success; for, bless you, I couldn't go a yard without a crowd after me."

"When I was out with the cart selling my composition, my usual method was this. I used to put a board across the top, and form a kind of counter. I always took with me a iron-wire cage—so big a one, that Mr. Barnet, a Jew, laid a wager that he could get into it, and he did. I used to form this cage at one end of the cart, and sell my composition at the other. There were rats painted round the cart—that was the only show I had about the vehicle. I used to take out the rats, and put them outside the cage; and used to begin the show by putting rats inside my shirt next my buzzum, or in my coat and breeches pockets, or on my shoulder—in fact, all about me, anywhere. The people would stand to see me take up rats without being bit. I never said much, but I used to handle the rats in every possible manner, letting 'em run up my arm, and stroking their backs and playing with 'em. Most of the people used to fancy they had been tamed on purpose, until they'd see me take fresh ones from the cage, and play with them in the same manner. I all this time kept on selling my composition, which my man Joe used to offer about; and whenever a packet was sold, I always tested its wirtues by killing a rat with it afore the people's own eyes."

"I once went to Tottenham to sell my composition, and to exhibit with my rats afore the country people. Some countrymen, which said they were rat-ketchers, came up to me whilst I was playing with some rats, and said—'Ugh, you're not a rat-ketcher; that's not the way to do it.' They were startled at seeing me selling the pison at such a rate, for the shilling packets was going uncommon well, sir. I said, 'No, I ain't a rat-ketcher, and don't know nothink about it. You come up and show me how to do it.' One of them come up on the cart, and put his hand in the cage, and curous enough he got three bites directly, and afore he could take his hands out they was nearly bit to ribands. My man Joe, says he, 'I tell you, if we ain't rat-ketchers, who is? We are the regular rat-ketchers; my master kills 'em, and then I eats 'em'—and he takes up a live one and puts its head into his mouth, and I puts my hand in the cage and pulls out six or seven in a cluster, and holds 'em up in the air, without even a bite. The countrymen bust out laughing; and they said, 'Well, you're the best we ever see.' I sold near 4l. worth of composition that day."

"Another day, when I'd been out flying pigeons as well—carriers, which I fancies to—I drove the cart, after selling the composition, to the King's Arms, Hanwell, and there was a feller there—a tailor by trade—what had turned rat-ketcher. He had got with him some fifty or sixty rats—the miserablest mangey brutes you ever seed in a tub—taking 'em up to London to sell. I, hearing of it, was deter-

mined to have a lark, so I goes up and takes out ten of them rats, and puts them inside my shirt, next my buzzum, and then I walks into the parlour and sits down, and begins drinking my ale as right as if nothink had happened. I scarce had seated myself, when the landlord—who was in the lay—says, 'I know a man who'll ketch rats quicker than anybody in the world.' This put the tailor chap up, so he offers to bet half-a-gallon of ale he would, and I takes him. He goes to the tub and brings out a very large rat, and walks with it into the room to show to the company. 'Well,' says I to the man, 'why I, who ain't a rat-ketcher, I've got a bigger one here,' and I pulls one out from my buzzum. 'And here's another, and another, and another,' says I, till I had placed the whole ten on the table. 'That's the way I ketch 'em,' says I,—'they comes of their own accord to me.' He tried to handle the warmints, but the poor fellow was bit, and his hands was soon bleeding fur'ously, and I without a mark. A gentleman as knowed me said, 'This must be the Queen's rat-ketcher, and that spilt the fun. The poor fellow seemed regular done up, and said, 'I shall give up rat-ketching, you've beat me! Here I've been travelling with rats all my life, and I never see such a thing afore.'

"When I've been in a mind for travelling I've never sold less than ten shillings' worth of my composition, and I've many a time sold five pounds' worth. Ten shillings' worth was the least I ever sold. During my younger career, if I'd had a backer, I might, one week with another, have made my clear three pounds a-week, after paying all my expenses and feeding my horse and all."

"I challenge my composition, and sell the art of rat-destroying, against any chemical rat-destroyer in the world, for any sum—I don't care what it is. Let anybody, either a medical or druggist manufacturer of composition, come and test with rats again me, and they'll pretty soon find it out. People pay for composition instead of employing the Queen's rat-ketcher, what kills the warmint and lays down his composition for nothink into the bargain likewise."

"I also destroy black beetles with a composition which I always keep with me again it's wanted. I often have to destroy the beetles in wine-cellars, which gnaw the paper off the bottles, such as is round the champagne and French wine bottles. I've killed lots of beetles too for bakers. I've also sterminated some thousands of beetles for linen-drapers and pork-sassage shops. There's two kinds of beetles, the hard-shell and the soft-shell beetle. The hard-shell one is the worst, and that will gnaw cork, paper, and anythink woollen. The soft-shell'd one will gnaw bread or food, and it also lays its eggs in the food, which is dreadful nasty."

"There's the house ant too, which there is some thousands of people as never saw—I sterminate them as well. There's a Mrs. B.

at the William the Fourth public-house, Hampstead; she couldn't lay her child's clothes down without getting 'em full of ants. They've got a sting something in feel like a horse-fly's, and is more annoying than dangerous. It's cockroaches that are found in houses. They're dreadful nasty things, and will bite, and they are equal to the Spanish flies for blistering. I've tried all insects on my flesh to see how they bite me. Cockroaches will undermine similar to the ant, and loosen the bricks the same as the cricket. It's astonishing how so small an insect as them will scrape away such a quantity of mortar as they do—which thing infests grates, floorings, and such-like."

"The beedle is a most 'strordinary thing, which will puzzle most people to sterminate, for they lays sitch a lot of eggs as I would never guarantee to do away with beetles—only to keep them clear; for if you kills the old ones the eggs will rewive, and young ones come out of the wainskitting and sitch-like, and then your employers will say, 'Why you were paid for sterminating, and yet here they are.'

"One night in August—the night of a very heavy storm, which, maybe, you may remember, sir—I was sent for by a medical gent as lived opposite the Load of Hay, Hampstead, whose two children had been attacked by rats while they was sleeping in their little cots. I traced the blood, which had left lines from their tails, through the openings in the lath and plaster, which I follered to where my ferruts come out of, and they must have come up from the bottom of the house to the attics. The rats gnawed the hands and feet of the little children. The lady heard them crying, and got out of her bed and called to the servant to know what the child was making such a noise for, when they struck a light, and then they see the rats running away to the holes; their little night-gownds was kivered with blood, as if their throats had been cut. I asked the lady to give me one of the night-gownds to keep as a cur'osity, for I considered it a *phœnomenon*, and she give it to me, but I never was so vexed in all my life as when I was told the next day that a maid had washed it. I went down the next morning and sterminated them rats. I found they was of the specie of rat which we term the blood-rat, which is a dreadful spiteful feller—a snake-headed rat, and infests the dwellings. There may have been some dozens of 'em altogether, but it's so long ago I a'most forget how many I took in that house. The gent behaved uncommon handsome, and said, 'Mr. Black, I can never pay you for this;' and ever arterwards, when I used to pass by that there house, the little dears when they see me used to call out to their mamma, 'O, here's Mr. Ratty, ma!' They were very pretty little fine children—uncommon handsome, to be sure."

"I once went to Mr. Hollins's, in Edward-street Regent's-park—a cow-keeper he was—where he was so infested that the cows could

not lay down or eat their food, for the rats used to go into the manger, and fight at 'em. Mr. Hollins said to me, 'Black, what shall I give you to get rid of them rats?' and I said to him, says I, 'Well, Mr. Hollins, you're a poor man, and I leave it to you.' (He's got awful rich since then.) I went to work, and I actually took out 300 rats from one hole in the wall, which I had to carry them in my mouth and hands, and under my arms, and in my buzzum and pockets, to take them to the cage. I was bit dreadful by them, and suffered greatly by the bites; but nothink to lay up for, though very painful to the hands. To prevent the rats from getting out of the hole, I had to stop it up by putting my breast against it, and then they was jumping up again me and gnawing at my waistkit. I should think I stermminated 500 from them premises. Ah! I did wonders round there, and everybody was talking of my feats.

"I'll tell you about another cow-keeper's, which Mr. Hollins was so gratified with my skill what I had done, that he pays me handsome and generous, and gives me a recommendation to Mrs. Brown's, of Camden-town, and there I stermminated above 700 rats; and I was a-near being killed, for I was stooping down under the manger, when a cow heard the rats squeak, and she butts at me and sends me up again the bull. The bull was very savage, and I fainted; but I was picked up and washed, and then I come to.

"Whilst doing that job at Mrs. Brown's I had to lie down on the ground, and push my naked arm into the hole till I could reach the rats as I'd driven up in the corner, and then pull them out with my hand. I was dreadful bit, for I was obleeged to handle them anyhow; my flesh was cut to ribands and dreadful lacerated.

"There was a man Mrs. Brown had got of the name of John, and he wouldn't believe about the rats, and half thought I brought 'em with me. So I showed him how to ketch rats.

"You see rats have always got a main run, and from it go the branch runs on each side like on a herring-bone, and at the end of the branch runs is the bolt-holes, for coming in and out at. I instantly stopped up all the bolt-holes and worked the rats down to the end of the main run, then I broke up the branch runs and stopped the rats getting back, and then, when I'd got 'em all together at the end of the main run, I put my arm down and lifted them up. I have had at times to put half my body into a hole and thrust down my arm just like getting rabbits out of their burrows.

"Sometimes I have to go myself into the holes, for the rats make such big ones, there's plenty of room. There was a Mrs. Perry in Albany-street, that kept an oil and coke shop—she were infested with rats dreadful. Three of her shop-boys had been sent away on suspicion of stealing fat, instead of which it was

the rats, for between the walls and the vault I found a hundred and a half of fat stowed away. The rats was very savage, and I should think there was 200 of them. I made a good bit of money by that job, for Mrs. Perry give the fat to me.

"I have had some good finds at times, rat-hunting. I found under one floor in a gent's house a great quantity of table napkins and silver spoons and forks, which the rats had carried away for the grease on 'em—shoes and boots gnawed to pieces, shifts, aprons, gownds, pieces of silk, and I don't know what not. Sarvants had been discharged accused of stealing them there things. Of course I had to give them up; but there they was.

"I was once induced to go to a mews in Tavistock-place, near Russell-square, which was reg'lar infested by rats. They had sent to a man before, and he couldn't do nothink with 'em, but I soon stermminated them. The rats there had worried a pair of beautiful chestnut horses, by gnawing away their hoofs and nearly driving them mad, which I saw myself, and there was all their teeth-marks, for I could scarcely believe it myself till I see it. I found them near a cart-load of common bricks, under the floor, and near the partition of the stable, which, when the men pulled the wood-work down, the coachman, says he, 'Well, rat-ketcher, if you'd been employed years ago a deal more corn would have gone into the horses.'

"This coachman give me a recommendation to a muffin-maker in Hanway-yard, and I went there and killed the rats. But a most singlar thing took place there; my ferret got away and run through into a house in Oxford-street kept by a linen-draper, for the young men come to say that the rat-ketcher's ferret was in their shop, and had bit one of their lady customers. I worked the ferrut through three times to make sure of this; and each time my little dog told me it was true. You see a well-trained dog will watch and stand and point to the ferrut working under ground just as a pinter does to game; and although he's above ground, yet he'll track the ferrut through the runs underneath by the smell. If the ferrut is lost—which I tell by the dog being uneasy—I say to the dog, 'Hi, lost;' and then he instantly goes on scent, and smells about in every direction, and I follers him, till he stands exactly over the spot where it may be, and then I have either to rise a stone or lift a board to get him out.

"I've ratted for years for Mr. Hodges, of Hodges and Lowman's, in Regent-street; and he once said to me, that he was infested dreadful with rats at the house, which he took for the children, at Hampstead; so I went there, and witnessed, certainly, the most curious circumstance, which puzzles me to this day. I had to lay on my belly half in the hole and pull out the rats; and, on looking at them, as I brings them up, I am astonished

to find that nearly every one of them is blind, and has a speck in the eye. I was never so much astonished in my life, for they was as a wall-eyed dog might be. I supposed it to be from lightning (I couldn't account for it no other ways), for at that time there was very heavy lightning and floods up there, which maybe you might remember, sir. They was chiefly of the blood-rat specie—small snake-headed rats, with a big, fine tail. They was very savage with me, and I had them run all over me before I ketched them.

"Rats are everywhere about London, both in rich and poor places. I've ketched rats in 44 Portland-place, at a clergyman's house there. There was 200 and odd. They had underminded the oven so, that they could neither bile nor bake; they had under-pinioned the stables, and let every stone down throughout the premises, pretty well. I had to crawl under a big leaden cistern which the rats had under-pinioned, and I expected it would come down upon me every minute. I had one little ferrut kill thirty-two rats under one stone, and I lifted the dead ones up in the presence of the cook and the butler. He didn't behave well to me—the gent didn't—for I had to go to my lawyer's afore I could get paid, and after the use of my skill; and I had to tell the lawyer I'd pawn my bed to stick to him and get my earnings; but, after all, I had to take one-third less than my bill. This, thinks I, isn't the right thing for Portland-place.

"Rats will eat each other like rabbits, which I've watched them, and seen them turn the dead one's skins out like pussies, and eat the flesh off beautiful clean. I've got cages of iron-wire, which I made myself, which will hold 1000 rats at a time, and I've had these cages piled up with rats, solid like. No one would ever believe it; to look at a quantity of rats, and see how they will fight and tear one another about,—it's astonishing, so it is! I never found any rats smothered, by putting them in a cage so full; but if you don't feed them every day, they'll fight and eat one another—they will, like cannibals.

"I general contracts with my customers, by the year, or month, or job. There's some gents I've worked for these fifteen years—sitch as Mr. Robson, the coach-builder, Mivart's Hotel, Shoulbreds', Mr. Lloyds, the large tobacconist, the Commercial Life Assurance, Lord Duncannon's, and I can't recollect how many more. My terms is from one guinea to five pounds per annum, according to the premises. Besides this, I have all the rats that I ketch, and they sell for threepence each. But I've done my work too well, and wherever I went I've cleared the rats right out, and so my customers have fell off. I have got the best testimonials of any man in London, and I could get a hatful more to-morrer. Ask anybody I've worked for, and they'll tell you about Jack Black.

"One night I had two hundred rats in a

cage, placed in my sitting-room, and a gent's dog happened to get at the cage, and undid the door, snuffing about, and let 'em all loose. Directly I come in I knew they was loose by the smell. I had to go on my knees and stomach under the beds and sofas, and all over the house, and before twelve o'clock that night I had got 'em all back again into the cage, and sold them after for a match. I was so fearful they'd get gnawing the children, having stermminated them in a house where children had been gnawed.

"I've turned my attention to everything connected with animals. I've got the best composition for curing the mange in a horse or a dog, which has reg'lar astonished medical gents. I've also been bit by a mad dog—a black retriever dog, that died raving mad in a cellar afterwards. The only thing I did was, I washed the wound with salt and water, and used a turpentine poultice."

Mrs. Black here interposed, exclaiming,—

"O dear me! the salt and water he's had to his flesh, it ought to be as hard as iron. I've seen him put lumps of salt into his wounds."

Mr. Black then continued:—

"I never had any uneasiness from that bite of a mad dog; indeed, I never troubled myself about it, or even thought of it.

"I've caught some other things besides rats in my time. One night, I saw a little South African cat going along the New-road. I thought it was a curious specie of rat, and chased it, and brought it home with me; but it proved to belong to Mr. Herring's menagerie in the New-road, so I let him have it back again.

"Another time I met with two racoons, which I found could handle me just as well as I could handle a rat, for they did bite and scratch awful. I put 'em in the cart, and brought them home in a basket. I never found out to whom they belonged. I got them in Ratcliffe-highway, and no doubt some sailors had brought them over, and got drunk, and let 'em loose. I tried them at killing rats, but they weren't no good at that.

"I've learnt a monkey to kill rats, but he wouldn't do much, and only give them a good shaking when they bit him. After I found the racoons no good, I trained a badger to kill rats, and he was superior to any dog, but very difficult in training to get him to kill, though they'll kill rabbits fast enough, or any other kind of game, for they're rare poachers are badgers. I used to call her Polly. She killed in my own pit, for I used to obleege my friends that wouldn't believe it possible with the sight. She won several matches—the largest was in a hundred match.

"I also stermminate moles for her Majesty, and the Woods and Forests, and I've stermminated some hundreds for different farmers in the country. It's a curious thing, but a mole will kill a rat and eat it afterwards, and two moles will fight wonderful. They've got a

mouth exactly like a shark, and teeth like saws; ah, a wonderful saw mouth. They're a very sharp-biting little animal, and very painful. A rat is frightened of one, and don't like fighting them at all.

"I've bred the finest collection of pied rats which has ever been knowed in the world. I had above eleven hundred of them—all variegated rats, and of a different specie and colour, and all of them in the first instance bred from the Norwegian and the white rat, and afterwards crossed with other specie.

"I have ris some of the largest tailed rats ever seen. I've sent them to all parts of the globe, and near every town in England. When I sold 'em off, three hundred of them went to France. I ketched the first white rat I had at Hampstead, and the black ones at Messrs. Hodges and Lowman's, in Regent-street, and them I bred in. I have 'em fawn and white, black and white, brown and white, red and white, blue-black and white, black-white and red.

"People come from all parts of London to see them rats, and I supplied near all the 'happy families' with them. Burke, who had the 'happy family' showing about London, has had hundreds from me. They got very tame, and you could do anythink with them. I've sold many to ladies for keeping in squirrel cages. Years ago I sold 'em for five and ten shillings a-piece, but towards the end of my breeding them, I let 'em go for two-and-six. At a shop in Leicester-square, where Cantello's hatching-eggs machine was, I sold a sow and six young ones for ten shillings, which formerly I have had five pounds for, being so docile, like a sow sucking her pigs."

THE SEWERMAN.

He is a broad-shouldered, strongly-built man, with a stoop in his shoulders, and a rather dull cast of features; from living so much in the "shores" (sewers), his eyes have assumed a *peering* kind of look, that is quite rat-like in its furtiveness.

He answered our questions with great good humour, but in short monosyllabic terms, peculiar to men who have little communion with their fellows.

The "parlour" in which the man lives was literally swarming with children when we paid him a visit (they were not all "belonging" to him). Nor was it quite pleasant to find that the smell of the tea, which had just been made, was overpowered by the odour of the rats which he keeps in the same room.

The week's wash was hanging across the apartment, and gave rather a slovenly aspect to the room, not otherwise peculiar for its untidiness; against the wall were pasted some children's "characters," which his second son, who is at the coal-shed, has a taste for, and which, as the "shoreman" observed, "is better than sweet-stuff for him, at all events."

A little terrier was jumping playfully about the room, a much more acceptable companion than the bull-dog whose acquaintance we had been invited to make (in the same court) by the "rat-killer."

The furniture and appointments of the "parlour" were extremely humble—not to say meagre in their character. After some trouble in getting sufficiently lucid answers, the following was the result:—

"There are not so many rats about as there used to be—not a five-hundredth part so many. I've seen long ago twenty or thirty in a row near where the slaughter-houses are, and that like. I ketch them all down the shores. I run after them and pick them up with my hand, and I take my lantern with me.

"I have caught rats these six or seven years. When the money got to be lowered, I took to ketching on them. One time I used to take a dog with me, when I worked down St. John's-wood way.

"They fetches all prices, does rats; some I get threepence a-piece for, some twopence, some twopence-halfpenny—'cordin' who has 'em.

"I works on the shores, and our time to leave off is four. I comes home and gets my tea, and if there's sale for them, why I goes out and ketches a few rats. When I goes out I can ketch a dozen; but, years ago, I could ketch two or three dozen without going so far, and that shows there's not so many now about.

"I finds some difficulty in ketching on them. If they gets into the drain you can't get 'em. Where the drains lay low to the shore it's most difficult, but where the drain is about two feet and a-half from the shore you gets a better chance.

"Three or four dozen I used to ketch, but I haven't ketched any this last two or three weeks. In this hot weather people don't like to be in a room where 'killing' is going on; but in the winter time a man will have his pint of beer and see a little sport that way. Three or four year ago I did ketch a good many; there was a sale for 'em. I could go and ketch two dozen in three hours, and that sooner than I can do a dozen now. It's varmint as wants to be destroyed.

"Rats'll turn round when they finds themselves beat, and sometimes fly at your hand. Sometimes I've got bit—not very badly, though. To tell the truth, I don't like it. When they grip, they do holt so tight before they'll let go.

"I've been a shoreman these fifteen or sixteen year, ever since this flushing commenced. I was put on by the Commissioners in Hatting Garding; but the Commissioners is all done away with since Government took to it. I'm employed by the parish now. Every parish has to do its own flushing.

"We cleanses away all the soil what's down

below, and keeps the shore as sweet as what we possibly can.

"Before I took to this life I was what they call a navvy; I used to help to *make* the shores, and before that, I was in the country at farmers' work.

"Ketching them rats ain't all profit, 'cause you have to keep 'em and feed 'em. I've some here, if I was to get sixpence a-piece for, why it wouldn't pay me for their feed. I give them barley generally, and bits of bread.

"There's a many about now ketchin' who does nothink else, and who goes down in the shores when they have no business there at all. They does well by rats when they've good call for 'em. They can go down two or three times a-day, and ketch a dozen and a half a time; but they can't do much now, there's no killing going on. They takes 'em to beer-shops, and sells 'em to the landlords, who gets their own price for 'em if there's a pit.

"Time ago you couldn't get a rat under sixpence. But the tax on dogs has done away wonderful with rat-killing. London would swarm with rats if they hadn't been ketched as they has been. I can go along shores and only see one or two now, sometimes see none. Times ago I've drove away twenty or thirty afore me. Round Newport-market I've seen a hundred together, and now I go round there and perhaps won't ketch one.

"As for poisonin' 'em under buildings, that's wrong; they're sure to lay there and rot, and then they smells so. No, pisoning a'n't no good, specially where there's many on 'em.

"I've sold Jack Black a good many. He don't ketch so many as he gets killed. He's what they call rat-ketcher to her Majesty.

"When I goes rat-ketching, I generally takes a bag with me; a trap is too much to lug about.

"Some parts of the shores I can find my way about better than I can up above. I could get in nigh here and come out at High Park; only the worst of it is, you're always on the stoop. I never heerd talk of anybody losing theirselves in the shores, but a stranger might.

"There's some what we calls 'gully-hunters' as goes about with a sieve, and near the gratings find perhaps a few ha'pence. Year's ago we used to find a little now and then, but we may go about now and not find twopence in a week. I don't think any shoreman ever finds much. But years ago, in the city, perhaps a robbery might be committed, and then they might be afraid of being found out, and chuck the things down the drains.

"I come from Oxfordshire, about four miles from Henley-pon-Thames. I haven't got now quite so many clods to tramp over, nor so many hills to climb.

"I gets two shillings a-dozen if I sells the

rats to a dealer, but if I takes 'em to the pit myself I gets three shillings. Rats has come down lately. There's more pits, and they kills 'em cheaper; they used to kill 'em at six shillings a-dozen.

"I've got five children. These here are not all belonging to me. Their mother's gone out a-nussing, and my wife's got to mind 'em.

"My oldest son is sixteen. He's off for a sailor. I had him on me for two years doin' nothink. He couldn't get a place, and towards the last he didn't care about it. He *would* go to sea; so he went to the Marine School, and now he's in the East Ingy Sarvice. My second is at a coal-shed. He gets three shillings a-week; but, Lord, what's that? He eats more than that, let alone clothes, and he wears out such a lot of shoe-leather. There's a good deal of wear and tear, I can tell yer, in carrying out coals and such-like."

THE PENNY MOUSE-TRAP MAKER.

THIS man lived in a small cottage at the back of Bethnal Green-road, and the little railed space in front of the humble dwelling was littered with sundry evidences of the inmate's ingenuity. Here was a mechanical carriage the crippled father had made to drive himself along, and a large thaumatrope, or disc of painted figures, that seemed to move while revolving rapidly before the eye; and this, I afterwards learnt, the ingenious cripple had made, as a street exhibition, for a poor man, whom he was anxious to put in the way of doing something for himself.

The principal apartment in the little two-roomed house was blocked up with carpenters' benches, and long planks were resting against the wall, while the walls themselves were partly covered with tools and patterns of the craft pursued; and in one corner there were heaps of the penny mouse-traps and penny money-boxes, that formed the main articles of manufacture.

In a little room adjoining this, and about the size of a hen-house, I found the cripple himself in bed, but still sitting up with a small desk-like bench before him, and engaged in the act of cutting and arranging the wires for the little wooden traps in which he dealt. And as I sat by his bedside he told me the following story:—

"I am," he said, "a white-wood toy-maker, in a small way; that is, I make a variety of cheap articles,—nothing beyond a penny,—in sawed and planed pine-wood. I manufacture penny and halfpenny money-boxes, penny and halfpenny toy bellows, penny carts, penny garden-rollers, penny and halfpenny dolls' tables and washhand-stands, chiefly for baby-houses; penny dressers, with drawers, for the same purpose; penny wheelbarrows and bedsteads; penny crossbows; and the mouse-trap that I am about now. I make all the things I have named for warehouses—for

what are called the cheap Birmingham and Sheffield houses. I am paid the same price for whatever I make, with the exception of the mouse-trap. For the principal part of the penny articles that I make I get 7s. for twelve dozen, that is 7d. a-dozen; and for the halfpenny articles I get 3s. 6d., at the rate of 3½d. a-dozen. For the penny mouse-traps, however, I am paid only 1l. for thirty-six dozen, and that's a shilling less than I get for the same quantity of the other shilling articles; whilst for the penny boxes I'm paid only at the rate of a halfpenny each.

"You will please to look at that, sir," he said, handing me his account-book with one of his employers for the last year; "you will see there that what I am saying is perfectly correct, for there is the price put to every article; and it is but right that you should have proof that what I'm a-telling you is the truth. I took of one master, for penny mouse-traps alone, you perceive, 36l. 10s. from January to December, 1849; but that is not all gain, you'll understand. Out of that I have to pay above one half for material. I think, altogether, my receipts of the different masters I worked for last year came to about 120l.—I can't lay my hands on the bills just now.—Yes, it's about 120l. I know, for our income,—that is, my clear gains is about 1l. to 1l. 5s. every week. So, calculating more than one half what I take to go for the expense for material, that will bring it to just about to what I state. To earn the 25s. a-week, you'll understand, there are four of us engaged,—myself, my wife, my daughter, and son. My daughter is eighteen, and my son eleven: that is my boy, sir; he's reading the *Family Friend* just now. It's a little work I take in for my girl, for her future benefit. My girl is as fond of reading as I am, and always was. My boy goes to school every evening, and twice on a Sunday. I am willing that they should find as much pleasure from reading as I have in my illness. I found books often lull my pain. Yes, I have, indeed, for many hours. For nine months I couldn't handle a tool; and my only comfort was the love of my family, and my books. I can't afford them now, for I have no wish to incur any extraneous expense, while the weight of the labour lies on my family more than it does on myself. Over and over again, when I have been in acute pain with my thigh, a scientific book, or a work on history, or a volume of travels, would carry my thoughts far away, and I should be happy in all my misery—hardly conscious that I had a trouble, a care, or a pang to vex me. I always had love of solid works. For an hour's light reading, I have often turned to a work of imagination, such as Milton's *Paradise Lost*, and Shakspeare's Plays; but I prefer science to poetry. I think every working man ought to be acquainted with general science. If he is a mechanic—let his station be ever so simple,—he will be sure to find the

benefit of it. It gives a man a greater insight into the world and creation, and it makes his labour a pleasure and a pride to him, when he can work with his head as well as his hands. I think I have made, altogether, about one hundred and six gross of mouse-traps for the master whose account I have given you, and as many more for other employers, in the course of the last year. I calculate that I made more than thirty thousand mouse-traps from January to December, 1849. There are three or four other people in London making penny mouse-traps, besides myself. I reckon they may make among them near upon half as many as I do; and that would give about forty-five or fifty thousand penny mouse-traps made in London in the course of the year. I myself brought out the penny mouse-trap in its improved shape, and with the improved lever spring. I have no calculations as to the number of mice in the country, or how soon we should have caught them if we go on at this rate; but I think my traps have to do with that. They are bought more for toys than for use, though they are good for mice as well as children; and though we have so many dozen mouse-traps about the house, I can assure you we are more troubled with mice here than most people. The four of us here can make twenty-four dozen traps in the day, but that is all we can get through comfortable. For eighteen dozen we get about 10s. at the warehouse, and out of that I reckon our clear gains are near upon 4s., or a little less than 1s. a head. Take one with the other, we can earn about a penny an hour; and if it wasn't for me having been a tailor originally, and applying some of my old tools to the business, we shouldn't get on so quick as we do. With my shears I can cut twenty-four wires at a time, and with my thimble I thread the wires through the holes in the sides. I make the springs, cut the wires, and put them in the traps. My daughter planes the wood and gauges out the sides and bottom, bores the wire-holes and makes the door as well. My wife nails the frames ready for wiring, and my son fixes the wires in their places when I have entered them; then the wife springs them, after which the daughter puts in the doors and so completes them. I can't form an idea as to how many penny and halfpenny money-boxes I made last year. I might have made, altogether, eight thousand, or five thousand halfpenny and three thousand penny ones. I was originally brought up to the tailoring business, but my master failed, and my sight kept growing weaker every year; so, as I found a good deal of trouble in getting employment at my own trade, I thought I would take to the bird-cage making—I had been doing a little at it before, as a pastime. I was fond of birds, and fonder still of mechanics, so I was always practising my hands at some craft or other in my over-time. I used to make dissected maps and puzzles, and so, when standing for employment, I managed to get

through the slack of the year. I think it is solely due to my taste for mechanics and my love of reading scientific books that I am able to live so comfortably as I do in my affliction. After I took to bird-cage making, I found the employment at it so casual that I could not support my family at it. This led my mind to toy making, for I found that cheap toys were articles of more general sale. Then I got my children and my wife to help me, and we managed to get along somehow, for you see they were learning the business, and I myself was not in much of a condition to teach them, being almost as inexperienced at the trade as they were; and, besides that, we were continually changing the description of toy that we manufactured, so we had no time to perfect ourselves. One day we were all at work at garden-rollers; the next, perhaps, we should be upon little carts; then, may-be, we should have to go to dolls' tables or wheelbarrows: so that, with the continual changing the description of toy that we manufactured from one thing to another, we had a great difficulty in getting practised in anything. While we were all learning you may imagine that, not being so quick then as we are now, we found a great difficulty in making a living at the penny-toy business: often we had merely dry bread for breakfast, tea, and supper, but we ate it with a light heart, for I knew repining wouldn't mend it, and I always taught myself and those about me to bear our trials with fortitude. At last I got to work regularly at the mouse-traps, and having less changing we learnt to turn them out of hand quicker, and to make more money at the business: that was about four years ago, and then I was laid up with a strumous abscess in the thigh. This caused necrosis, or decay of the thigh-bone, to take place, and it was necessary that I should be confined to my bed until such time as a new thigh-bone was formed, and the old decayed one had sloughed away. Before I lay up I stood at the bench until I was ready to drop, for I had no one who could plane the boards for me; and what could I do? If I didn't keep up, I thought we should all starve. The pain was dreadful, and the anxiety of mind I suffered for my wife and children made it a thousand times worse. I couldn't bear the idea of going to the workhouse, and I kept on my feet until I couldn't stand no longer. My daughter was only sixteen then, and I saw no means of escape. It was at that time my office to prepare the boards for my family, and without that they could do nothing. Well, sir, I saw utter ruin and starvation before us. The doctor told me it would take four years before a new bone would be formed, and that I must lay up all the while. What was to become of us all in the mean time I could not tell. Then it was that my daughter, seeing the pain I suffered both in body and mind, came to me, and told me not to grieve, for that she would do all the heavy work for me, and

plane up the boards and cut out the work as I had done; but I thought it impossible for her to get through such hard work, even for my sake. I knew she could do almost anything that she set her mind to, but I little dreamt that she would be able to compass that. However, with the instinct of her affection—I can't call it anything else (for she learnt at once what it had taken me months to acquire), she planed and shaped the boards as well as I myself could have done after years of practice. The first board she did was as cleanly done as she can do it now, and when you think of the difficulties she had to overcome, what a mere child she was, and that she had never handled a plane before, how she had the grain of the wood to find out, to learn the right handling of her tools, and a many little niceties of touch that workmen only can understand, it does seem to me as if some superior Power had inspired her to aid me. I have often heard of birds building their nests of the most beautiful structure, without ever having seen one built before, and my daughter's handiwork seemed to me exactly like that. It was a thing not learnt by practice, but done in an instant, without teaching or experience of any kind. She is the best creature I ever knew or ever heard tell of on earth—at least, so she has been to me all her life; aye, without a single exception. If it hadn't been for her devotion I must have gone to the workhouse, and perhaps never been able to have got away from it, and had my children brought up as paupers. Where she got the strength to do it is as much a mystery to me as how she did it. Though she was but a mere child, so to speak, she did the work of a grown man, and I assure you the labour of working at the bench all day is heavy, even for the strongest workman, and my girl is not over-strong now; indeed she was always delicate from a baby: nevertheless she went through the labour, and would stand to the bench the whole of the day, and with such cheerful good humour too that I cannot but see the hand of the Almighty in it all. I never knew her to complain of fatigue, or ever go to her work without a smile on her face. Her only anxiety was to get done, and to afford me every comfort in my affliction that she could. For three years and two months now have I been confined to my bed, and for two years and a half of that time I have not left it, even to breathe the fresh open air. Almost all that period I have been suffering intense and continued pain from the formation of abscesses in my thigh previous to the sloughing away of the decayed bones. I have taken out of the sores at least two hundred pieces, some as small as needles and some not less than an inch and a half long, which required to be pulled out with tweezers from the wound. Often, when I was getting a bit better and able to go about in the cart you see there outside, with the gravel in it—(I made that on this bed here, so as to be able to move about on it; the

two front wheels I made myself, and the two back were old ones that I repaired here. I made the whole of the body, and my daughter planed up the boards for me)—well, often when I could just get along in that, have I gone about with a large piece of decayed bone projecting through my thigh, in hopes that the jolting would force it through the wound. The pain before the bone came away was often intense, especially when it had to work its way through the thick of the muscle. Night after night have I laid awake here. I didn't wish, of course, to distress the minds of my family any more than I could help. It would not have been fair; so I bore all with patience, and since I have been here I have got through a great deal of work in my little way. In bed, as I sit with my little bench, I do my share of eight dozen of these penny traps a-day. Last August I made a 'thaumatrope' for a young man that I had known since a lad of twelve years of age; he got off work and couldn't find anything to turn his hand to, so I advised him to get up an exhibition: anything was better than starving. He had a wife and two children, and I can't bear to see any one want, let alone the young ones; and so, cripple as I was, I set to work here in my bed and made him a large set of magic circles. I painted all the figures myself in this place, though I had never handled a brush before, and that has kept him in bread up to this time. I did it to cause him to exert himself, but now he has got a situation, and is doing middling to what he has been: there's one thing though, a little money, with care, will go farther than a great deal without it. I shall never be able to get about as I used, for you see the knee is set stiff and the thigh-bone is arched with the hip, so that the one leg is three inches shorter than the other. The bone broke spontaneously, like a bit of rotten wood, the other day, while I was rubbing my hand down my thigh, and in growing together again it got out of straight. I am just able to stir about now with a crutch and stick. I can sometimes treat myself to a walk about the house and yard, but that is not often, and last Saturday night I *did* make a struggle to get out in the Bethnal Green-road, and there, as I was coming along, my stick tripped against a stone and I fell. If it hadn't been for my crutch throwing me forward, I might have fallen on my new bone and broken it again. But as it was, the crutch threw me forward and saved me. My doctor tells me my new bone would bear a blow, but I shouldn't like to try after all I have gone through. I shall not be about again till I get my carriage done, and that I intend to construct so as to drive it with one hand, by means of a new ratchet lever motion."

The daughter of the toy-maker, with whom I spoke afterwards, and who was rather "good-looking," in the literal sense of the word, than beautiful, said that she could not describe how it was that she had learnt to plane and gauge

the boards. It seemed to come to her all of a sudden—quite natural-like, she told me; though, she added, it was most likely her affection for her poor father that made her take to it so quick. "I felt it deeply" she said, "to see him take to his bed, and knew that I alone could save him from the workhouse. No! I never felt tired over the work," she continued, in answer to my questions, "because I know that it is to make him comfortable."

I should add, that I was first taken to this man by the surgeon who attended him during his long suffering, and that gentleman not only fully corroborated all I heard from his ingenious and heroic patient, but spoke in the highest possible terms of both father and daughter.

FLIES.

THESE winged tormentors are not, like most of our apterous enemies, calculated to excite disgust and nausea when we see or speak of them; nor do they usually steal upon us during the silent hours of repose (though the gnat or mosquito must be here excepted), but are many of them very beautiful, and boldly make their attack upon us in open day, when we are best able to defend ourselves.

The active fly, so frequently an unbidden guest at your table (Mouffet, 56), whose delicate palate selects your choicest viands, at one time extending his proboscis to the margin of a drop of wine, and then gaily flying to take a more solid repast from a pear or a peach—now gambolling with his comrades in the air, now gracefully carrying his furred wings with his taper feet—was but the other day a disgusting grub, without wings, without legs, without eyes, wallowing, well pleased, in the midst of a mass of excrement.

"The common house-fly," says Kirby, "is with us sufficiently annoying at the close of summer, so as to have led the celebrated Italian Ugo Foscolo, when residing here, to call it one of the 'three miseries of life.'" But we know nothing of it as a tormentor, compared with the inhabitants of southern Europe, "I met," says Arthur Young, in his interesting *Travels through France*, between Pradelles and Thurvtz, "mulberries and flies at the same time. By the term *flies*, I mean those myriads of them which form the most disagreeable circumstances of the southern climates. They are the first torments in Spain, Italy, and the olive district of France; it is not that they bite, sting, or hurt, but they buzz, tease, and worry: your mouth, eyes, ears, and nose are full of them: they swarm on every eatable—fruit, sugar, everything is attacked by them in such myriads, that if they are not incessantly driven away by a person who has nothing else to do, to eat a meal is impossible. They are, however, caught on prepared paper, and other contrivances, with so much ease and in such quantities, that were it not for negligence they

could not abound in such incredible quantities. If I farmed in these countries, I should manure four or five acres every year with dead flies. I have been much surprised that the learned Mr. Harmer should think it odd to find, by writers who treated of southern climates, that driving away flies was of importance. Had he been with me in Spain and in Languedoc in July and August, he would have been very far from thinking there was anything odd in it."—(*Young's Travels in France*, i. 298.)

It is a remarkable, and, as yet, unexplained fact, that if nets of thread or string, with meshes a full inch square, be stretched over the open windows of a room in summer or autumn, when flies are the greatest nuisance, not a single one will venture to enter from without; so that by this simple plan, a house may be kept free from these pests, while the adjoining ones which have not had nets applied to their windows will swarm with them. In order, however, that the protection should be efficient, it is necessary that the rooms to which it is applied should have the light enter by *one side only*; for in those which have a thorough light, the flies, strange to say, pass through the meshes without scruple.

For a fuller account of these singular facts, the reader is referred to a paper by W. Spence, in *Trans. Ent. Soc.* vol. i. p. 1, and also to one in the same work by the Rev. E. Stanley, late Lord Bishop of Norwich, who, having made some of the experiments suggested by Mr. Spence, found that by extending over the outside of his windows nets of a very fine pack-thread, with meshes one inch and a quarter to the square, so fine and comparatively invisible that there was no apparent diminution either of light or the distant view, he was enabled for the remainder of the summer and autumn to enjoy the fresh air with open windows, without the annoyance he had previously experienced from the intrusion of flies—often so troublesome that he was obliged on the hottest days to forego the luxury of admitting the air by even partially raising the sashes.

"But no sooner," he observes, "had I set my nets than I was relieved from my disagreeable visitors. I could perceive and hear them hovering on the other side of my barriers; but though they now and then settled on the meshes, I do not recollect a single instance of one venturing to cross the boundary."

"The number of house-flies," he adds, "might be greatly lessened in large towns, if the stabling in which their larvæ are chiefly supposed to feed were kept in pits closed by trap-doors, so that the females could not deposit their eggs in it. At Venice, where no horses are kept, it is said there are no house-flies; a statement which I regret not having heard before being there, that I might have inquired as to its truth."—(*Kirby and Spence's Entom.* i. 102, 8.)

This short account of flies would be incomplete without a description of their mode of

proceeding when they regale themselves upon a piece of loaf-sugar, and an account of the apparatus with which the Creator has furnished them in order to enable them to walk on bodies possessing smooth surfaces, and in any position.

"It is a remark* which will be found to hold good, both in animals and vegetables, that no important motion or feeling can take place without the presence of moisture. In man, the part of the eye which is the seat of vision is always bedewed with moisture; the skin is softened with a delicate oil; the sensitive part of the ear is filled with a liquid; but moisture is still more abundant in our organs of taste and smell than in any of the other senses. In the case of taste, moisture is supplied to our mouth and tongue from several reservoirs (*glands*) in their neighbourhood, whence pipes are laid and run to the mouth. The whole surface, indeed, of the mouth and tongue, as well as the other internal parts of our body, give out more or less moisture; but besides this, the mouth, as we have just mentioned, has a number of fountains expressly for its own use. The largest of these fountains lies as far off as the ear on each side, and is formed of a great number of round, soft bodies, about the size of garden-peas, from each of which a pipe goes out, and all of these uniting together, form a common channel on each side. This runs across the cheek, nearly in a line with the lap of the ear and the corner of the mouth, and enters the mouth opposite to the second or third of the double teeth (*molars*) by a hole, into which a hog's bristle can be introduced. There are, besides, several other pairs of fountains, in different parts adjacent, for a similar purpose.

"We have been thus particular in our description, in order to illustrate an analogous structure in insects, for they also seem to be furnished with salivary fountains for moistening their organs of taste. One of the circumstances that first awakened our curiosity with regard to insects, was the manner in which a fly contrives to suck up through its narrow sucker (*haustellum*) a bit of dry lump-sugar; for the small crystals are not only unfitted to pass, from their angularity, but adhere too firmly together to be separated by any force the insect can exert. Eager to solve the difficulty, for there could be no doubt of the fly's sucking the dry sugar, we watched its proceedings with no little attention; but it was not till we fell upon the device of placing some sugar on the outside of a window, while we looked through a magnifying-glass on the inside, that we had the satisfaction of repeatedly witnessing a fly let fall a drop of fluid upon the sugar, in order to melt it, and thereby render it fit to be sucked up; on precisely the same principle that we moisten with saliva, in the process of mastication, a mouthful of dry

* "Insect Miscellanies" p. 96.

bread, to fit it for being swallowed—the action of the jaws, by a beautiful contrivance of Providence, preparing the moisture along the channels at the time it is most wanted. Readers who may be disposed to think the circumstance of the fly thus moistening a bit of sugar fanciful, may readily verify the fact themselves in the way we have described. At the time when we made this little experiment, we were not aware that several naturalists of high authority had actually discovered by dissection the vessels which supply the saliva in more than one species of insect.*

"In the case of their drinking fluids, like water, saliva is not wanted; and it may be remarked, when we drink cold water it actually astringes and shuts up the openings of the salivary pipes. Hence it is that drinking does not quench thirst when the saliva is rendered viscid and scanty by heat, by fatigue, or by the use of stimulant food and liquor; and sometimes a draught of cold water, by carrying off all the saliva from the mouth, and at the same time astringing the orifices of the ducts, may actually produce thirst. Ices produce this effect on many persons. It is, no doubt, in consequence of their laborious exertions, as well as of the hot nature of their acid fluids producing similar effects, that ants are so fond of water. We have seen one quaff a drop of dew almost as large as its whole body; and when we present those in our glass formicaries with water, they seem quite insatiable in drinking it."*

Rennie, in his *Insect Miscellanies*, after describing the pedestrian contrivances with which various insects are furnished, says,†—"The most perfect contrivance of this kind, however, occurs in the domestic fly (*Musca domestica*), and its congeners, as well as in several other insects. Few can have failed to remark that flies walk with the utmost ease along the ceiling of a room, and no less so upon a perpendicular looking-glass; and though this were turned downwards, the flies would not fall off, but could maintain their position undisturbed with their backs hanging downwards. The conjectures devised by naturalists to account for this singular circumstance, previous to the ascertaining of the actual facts, are not a little amusing. 'Some suppose,' says the Abbé de la Pluche, 'that when the fly marches over any polished body, on which neither its claws nor its points can fasten, it sometimes compresses her sponge and causes it to evacuate a fluid, which fixes it in such a manner as prevents its falling without diminishing the facility of its progress; but it is much more probable that the sponges correspond with the fleshy balls which accompany the claws of dogs and cats, and that they enable the fly to proceed with a softer pace, and contribute to the preservation of the claws, whose pointed extremities would

* "Insect Miscellanies," p. 38. † Ibid, p. 368.

soon be impaired without this prevention.' (*Spect. de la Nat.* vol. i. p. 116.) 'Its ability to walk on glass,' says S. Shaw, 'proceeds partly from some little ruggedness thereon, but chiefly from a tarnish, or dirty, smoky substance, adhering to the surface; so that, though the sharp points on the sponges cannot penetrate the surface of the glass, it may easily catch hold of the tarnish.' (*Nature Displ.* vol. iii. p. 98, Lond. 1823.) But," adds Rennie, "it is singular that none of these fanciers ever took the trouble to ascertain the existence of either a gluten squeezed out by the fly, or of the smoky tarnish on glass. Even the shrewd Réaumur could not give a satisfactory explanation of the circumstance."

"The earliest correct notion on this curious subject was entertained by Derham, who, in mentioning the provision made for insects that hang on smooth surfaces, says, 'I might here name divers flies and other insects who, besides their sharp-hooked nails, have also skinny palms to their feet, to enable them to stick to glass and other smooth bodies by means of the pressure of the atmosphere—after the manner as I have seen boys carry heavy stones with only a wet piece of leather clapped on the top of the stone.' (*Physico-Theology*, vol. ii. p. 194, note b, 11th edit.) The justly-celebrated Mr. White, of Selborne, apparently without the aid of microscopical investigation, adopted Derham's opinion, adding the interesting illustration, that in the decline of the year, when the flies crowd to windows and become sluggish and torpid, they are scarcely able to lift their legs, which seem glued to the glass, where many actually stick till they die; whereas they are, during warm weather, so brisk and alert, that they easily overcome the pressure of the atmosphere."—(*Nat. Hist. of Selborne*, vol. ii. p. 274.)

"This singular mechanism, however," continues Rennie, "is not peculiar to flies, for some animals a hundred times as large can walk upon glass by the same means." St. Pierre mentions "a very small lizard, about a finger's length, which climbs along the walls, and even along glass, in pursuit of flies and other insects" (*Voyage to the Isle of France*, p. 73); and Sir Joseph Banks noticed another lizard, named the Gecke (*Lacerta Gecha*, Linn.), which could walk against gravity, and which made him desirous of having the subject thoroughly investigated. On mentioning it to Sir Everard Home, he and Mr. Bauer commenced a series of researches, by which they proved incontrovertibly, that in climbing upon glass, and walking along the ceilings with the back downwards, a vacuum is produced by a particular apparatus in the feet, sufficient to cause atmospheric pressure upon their exterior surface.

"The apparatus in the feet of the fly consists of two or three membranous suckers, connected with the last joint of the foot by a narrow neck, of a funnel-shape, immediately

under the base of each jaw, and movable in all directions. These suckers are convex above and hollow below, the edges being margined with minute serratures, and the hollow portion covered with down. In order to produce the vacuum and the pressure, these membranes are separated and expanded, and when the fly is about to lift its foot, it brings them together, and folds them up, as it were, between the two claws. By means of a common microscope, these interesting movements may be observed when a fly is confined in a wine-glass." (*Phil. Trans. for 1816*, p. 325.)

"It must have attracted the attention of the most incurious to see, during the summer, swarms of flies crowding about the droppings of cattle, so as almost to conceal the nuisance, and presenting instead a display of their shining corslets and twinkling wings. The object of all this busy bustle is to deposit their eggs where their progeny may find abundant food; and the final cause is obviously both to remove the nuisance, and to provide abundant food for birds and other animals which prey upon flies or their larvæ.

"The same remarks apply with no less force to the 'blow-flies,' which deposit their eggs, and in some cases their young, upon carcases. The common house-fly (the female of which generally lays 144 eggs) belongs to the first division, the natural food of its larvæ being horse-dung; consequently, it is always most abundant in houses in the vicinity of stables, cucumber-beds, &c., to which, when its numbers become annoying, attention should be primarily directed, rather than having recourse to fly-waters."—(*RENNIE'S Insect Miscellany*, p. 265.)

Besides the common house-fly, and the other genera of the dipterous order of insects, there is another not unfrequent intruding visitor of the fly kind which we must not omit to mention, commonly known as the blue-bottle (*Musca vomitoria*, Linn.). The disgust with which these insects are generally viewed will perhaps be diminished when our readers are informed that they are destined to perform a very important part in the economy of nature. Amongst a number of the insect tribe whose office it is to remove nuisances the most disgusting to the eye, and the most offensive to the smell, the varieties of the blue-bottle fly belong to the most useful.

"When the dead carcases of animals begin to grow putrid, every one knows what dreadful miasmata exhale from them, and taint the air we breathe. But no sooner does life depart from the body of any creature—at least from any which, from its size, is likely to become a nuisance—than myriads of different sorts of insects attack it, and in various ways. First come the *histers*, and pierce the skin. Next follow the *flesh-flies*, covering it with millions of eggs, whence in a day or two proceed innumerable devourers. An idea of the despatch made by these gourmands may be gained from the combined consideration of their numbers,

voracity, and rapid development. The larvæ of many flesh-flies, as Redi ascertained, will in twenty-four hours devour so much food, and gnaw so quickly, as to increase their weight two hundred-fold! In five days after being hatched they arrive at their full growth and size, which is a remarkable instance of the care of Providence in fitting them for the part they are destined to act; for if a longer time was required for their growth, their food would not be a fit aliment for them, or they would be too long in removing the nuisance it is given them to dissipate. Thus we see there was some ground for Linnæus's assertion, under *Musca vomitoria*, that three of these flies will devour a dead horse as quickly as would a lion."—(KIRBY and SPENCE, i.)

The following extraordinary fact, given by Kirby and Spence, concerning the voracity of the larvæ of the blow-fly, or blue-bottle (*Musca vomitoria*), is worth while appending:—

"On Thursday, June 25th, died at Asbornby, Lincolnshire, John Page, a pauper belonging to Silk-Willoughby, under circumstances truly singular. He being of a restless disposition, and not choosing to stay in the parish workhouse, was in the habit of strolling about the neighbouring villages, subsisting on the pittance obtained from door to door. The support he usually received from the benevolent was bread and meat; and after satisfying the cravings of nature, it was his custom to deposit the surplus provision, particularly the meat, between his shirt and skin. Having a considerable portion of this provision in store, so deposited, he was taken rather unwell, and laid himself down in a field in the parish of Stredington; when, from the heat of the season at that time, the meat speedily became putrid, and was of course struck by the flies. These not only proceeded to devour the inanimate pieces of flesh, but also literally to prey upon the living substance; and when the wretched man was accidentally found by some of the inhabitants, he was so eaten by the maggots, that his death seemed inevitable. After clearing away, as well as they were able, these shocking vermin, those who found Page conveyed him to Asbornby, and a surgeon was immediately procured, who declared that his body was in such a state that dressing it must be little short of instantaneous death; and, in fact, the man did survive the operation but for a few hours. When first found, and again when examined by the surgeon, he presented a sight loathsome in the extreme. White maggots of enormous size were crawling in and upon his body, which they had most shockingly mangled, and the removal of the external ones served only to render the sight more horrid." Kirby adds, "In passing through this parish last spring, I inquired of the mail-coachman whether he had heard this story; and he said the fact was well known."

One species of fly infests our houses

(*Stomoxys calcitrans*), which so nearly resembles the common house-fly (*Musca domestica*), that the difference is not easily detected except by an entomologist; indeed the resemblance is so close as to have led to the vulgar error that the common house-fly occasionally indulges itself by a feast upon our blood, after it has fed to satiety upon the delicacies which it picks from our tables. It is even a greater torment than the horse-fly.

"This little pest," says Kirby, referring to the *Stomoxys*, "I speak feelingly, incessantly interrupts our studies and comfort in showery weather, making us even stamp like the cattle by its attacks on our legs, and if we drive it away ever so often, returning again and again to the charge." In Canada they are infinitely worse. "I have sat down to write," says Lambert, (who, though he calls it the house-fly, is evidently speaking of the *Stomoxys*), "and have been obliged to throw away my pen in consequence of their irritating bite, which has obliged me every moment to raise my hand to my eyes, nose, mouth, and ears, in constant succession. When I could no longer write, I began to read, and was always obliged to keep one hand constantly on the move towards my head. Sometimes, in the course of a few minutes, I would take half-a-dozen of my tormentors from my lips, between which I caught them just as they perched."—(*Travels. &c. i. 126.*)

But of all the insect-tormentors of man, none are so loudly and universally complained of as the species of the genus *Culex*, L., whether known by the name of gnats or mosquitos. It has been generally supposed by naturalists that the mosquitos of America belong to the Linnæan genus *Culex*; but Humboldt asserts that the term *mosquito*, signifying a little fly, is applied there to a *Senicilium*, LATR. (*Senicilia*, MEIG.), and that the *Culices*, which are equally numerous and annoying, are called *Zancudoes*, which means *long-legs*. The former, he says, are what the French call *Moustiques*, and the latter *Maringouins*. (*Personal Narrative, E. T., v. 93.*)

Humboldt's remark, however, refers only to South America. Mr. Westwood informs us that *Mosquito* is certainly applied to a species of *Culex* in the United States, the inhabitants giving the name of *black-fly* to a small *Senicilium*. Pliny, after Aristotle, distinguishes well between *Hymenoptera* and *Diptera*, when he says the former have their sting in the tail, and the latter in the mouth; and that to the one this instrument is given as the instrument of vengeance, and to the other of avidity.

But the instrument of avidity in the genus of which I am speaking is even more terrible than that of vengeance in most insects that are armed with it. It instils into its wound a poison (as appears from the consequent inflammation and tumour), the principal use of which is to render the blood more fluid and fitter for suction. This weapon, which is more

complex than the sting of hymenopterous insects, consisting of five pieces besides the exterior sheath—some of which seem simply lancets, while others are barbed like the spiculae of a bee's sting—is at once calculated for piercing the flesh and forming a syphon adapted to imbibe the blood. There are several species of this genus whose bite is severe; but none is to be compared to the common gnat (*Culex pipiens*, L.), if, as has been generally affirmed, it be synonymous with the mosquito, though, in all probability, several species are confounded under both names.

In this country they are justly regarded as no trifling evil; for they follow us to all our haunts, intrude into our most secret retirements, assail us in the city and in the country, in our houses and in our fields, in the sun and in the shade; nay, they pursue us to our pillows, and keep us awake by the ceaseless hum of their rapid wings (which, according to the Baron C. de Latour, are vibrated 3000 times per minute), and their incessant endeavours to fix themselves upon our face, or some uncovered part of our body; whilst, in spite of them we fall asleep, they awaken us by the acute pain which attends the insertion of their oral stings, attacking with most avidity the softer sex, and trying their temper by disfiguring their beauty.

In Marshland in Norfolk, the inhabitants are said to be so annoyed by the gnats, that the better sort of them, as in many hot climates, have recourse to a gauze covering for their beds, to keep them off during the night.

"CATCH-'EM-ALIVE" SELLERS.

I DISCOVERED a colony of "catch-'em-alive" boys residing in Pheasant-court, Gray's-inn-lane.

From the pleasing title given to this alley, one might almost be led to imagine it was a very delightful spot, though it is only necessary to look down the little bricked archway that marks its entrance, and see the houses—dirty as the sides of a dust-bin, and with the patched counterpanes and yellow sheets hanging from the windows—to feel assured that it is one of the most squalid of the many wretched courts that branch out from Gray's-inn-lane.

I found the lads playing at "pitch and toss" in the middle of the paved yard. They were all willing enough to give me their statements; indeed, the only difficulty I had was in making my choice among the youths.

"Please, sir, I've been at it longer than him," cried one with teeth ribbed like celery.

"Please, sir, he ain't been out this year with the papers," said another, who was hiding a handful of buttons behind his back.

"He's been at shoe-blackening, sir; I'm the only reg'lar fly-boy," shouted a third, eating a piece of bread as dirty as London snow.

A big lad with a dirty face, and hair like



VAGRANTS IN THE CASUAL WARD OF WORKHOUSE.

[From a Sketch.]

hemp, was the first of the "catch-'em-alive" boys who gave me his account of the trade. He was a swarthy-featured boy, with a broad nose like a negro's, and on his temple was a big half-healed scar, which he accounted for by saying that "he had been runned over" by a cab, though, judging from the blackness of one eye, it seemed to have been the result of some street-fight. He said:—

"I'm an Irish boy, and near turned sixteen, and I've been silling fly-papers for between eight and nine year. I must have begun to sill them when they first come out. Another boy first tould me of them, and he'd been silling them about three weeks before me. He used to buy them of a party as lives in a back-room near Drury-lane, what buys paper and makes the catch 'em alive himself. When they first came out the used to charge sixpence a-dozen for 'em, but now they've got 'em to twopence ha'penny. When I first took to silling 'em, there was a tidy lot of boys at the business, but not so many as now, for all the boys seem at it. In our court alone I should think there was above twenty boys silling the things.

"At first, when there was a good time, we used to buy three or four gross together, but now we don't do more than half a gross. As we go along the streets we call out different cries. Some of us says, 'Fly-papers, fly-papers, ketch 'em all alive.' Others make a kind of song of it, singing out, 'Fly-paper, ketch 'em all alive, the nasty flies, tormenting the baby's eyes. Who'd be fly-blow'd, by all the nasty blue-bottles, beetles, and flies?'

"People likes to buy of a boy as sings out well, 'cos it makes 'em laugh.

"I don't think I sell so many in town as I do in the borders of the country, about High-bury, Croydon, and Brentford. I've got some regular customers in town about the City-prison and the Caledonian-road; and after I've served them and the town custom begins to fall off, then I goes to the country.

"We goes two of us together, and we takes about three gross. We keep on silling before us all the way, and we comes back the same road. Last year we sould very well in Croydon, and it was the best place for gitting a price for them; they'd give a penny a-piece for 'em there, for they didn't know nothing about them. I went off one day at tin o'clock and didn't come home till two in the morning. I sould eighteen dozen out in that d'rection the other day, and got rid of them before I had got half-way.

"But flies are very scarce at Croydon this year, and we haven't done so well. There ain't half as many flies this summer as last.

"Some people says the papers draws more flies than they ketches, and that when one gets in, there's twenty others will come to see him.

"It's according to the weather as the flies is about. If we have a fine day it fetches

them out, but a cold day kills more than our papers.

"We sills the most papers to little cook-shops and sweetmeat-shops. We don't sill so many at private-houses. The public-houses is pretty good customers, 'cos the beer draws the flies. I sould nine dozen at one house—a school—at Highgate, the other day. I sould 'em two for three-ha'pence. That was a good hit, but then t'other days we loses. If we can make a ha'penny each we thinks we does well.

"Those that sills their papers at three a-penny buys them at St. Giles's, and pays only three-ha'pence a dozen for them, but they an't half as big and good as those we pays tuppence-ha'penny a dozen for.

"Barnet is a good place for fly-papers; there's a good lot of flies down there. There used to be a man at Barnet as made 'em, but I can't say if he do now. There's another at Brentford, so it ain't much good going that way.

"In cold weather the papers keep pretty well, and will last for months with just a little warming at the fire; for they tears on opening when they are dry. You see we always carry them with the sticky sides doubled up together like a sheet of writing-paper. In hot wither, if you keep them folded up, they lasts very well; but if you opens them, they dry up. It's easy opening them in hot weather, for they comes apart as easy as peeling a horrange.

"We generally carries the papers in a bundle on our arm, and we ties a paper as is loaded with flies round our cap, just to show the people the way to ketch 'em. We get a loaded paper given to us at a shop.

"When the papers come out first, we used to do very well with fly-papers; but now it's hard work to make our own money for 'em. Some days we used to make six shillings a-day regular. But then we usen't to go out every day, but take a rest at home. If we do well one day, then we might stop idle another day, resting. You see, we had to do our twenty or thirty miles silling them to get that money, and then the next day we was tired.

"The silling of papers is gradual fallen off. I could go out and sill twenty dozen wunst where I couldn't sill one now.

"I think I does a very grand day's work if I yearns a shilling. Perhaps some days I may lose by them. You see, if it's a very hot day, the papers gets dusty; and beside, the stuff gets melted and oozes out; though that don't do much harm, 'cos we gets a bit of whitening and rubs 'em over.

"Four years ago we might make ten shillings a-day at the papers, but now, taking from one end of the fly-paper sason to the other, which is about three months, I think we makes about one shilling a-day out of papers, though even that aint quite certain. I never goes out without getting rid of mine, somehow or another, but then I am obleeged to walk quick and look about me.

"When it's a bad time for silling the papers, such as a wet, could day, then most of the fly-paper boys goes out with brushes, cleaning boots. Most of the boys is now out hopping. They goes reg'lar every year after the sason is give over for flies.

"The stuff as they puts on the paper is made out of boiled oil and turpentine and resin. It's seldom as a fly lives more than five minutes after it gets on the paper, and then it's as dead as a house. The blue-bottles is tougher, but they don't last long, though they keeps on fizzing as if they was trying to make a hole in the paper. The stuff is only p'isonous for flies, though I never heard of any body as ever eat a fly-paper."

The second lad I chose from among the group of applicants was of a middle age, and although the noisiest when among his companions, had no sooner entered the room with me, than his whole manner changed. He sat himself down, bent up like a monkey, and scarcely ever turned his eyes from me. He seemed as nervous as if in a witness-box, and kept playing with his grubby fingers till he had almost made them white.

"They calls me 'Curley.' I come from Ireland too. I'm about fourteen year, and have been in this line now, sir, about five year. I goes about the borders of the country. We general takes up the line about the beginning of June, that is, when we gets a good summer. When we gets a good close dull day like this, we does pretty well, but when we has first one day hot, and then another rainy and could, a course we don't get on so well.

"The most I sould was one day when I went to Uxbridge, and then I sould a gross and a half. I paid half-a-crown a gross for them. I was living with mother then, and she give me the money to buy 'em, but I had to bring her back again all as I took. I al'us give her all I makes, except sixpence as I wants for my dinner, which is a kipple of pen'orth of bread and cheese and a pint of beer. I sould that gross and a half I spoke on at a ha'penny each, and I took nine shillings, so that I made five and sixpence. But then I'd to leave London at three or four o'clock in the morning, and to stop out till twelve o'clock at night. I used to live out at Hammersmith then, and come up to St. Giles's every morning and buy the papers. I had to rise by half-past two in the morning, and I'd get back again to Hammersmith by about six o'clock. I couldn't sill none on the road, 'cos the shops wasn't open.

"The flies is getting bad every summer. This year they a'n't half so good as they was last year or the year before. I'm sure I don't know why there aint so many, but they aint so plentiful like. The best year was three year ago. I know that by the quantity as my customers bought of me, and in three days the papers was swarmed with flies.

"I've got regular customers, where I calls two or three times a week to 'em. If I was to

walk my rounds over I could at the lowest sell from six to eight dozen at ha'penny each at wonst. If it was nice wither, like to-day, so that it wouldn't come wet on me, I should make ten shillings a-week regular, but it depends on the wither. If I was to put my profits by, I'm sure I should find I make more than six shillings a-week, and nearer eight. But the season is only for three months at most, and then we takes to boot-cleaning. Near all the poor boys about here is fly-paper silling in the hot weather, and boot-cleaners at other times.

"Shops buys the most of us in London. In Barnet I sell sometimes as much as six or seven dozen to some of the grocers as buys to sell again, but I don't let them have them only when I can't get rid of 'em to t'other customers. Butchers is very fond of the papers, to catch the blue-bottles as gets in their meat, though there is a few butchers as have said to me, 'Oh, go away, they draws the flies more than they ketches 'em.' Clothes-shops, again, is very fond of 'em. I can't tell why they is fond of 'em, but I suppose 'cos the flies spots the goods.

"There's lots of boys going silling 'ketch 'em alive oh's' from Golden-lane, and White-chapel, and the Borough. There's lots, too, comes out of Gray's-inn-lane and St. Giles's. Near every boy who has nothing to do goes out with fly-papers. Perhaps it aint that the flies is falled off that we don't sill so many papers now, but because there's so many boys at it."

The most intelligent and the most gentle in his demeanour was a little boy, who was scarcely tall enough to look on the table at which I was writing. If his face had been washed, he would have been a pretty-looking lad; for, despite the black marks made by his knuckles during his last fit of crying, he had large expressive eyes, and his features were round and plump, as though he were accustomed to more food than his companions.

Whilst taking his statement I was interrupted by the entrance of a woman, whose fears had been aroused by the idea that I belonged to the Ragged School, and had come to look after the scholars. "It's no good you're coming here for him, he's off hopping to-morrow with his mother, as has asked me to look after him, and it's only your saxpence he's wanting."

It was with great difficulty that I could get rid of this lady's company; and, indeed, so great appeared to be the fear in the court that the object of my visit was to prevent the young gentlemen from making their harvest trip into the country, that a murmuring crowd began to assemble round the house where I was, determined to oppose me by force, should I leave the premises accompanied by any of the youths.

"I've been longer at it than that last boy, though I'm only getting on for thirteen, and he's older than I'm; 'cos I'm little and he's

big, getting a man. But I can sell them quite as well as he can, and sometimes better, for I can holler out just as loud, and I've got reg'lar places to go to. I was a very little fellow when I first went out with them, but I could sell them pretty well then, sometimes three or four dozen a-day. I've got one place, in a stable, where I can sell a dozen at a time to countrypeople.

"I calls out in the streets, and I goes into the shops, too, and calls out, 'Ketch 'em alive, ketch 'em alive; ketch all the nasty black-beetles, blue-bottles, and flies; ketch 'em from teasing the baby's eyes.' That's what most of us boys cries out. Some boys who is stupid only says, 'Ketch 'em alive,' but people don't buy so well from them.

"Up in St. Giles's there is a lot of fly-boys, but they're a bad set, and will fling mud at gentlemen, and some prigs the gentlemen's pockets. Sometimes, if I sells more than a big boy, he'll get mad and hit me. He'll tell me to give him a halfpenny and he won't touch me, and that if I don't he'll kill me. Some of the boys takes an open fly-paper, and makes me look another way, and then they sticks the ketch 'em alive on my face. The stuff won't come off without soap and hot water, and it goes black, and looks like mud. One day a boy had a broken fly-paper, and I was taking a drink of water, and he come behind me and slapped it up in my face. A gentleman as saw him give him a crack with a stick and me twopence. It takes your breath away, until a man comes and takes it off. It all sticked to my hair, and I couldn't rack (comb) right for some time.

"When we are selling papers we have to walk a long way. Some boys go as far as Croydon, and all about the country; but I don't go much further than Copenhagen-fields, and straight down that way. I don't like going along with other boys, they take your customers away; for perhaps they'll sell 'em at three a-penny to 'em, and spoil the customers for you. I won't go with the big boy you saw 'cos he's such a blackgeyard; when he's in the country he'll go up to a lady and say, 'Want a fly-paper, marm?' and if she says 'No,' he'll perhaps job his head in her face—butt at her like.

"When there's no flies, and the ketch 'em alive's is out, then I goes tumbling. I can turn a cat'enwheel over on one hand. I'm going to-morrow to the country, harvesting and hopping—for, as we says, 'Go out hopping, come in jumping.' We start at three o'clock to-morrow, and we shall get about twelve o'clock at night at Dead Man's Barn. It was left for poor people to sleep in, and a man there was buried in a corner. The man had got six farms of hops; and if his son hadn't buried him there, he wouldn't have had none of the riches.

"The greatest number of fly-papers I've sold in a day is about eight dozen. I never

sells no more than that; I wish I could. People won't buy 'em now. When I'm at it I makes, taking one day with another, about ten shilling a-week. You see, if I sold eight dozen, I'd make four shillings. I sell them at a penny each, at two for three-ha'pence, and three for twopence. When they gets stale I sells 'em at three a-penny. I always begin by asking a penny each, and perhaps they'll say, 'Give me two for three-ha'pence.' I'll say, 'Can't, ma'am,' and then they pulls out a purse full of money and gives a penny.

"The police is very kind to us, and don't interfere with us. If they sees another boy hitting us they'll take off their belts and hit 'em. Sometimes I've sold a ketch 'em alive to a policeman; he'll fold it up and put it in his pocket to take home with him. Perhaps he's got a kid, and the flies teazes its eyes.

"Some ladies like to buy fly-cages better than ketch 'em alive's, because sometimes when they're putting 'em up they falls in their faces, and then they screams."

THE FLY-PAPER MAKER.

In a small attic-room, in a house near Drury-lane, I found the "catch 'em alive" manufacturer and his family busy at their trade.

Directly I entered the house where I had been told he lodged, I knew that I had come to the right address; for the staircase smelt of turpentine as if it had been newly painted, the odour growing more and more powerful as I ascended.

The little room where the man and his family worked was as hot as an oven; for although it was in the heat of summer, still his occupation forced him to have a fire burning for the purpose of melting and keeping fluid the different ingredients he spread upon his papers.

When I opened the door of his room, I was at first puzzled to know how I should enter the apartment; for the ceiling was completely hidden by the papers which had been hung up to dry from the many strings stretched across the place, so that it resembled a washer-woman's back-yard, with some thousands of red pocket-handkerchiefs suspended in the air. I could see the legs of the manufacturer walking about at the further end, but the other part of his body was hidden from me.

On his crying, "Come in!" I had to duck my head down, and creep under the forest of paper strips rustling above us.

The most curious characteristic of the apartment was the red colour with which everything was stained. The walls, floor, and tables were all smeared with ochre, like the pockets of a drover. The papers that were drying were as red as the pages of a gold-leaf book. This curious appearance was owing to part of the process of "catch 'em alive" making consisting in first covering the paper

with coloured size, to prevent the sticky solution from soaking into it.

The room was so poorly furnished, that it was evident the trade was not a lucrative one. An old Dutch clock, with a pendulum as long as a walking-stick, was the only thing in the dwelling which was not indispensable to the calling. The chimneypiece—that test of “well-to-do” in the houses of the poorer classes—had not a single ornament upon it. The long board on which the family worked served likewise as the table for the family meals, and the food they ate had to be laid upon the red-smear surface. There was but one chair, and that the wife occupied; and when the father or son wished to sit down, a tub of size was drawn out with its trembling contents from under the work-table, and on this they rested themselves.

“We are called in the trade,” said the father, “fly-paper makers. They used to put a nice name to the things once, and call ‘em Egyptian fly-papers, but now they use merely the word ‘fly-papers,’ or ‘fly-destroyers,’ or ‘fly-catchers,’ or ‘catch ‘em alive, oh.’”

“I never made any calculation about flies, and how often they breeds. You see, it depends upon so many things how they’re produced: for instance, if I was to put my papers on a dung-heap, I might catch some thousands; and if I was to put a paper in an ice-well, I don’t suppose I should catch one.

“I know the flies produce some thousands each, because if you look at a paper well studded over with flies, you’ll see—that is, if you look very carefully—where each fly has blown, as we call it, there’ll be some millions on a paper, small grubs or little mites, like; for whilst struggling the fly shoots forth the blows, and eventually these blows would turn to flies.

“I have been at fly-catcher making for the last nine years. It’s almost impossible to make any calculation as to the number of papers I make during the season, and this is the season. If it’s fine weather, then flies are plentiful, and the lads who sell the papers in the streets keep me busy; but if it’s at all bad weather, then they turn their attention to blacking boots.

“It’s quite a speculation, my business is, for all depends upon the lads coming to me to buy, and there’s no certainty beyond. I every season expect that these lads who bought papers of me the last year will come back and deal with me again. First of all, these lads will come for a dozen, or a kipple of dozen, of papers; and so it goes on till perhaps they are able to sell half a gross a-day, and then from that they will, if the weather is fine, get up to ten dozen, or perhaps a gross, but seldom or never over that.

“In the very busiest and hottest time as is, I have, for about two or three weeks, made as many as thirty-six gross of papers in a week. We generally begins about the end of June or

the beginning of July, and then for five or six weeks we goes on very busy; after that it dies out, and people gets tired of laying out their money.

“It’s almost impossible to get at any calculation of the quantity I make. You see, today I haven’t sold a gross, and yesterday I didn’t sell more than a gross; and the last three days I haven’t sold a single paper, it’s been so wet. But last week I sold more than five gross a-day,—it varies so. Oh yes, I sell more than a hundred gross during the season. You may say, that for a month I make about five gross a-day, and that—taking six days to the week, and thirty days to the month—makes a hundred and thirty gross: and then for another month I do about three gross a-day, and that, at the same calculation, makes seventy-eight gross, or altogether one hundred and ninety-eight gross, or 28,512 single papers, and that is as near as I can tell you.

“Sometimes our season lasts more than two months. You may reckon it from the latter end of June to the end of August, or if the weather is very hot, then we begins early in June, and runs it into September. The prime time is when the flies gets heavy and stings—that’s when the papers sells most.

“There’s others in the business besides myself; they lives up in St. Giles’s, and they sells ‘em rather cheaper. At one time the shopkeepers used to make the papers. When they first commenced, they was sold at twopence and threepence and fourpence a-piece, but now they’re down to three a-penny in the streets, or a halfpenny for a single one. The boys when they’ve got back the money they paid me for their stock, will sell what papers they have left at anything they’ll fetch, because the papers gets dusty and spiles with the dust.

“I use the very best ‘Times’ paper for my ‘catch ‘em alive.’ I gets them kept for me at stationers’ shops and libraries, and such-like. I pays threepence a-pound, or twenty-eight shillings the hundred weight. That’s a long price, but you must have good paper if you want to make a good article. I could get paper at twopence a-pound, but then it’s only the cheap Sunday papers, and they’re too slight.

“The morning papers are the best, and will stand the pulling in opening the papers; for we always fold the destroyers with the sticky sides together when finished. The composition I use is very stiff; if the paper is bad, they tear when you force them open for use. Some in the trade cut up their newspapers into twelve for the full sheet, but I cut mine up into only eight.

“The process is this. First of all the paper is sized and coloured. We colour them by putting a little red lead into the size, because if the sticky side is not made apparent the people wont buy ‘em, ‘cause they might spile

the furniture by putting the composition-side downwards. After sizing the papers, they are hung up to dry, and then the composition is laid on. This composition is a secret, and I’m obligated to keep it so, for of course all the boys who come here would be trying to make ‘em, and not only would it injure me, but I’d warrant they’d injure themselves as well, by setting the house on fire. You may say that my composition is made from a mixture of resinous substances. Everything in making it depends upon using the proper proportions. There’s some men who deal with me who know the substances to make the composition from, but because they haven’t got the exact proportions of the quantities, they can’t make it right.

“The great difficulty in making them is drying the papers after they are sized. Some days when it’s fine they’ll dry as fast as you can hang ‘em up a’most, and other days they won’t dry at all—in damp weather ‘specially. There is some makers who sizes and colours their papers in the winter, and then puts ‘em to dry; and when the summer comes, then they has only to put on the composition.

“I’m a very quick hand in the trade (if you can call it one, for it only lasts three months at most, and is a very uncertain one, too; indeed, I don’t know what you can style our business—it ain’t a purfession and it ain’t a trade, I suppose it’s a calling): I’m a quick hand I say at spreading the composition, and I can, taking the day through, do about two gross an hour—that is, if the papers was sized ready for me; but as it is, having to size ‘em first, I can’t do more than three gross a-day myself, but with my wife helping me we can do such a thing as five gross a-day.

“It’s most important that the size should dry. Now those papers (producing some covered with a dead red coating of the size preparation) have been done four days, and yet they’re not dry, although to you they appear so, but I can tell that they feel tough, and not crisp as they ought to. When the size is damp it makes them adhere to one another when I am laying the stuff on, and it sweats through and makes them heavy, and then they tears when I opens them.

“When I’m working, I first size the entire sheet. We put it on the table, and then we have a big brush and plaster it over. Then I gives it to my wife, and she hangs it up on a line. We can hang up a gross at a time here, and then the room is pretty full, and must seem strange to anybody coming in, though to us it’s ordinary enough.”

The man was about to exhibit to us his method of proceeding, when his attention was drawn off by a smell which the moving of the different pots had caused. “How strong this size smells, Charlotte!” he said to his wife.

“It’s the damp and heat of the room does it,” the wife replied; and then the narrative went on.

“Before putting on the composition I cut up the papers into slips as fast as possible, that don’t take long.”

“We can cut ‘em in first style,” interrupted the wife.

“I can cut up four gross an hour,” said a boy, who was present.

“I don’t think you could, Johnny,” said the man. “Two gross is nearer the mark, to cut ‘em evenly.”

“It’s only seventy sheets,” remonstrated the lad, “and that’s only a little more than one a minute.”

A pile of entire newspapers was here brought out, and all of them coloured red on one side, like the leaves of the books in which gold-leaf is kept.

Judging from the trial at cutting which followed, we should conclude that the lad was correct in his calculation.

“When we put on the composition,” continued the catch-‘em-alive maker, “we has the cut slips piled up in a tall mound like, and then we have a big brush, and dips it in the pot of stuff and rubs it in; we folds each catcher up as we does it, like a thin slice of bread and butter, and put it down. As I said before, at merely putting on the composition I could do about two gross an hour.

“My price to the boys is twopence-halfpenny a dozen, or two-and-sixpence a gross, and out of that I don’t get more than ninepence profit, for the paper, the resin, and the firing for melting the size and composition, all takes off the profit.

“This season nearly all my customers have been boys. Last season I had a few men who dealt with me. The principal of those who buys of me is Irish. A boy will sometimes sell his papers for a halfpenny each, but the usual price is three a-penny. Many of the blacking-boys deal with me. If it’s a fine day it don’t suit them at boot-cleaning, and then they’ll run out with my papers; and so they have two trades to their backs—one for fine, and the other for wet weather.

“The first man as was the inventor of these fly-papers kept a barber’s shop in St. Andrew-street, Seven Dials, of the name of Greenwood or Greenfinch, I forget which. I expect he disklivered it by accident, using varnish and stuff, for stale varnish has nearly the same effect as our composition. He made ‘em and sold ‘em at first at threepence and fourpence a-piece. Then it got down to a penny. He sold the receipt to some other parties, and then it got out through their having to employ men to help ‘em. I worked for a party as made ‘em, and then I set to work making ‘em for myself, and afterwards hawking them. They was a greater novelty then than they are now, and sold pretty well. Then men in the streets, who had nothing to do, used to ask me where I bought ‘em, and then I used to give ‘em my own address, and they’d come and find me.”

OF BUGS AND FLEAS.

A NUMEROUS family of a large order of insects is but too well known, both in gardens and houses, under the general name of Bugs (*Cimicidæ*) most, if not all, of the species being distinguished by an exceedingly disagreeable smell, particularly when pressed or bruised.

The sucking instrument of these insects has been so admirably dissected and delineated by M. Savigny, in his "Theory of the Mouth of Six-legged (*hexapod*) Insects,"* that we cannot do better than follow so excellent a guide.

The sucker is contained in a sheath, and this sheath is composed of four pieces, which, according to Savigny's theory, represent an under-lip much prolonged. The edges bend downwards, and form a canal receiving the four bristles, which he supposes to correspond with the two mandibles and the two lower jaws. It is probable that the two middle of these bristles act as piercers, while the other two, being curved at the extremity (though not at all times naturally so), assist in the process of suction.

The plant-bugs are all furnished with wings and membranous wing-cases, many of them being of considerable size, and decked in showy colours. These differ in all those points from their congener, the bed-bug (*Cimex lectularius*), which is small, without wings, and of a dull uniform brown. The name is of Welsh origin, being derived from the same root as *bug-bear*, and hence the passage in the Psalms, "thou shalt not be afraid for the terror by night,"† is rendered in Matthew's Bible, "thou shalt not need to be afraid of any bugs by night."

In earlier times this insect was looked upon with no little fear, no doubt because it was not so abundant as at present. "In the year 1503," says Mouffet, "Dr. Penny was called in great haste to a little village called Mortlake, near the Thames, to visit two noblemen who were much frightened by the appearance of bug-bites, and were in fear of I know not what contagion; but when the matter was known, and the insects caught, he laughed them out of all fear."‡ This fact, of course, disproves the statement of Southall, that bugs were not known in England before 1670.

Linnaeus was of opinion, however, that the bug was not originally a native of Europe, but had been imported from America. Be this as it may, it seems to thrive but too well in our climate, though it multiplies less in Britain than in the warmer regions of the Continent, where it is also said to grow to a larger size, and to bite more keenly. This insect, it is said, is never seen in Ireland.§

"Commerce," says a learned entomologist, "with many good things, has also introduced

* "Mém. Anim. sans Vertébrat." i. 36.

† Ps. xci. 5. ‡ "Theatr. Insect." 270. § J. F.

amongst us many great evils, of which noxious insects form no small part; and one of her worst presents was, doubtless, the disgusting animals called bugs. They seem, indeed," he adds, "to have been productive of greater alarm at first than mischief,—at least, if we may judge from the change of name which took place upon their becoming common. Their original English name was *Chinche*, or *Wall-louse*; and the term *bug*, which is a Celtic word, signifying a ghost or goblin, was applied to them after Ray's time, most probably because they were considered as 'terrors by night.' Hence our English word *bug-bear*. The word in this sense often occurs in Shakespeare, *Winter's Tale*, act iii. sc. 2, 3; *Henry VI.* act v. sc. 2; *Hamlet*, act v. sc. 2. See Douce's *Illustrations of Shakspeare*, i. 329."

Even in our own island these obtrusive insects often banish sleep. "The night," says Goldsmith, in his *Animated Nature*, "is usually the season when the wretched have rest from their labour; but this seems the only season when the bug issues from its retreats to make its depredations. By day it lurks, like a robber, in the most secret parts of the bed, takes the advantage of every chink and cranny to make a secure lodgment, and contrives its habitation with so much art that it is no easy matter to discover its retreat. It seems to avoid the light with great cunning, and even if candles be kept burning, this formidable insect will not issue from its hiding-place. But when darkness promises security, it then issues from every corner of the bed, drops from the tester, crawls from behind the arras, and travels with great assiduity to the unhappy patient, who vainly wishes for rest. It is generally vain to destroy one only, as there are hundreds more to revenge their companion's fate; so that the person who thus is subject to be bitten (some individuals are exempt), remains the whole night like a sentinel upon duty, rather watching the approach of fresh invaders than inviting the pleasing approaches of sleep."*

Mouffet assures us, that against these enemies of our rest in the night our merciful God hath furnished us with remedies, which we may fetch out of old and new writers, either to drive them away or kill them.† The following is given as the best poison for bugs, by Mr. Brande, of the Royal Institution:—Reduce an ounce of corrosive sublimate (*perchloride of mercury*) and one ounce of white arsenic to a fine powder; mix with it one ounce of muriate of ammonia in powder, two ounces each of oil of turpentine and yellow wax, and eight ounces of olive oil; put all these into a pipkin, placed in a pan of boiling water, and when the wax is melted, stir the whole, till cold, in a mortar.‡ A strong solution of corrosive sublimate, indeed, applied as a wash, is a most efficacious bug-poison.

* Goldsmith's "Animat. Nature," iv. 198.

† "Theatr. Insect." ‡ "Materia Medica," Index

Though most people dislike this insect, others have been known to regard it with protecting care. One gentleman would never suffer the bugs to be disturbed in his house, or his bedsteads removed, till, in the end, they swarmed to an incredible degree, crawling up even the walls of his drawing-room; and after his death millions were found in his bed and chamber furniture.*

In the Banian hospital, at Surat, the overseers are said frequently to hire beggars from the streets, at a stipulated sum, to pass the night among bugs and other vermin, on the express condition of suffering them to enjoy their feast without molestation.†

The bed-bug is not the only one of its congeners which preys upon man. St. Pierre mentions a bug found in the Mauritius, the bite of which is more venomous than the sting of a scorpion, being succeeded by a swelling as big as the egg of a pigeon, which continues for four or five days.‡ Ray tells us that his friend Willoughby had suffered severe temporary pain, in the same way, from a water-bug. (*Notonecta glauca*, LINN.)§

The winged insects of the order to which the bed-bug belongs often inflict very painful wounds, and it is even stated, upon good authority, that an insect of the order, commonly known in the West Indies by the name of the *wheel-bug*, can communicate an electric shock to the person whose flesh it touches. The late Major-General Davies, R.A. (well known as a most accurate observer of nature and an indefatigable collector of her treasures, as well as a most admirable painter of them), having taken up this animal and placed it upon his hand, assures us that it gave him, with its legs, a considerable shock, as if from an electric jar, which he felt as high as his shoulders; and then dropping the creature, he observed six marks upon his hand where the six feet had stood.

Bugs are very voracious, and seem to bite most furiously in the autumn, as if determined to feast themselves before they retire to their winter quarters.

There is another pernicious bed insect—the flea (*Pulex irritans*, LINN.), which, being without wings, some of our readers may suppose to be nearly allied to the bed-bug, though it does not belong even to the same order, but to a new one (*Aphaniptera*, KIRBY), established on the principle that the wings are obsolete or inconspicuous.

Fleas, it may be worth remarking, are not all of one species; those which infest animals and birds differing in many particulars from the common bed-flea (*Pulex irritans*). As many as twelve distinct sorts of fleas have been found in Britain alone.|| The most annoying

* Nicholson's "Journal," xvii. 40.

† Forbes, "Oriental Mem." i.

‡ "Voyage to the Isle of France."

§ "Hist. Insect." 58.

|| "Insect Transformations," p. 393.

species, however, is, fortunately, not indigenous, being a native of the tropical latitudes, and variously named in the West Indies, chigoe, jigger, nigua, tungua, and pique (*Pulex penetrans*, LINN). According to Stedman, "this is a kind of small sand-flea, which gets in between the skin and the flesh without being felt, and generally under the nails of the toes, where, while it feeds, it keeps growing till it becomes of the size of a pea, causing no further pain than a disagreeable itching. In process of time its operation appears in the form of a small bladder, in which are deposited thousands of eggs, or nits, and which, if it breaks, produce so many young chigoes, which in course of time create running ulcers, often of very dangerous consequence to the patient. So much so, indeed, that I knew a soldier, the soles of whose feet were obliged to be cut away before he could recover; and some men have lost their limbs by amputation, nay, even their lives, by having neglected, in time, to root out these abominable vermin. Walton mentions that a Capuchin friar, in order to study the history of the chigoe, permitted a colony of them to establish themselves in his feet: but before he could accomplish his object his feet mortified and had to be amputated.* No wonder that Cardan calls the insect "a very shrewd plague."†

Several extraordinary feats of strength have been recorded of fleas by various authors,‡ and we shall here give our own testimony to a similar fact. At the fair of Charlton, in Kent, 1830, we saw a man exhibit three fleas harnessed to a carriage in the form of an omnibus, at least fifty times their own bulk, which they pulled along with great ease; another pair drew a chariot. The exhibitor showed the whole first through a magnifying glass, and then to the naked eye, so that we were satisfied there was no deception. From the fleas being of large size they were evidently all females.§

It is rarely, however, that we meet with fleas in the way of amusement, unless we are of the singular humour of the old lady mentioned by Kirby and Spence, who had a liking to them; "because," said she, "I think they are the prettiest little merry things in the world; I never saw a dull flea in all my life."

When Ray and Willoughby were travelling, they found "at Venice and Augsburg fleas for sale, and at a small price too, decorated with steel or silver collars round their necks. When fleas are kept in a box amongst wool or cloth, in a warm place, and fed once a-day, they will live a long time. When these insects begin to suck they erect themselves almost perpendicularly, thrusting their sucker, which originates in the middle of the forehead, into the skin. The itching is not felt immediately,

* Walton's "Hispaniola."

† "Subtilia," lib. ix.

‡ "Insect Transformations," p. 180.

§ Introduction, i. 102.—J. R.

but a little afterwards. As soon as they are full of blood, they begin to void a portion of it; and thus, if permitted, they will continue for many hours sucking and voiding. After the first itching no uneasiness is subsequently felt. Willoughby had a flea that lived for three months, sucking in this manner the blood of his hand; it was at length killed by the cold of winter.*

According to Mouffet's account of the sucker of the flea, "the point of his nib is somewhat hard, that he may make it enter the better; and it must necessarily be hollow, that he may suck out the blood and carry it in."† Modern authors, particularly Straus and Kirby, show that Rösel was mistaken in supposing this sucker to consist of two pieces, as it is really made up of seven. First, there is a pair of triangular instruments, somewhat resembling the beak of a bird, inserted on each side of the mouth, under the parts which are generally regarded as the antennæ. Next, a pair of long sharp piercers (*scalpella*, Kirby), which emerge from the head below the preceding instruments; whilst a pair of feelers (*palpi*), consisting of four joints, is attached to these near their base. In fine, there is a long, slender tongue, like a bristle, in the middle of these several pieces.

Mouffet says, "the lesser, leaner, and younger the fleas are, the sharper they bite,—the fat ones being more inclined to tickle and play. They molest men that are sleeping," he adds, "and trouble wounded and sick persons, from whom they escape by skipping; for as soon as they find they are arraigned to die, and feel the finger coming, on a sudden they are gone, and leap here and there, and so escape the danger; but so soon as day breaks they forsake the bed. They then creep into the rough blankets, or hide themselves in rushes and dust, lying in ambush for pigeons, hens, and other birds; also for men and dogs, moles and mice, and vex such as pass by. Our hunters report that foxes are of full them, and they tell a pretty story how they get quit of them. "The fox," say they, "gathers some handfuls of wool from thorns and briers, and wrapping it up, holds it fast in his mouth, then he goes by degrees into a cold river, and dips himself down by little and little; when he finds that all the fleas are crept so high as his head for fear of drowning, and ultimately for shelter crept into the wool, he barks and spits out the wool, full of fleas, and thus very frolicquely being delivered from their molestations, he swims to land."‡

This is a little more doubtful even than the story told of Christina, queen of Sweden, who is reported to have fired at the fleas that troubled her with a piece of artillery, still exhibited in the Royal Arsenal at Stockholm.§ Nor are fleas confined to the old continent, for

* J. R. † "Theatre of Insects," p. 1102.
‡ "Theatre of Insects," p. 1102.
§ Linnæus, "Lachesis Lapan." ii. 32, note.

Lewis and Clarke found them exceedingly harassing on the banks of the Missouri, where it is said the native Indians are sometimes compelled to shift their quarters, to escape their annoyance. They are not acquainted, it would therefore seem, with the device of the shepherds in Hungary, who grease their clothes with hog's-lard to deter the fleas;* nor with the old English preventive:

"While wormwood hath seed, get a handful or twaine,
To save against March, to make fleas refrain.
Where chamber is swept, and wormwood is strown,
Ne'er flea for his life dare abide to be known."†

Linnæus was in error in stating that the domestic cat (*Felis maniculatus*, TEMMINCK) is not infested with fleas; for on kittens in particular they abound as numerous as upon dogs.‡

HER MAJESTY'S BUG-DESTROYER.

THE vending of bug-poison in the London streets is seldom followed as a regular source of living. We have met with persons who remember to have seen men selling penny packets of vermin poison, but to find out the vendors themselves was next to an impossibility. The men seem merely to take to the business as a living when all other sources have failed. All, however, agree in acknowledging that there is such a street trade, but that the living it affords is so precarious that few men stop at it longer than two or three weeks.

Perhaps the most eminent firm of the bug-destroyers in London is that of Messrs. Tiffin and Son; but they have pursued their calling in the streets, and rejoice in the title of "Bug-Destroyers to Her Majesty and the Royal Family."

Mr. Tiffin, the senior partner in this house, most kindly obliged me with the following statement. It may be as well to say that Mr. Tiffin appears to have paid much attention to the subject of bugs, and has studied with much earnestness the natural history of this vermin.

"We can trace our business back," he said, "as far as 1695, when one of our ancestors first turned his attention to the destruction of bugs. He was a lady's stay-maker—men used to make them in those days, though, as far as that is concerned, it was a man that made my mother's dresses. This ancestor found some bugs in his house—a young colony of them, that had introduced themselves without his permission, and he didn't like their company, so he tried to turn them out of doors again, I have heard it said, in various ways. It is in history, and it has been handed down in my own family as well, that bugs were first introduced into England after the fire of London, in the timber that

* "Travels."
† Tusser, "Points of Good Husbandry."
‡ J. R.

was brought for rebuilding the city, thirty years after the fire, and it was about that time that my ancestor first discovered the colony of bugs in his house. I can't say whether he studied the subject of bug-destroying, or whether he found out his stuff by accident, but he certainly *did* invent a compound which completely destroyed the bugs, and, having been so successful in his own house, he named it to some of his customers who were similarly plagued, and that was the commencement of the present connexion, which has continued up to this time.

"At the time of the illumination for the Peace, I thought I must have something over my shop, that would be both suitable for the event and to my business; so I had a transparency done, and stretched on a big frame, and lit up by gas, on which was written—

MAY THE DESTROYERS OF PEACE

BE DESTROYED BY US.

TIFFIN & SON,

BUG-DESTROYERS TO HER MAJESTY.

"Our business was formerly carried on in the Strand, where both my father and myself were born; in fact, I may say I was born to the bug business.

"I remember my father as well as possible; indeed, I worked with him for ten or eleven years. He used, when I was a boy, to go out to his work killing bugs at his customers' houses with a sword by his side and a cocked-hat and bag-wig on his head—in fact, dressed up like a regular dandy. I remember my grandmother, too, when she was in the business, going to the different houses, and seating herself in a chair, and telling the men what they were to do, to clean the furniture and wash the woodwork.

"I have customers in our books for whom our house has worked these 150 years; that is, my father and self have worked for them and their fathers. We do the work by contract, examining the house every year. It's a precaution to keep the place comfortable. You see, servants are apt to bring bugs in their boxes; and, though there may be only two or three bugs perhaps hidden in the woodwork and the clothes, yet they soon breed if left alone.

"We generally go in the spring, before the bugs lay their eggs; or, if that time passes, it ought to be done before June, before their eggs are hatched, though it's never too late to get rid of a nuisance.

"I mostly find the bugs in the bedsteads. But, if they are left unmolested, they get numerous and climb to the tops of the rooms, and about the corners of the ceilings. They colonize anywhere they can, though they're very high-minded and prefer lofty places. Where iron bedsteads are used the bugs are more in the rooms, and that's why such things

are bad. They don't keep a bug away from the person sleeping. Bugs'll come, if they're thirty yards off.

"I knew a case of a bug who used to come every night about thirty or forty feet—it was an immense large room—from a corner of the room to visit an old lady. There was only one bug, and he'd been there for a long time. I was sent for to find him out. It took me a long time to catch him. In that instance I had to examine every part of the room, and when I got him I gave him an extra nip to serve him out. The reason why I was so bothered was, the bug had hidden itself near the window, the last place I should have thought of looking for him, for a bug never by choice faces the light; but when I came to inquire about it, I found that this old lady never rose till three o'clock in the day, and the window-curtains were always drawn, so that there was no light like.

"Lord! yes, I am often sent for to catch a single bug. I've had to go many, many miles—even 100 or 200—into the country, and perhaps catch only half-a-dozen bugs after all; but then that's all that are there, so it answers our employer's purpose as well as if they were swarming.

"I work for the upper classes only; that is, for carriage company and such-like approaching it, you know. I have noblemen's names, the first in England, on my books.

"My work is more method; and I may call it a scientific treating of the bugs rather than wholesale murder. We don't care about the thousands, it's the last bug we look for, whilst your carpenters and upholsterers leave as many behind them, perhaps, as they manage to catch.

"The bite of the bug is very curious. They bite all persons the same (?) but the difference of effect lays in the constitution of the parties. I've never noticed that a different kind of skin makes any difference in being bitten. Whether the skin is moist or dry, it don't matter. Wherever bugs are, the person sleeping in the bed is sure to be fed on, whether they are marked or not; and as a proof, when nobody has slept in the bed for some time, the bugs become quite flat; and, on the contrary, when the bed is always occupied, they are round as a 'lady-bird.'

"The flat bug is more ravenous, though even he will allow you time to go to sleep before he begins with you; or at least until he thinks you ought to be asleep. When they find all quiet, not even a light in the room will prevent their biting; but they are seldom or ever found under the bed-clothes. They like a clear ground to get off, and generally bite round the edges of the nightcap or the nightdress. When they are found in the bed, it's because the parties have been tossing about, and have curled the sheets round the bugs.

"The finest and the fattest bugs I ever saw were those I found in a black man's bed. He

was the favourite servant of an Indian general. He didn't want his bed done by me; he didn't want it touched. His bed was full of 'em, no beehive was ever fuller. The walls and all were the same, there wasn't a patch that wasn't crammed with them. He must have taken them all over the house wherever he went.

"I've known persons to be laid up for months through bug-bites. There was a very handsome fair young lady I knew once, and she was much bitten about the arms, and neck, and face, so that her eyes were so swelled up she couldn't see. The spots rose up like blisters, the same as if stung with a nettle, only on a very large scale. The bites were very much inflamed, and after a time they had the appearance of boils.

"Some people fancy, and it is historically recorded, that the bug smells because it has no vent; but this is fabulous, for they have a vent. It is not the human blood neither that makes them smell, because a young bug who has never touched a drop will smell. They breathe, I believe, through their sides; but I can't answer for that, though it's not through the head. They haven't got a mouth, but they insert into the skin the point of a tube, which is quite as fine as a hair, through which they draw up the blood. I have many a time put a bug on the back of my hand, to see how they bite; though I never felt the bite but once, and then I suppose the bug had pitched upon a very tender part, for it was a sharp prick, something like that of a leech-bite.

"I once had a case of lice-killing, for my process will answer as well for them as for bugs, though it's a thing I should never follow by choice. Lice seem to harbour pretty much the same as bugs do. I found them in the furniture. It was a nurse that brought them into the house, though she was as nice and clean a looking woman as ever I saw. I should almost imagine the lice must have been in her, for they say there is a disease of that kind; and if the tics breed in sheep, why should not lice breed in us? for we're but live matter, too. I didn't like myself at all for two or three days after that lice-killing job, I can assure you; it's the only case of the kind I ever had, and I can promise you it shall be the last.

"I was once at work on the Princess Charlotte's own bedstead. I was in the room, and she asked me if I had found anything, and I told her no; but just at that minute I *did* happen to catch one, and upon that she sprang up on the bed, and put her hand on my shoulder, to look at it. She had been tormented by the creature, because I was ordered to come directly, and that was the only one I found. When the Princess saw it, she said, 'Oh, the nasty thing! That's what tormented me last night; don't let him escape.' I think he looked all the better for having tasted royal blood.

"I also profess to kill beetles, though you can never destroy them so effectually as you

can bugs; for, you see, beetles run from one house to another, and you can never perfectly get rid of them; you can only keep them under. Beetles will scrape their way and make their road round a fireplace, but how they manage to go from one house to another I can't say, but they *do*.

"I never had patience enough to try and kill fleas by my process; it would be too much of a chivey to please me.

"I never heard of any but one man who seriously went to work selling bug-poison in the streets. I was told by some persons that he was selling a first-rate thing, and I spent several days to find him out. But, after all, his secret proved to be nothing at all. It was train-oil, linseed and hempseed, crushed up all together, and the bugs were to eat it till they burst.

"After all, secrets for bug-poisons ain't worth much, for all depends upon the application of them. For instance, it is often the case that I am sent for to find out one bug in a room large enough for a school. I've discovered it when the creature had been three or four months there, as I could tell by his having changed his jacket so often—for bugs shed their skins, you know. No, there was no reason that he should have bred; it might have been a single gentleman or an old maid.

"A married couple of bugs will lay for forty to fifty eggs at one laying. The eggs are oval, and are each as large as the thirty-second part of an inch; and when together are in the shape of a caraway comfit, and of a bluish-white colour. They'll lay this quantity of eggs three times in a season. The young ones are hatched direct from the egg, and, like young partridges, will often carry the broken eggs about with them, clinging to their back. They get their fore-quarters out, and then they run about before the other legs are completely cleared.

"As soon as the bugs are born they are of a cream colour, and will take to blood directly; indeed, if they don't get it in two or three days they die; but after one feed they will live a considerable time without a second meal. I have known old bugs to be frozen over in a horse-pond—when the furniture has been thrown in the water—and there they have remained for a good three weeks; still, after they have got a little bit warm in the sun's rays they have returned to life again.

"I have myself kept bugs for five years and a half without food, and a housekeeper at Lord H——'s informed me that an old bedstead that I was then moving from a store-room was taken down forty-five years ago, and had not been used since, but the bugs in it were still numerous, though as thin as living skeletons. They couldn't have lived upon the sap of the wood, it being worm-eaten and dry as a bone.

"A bug will live for a number of years, and we find that when bugs are put away in old furniture without food, they don't increase in number; so that, according to my belief, the

bugs I just mentioned must have existed forty-five years: besides, they were large ones, and very dark-coloured, which is another proof of age.

"It is a dangerous time for bugs when they are shedding their skins, which they do about four times in the course of a year; then they throw off their hard shell and have a soft coat, so that the least touch will kill them; whereas, at other times they will take a strong pressure. I have plenty of bug-skins, which I keep by me as curiosities, of all sizes and colours, and sometimes I have found the young bugs collected inside the old ones' skins for warmth, as if they had put on their father's great-coat. There are white bugs—albinoes you may call 'em—freaks of nature like."

BLACK-BEETLES.

COCKROACHES are even more voracious than crickets. A small species (*Blatta Lapponica*, LINN.), occasionally met with about London, is said to swarm numerously in the huts of the Laplanders, and will sometimes, in conjunction with a carrion-beetle (*Silpha Lapponica*, LINN.), devour, we are told, in a single day, their whole store of dried fish.

In London, and many other parts of the country, cockroaches, originally introduced from abroad, have multiplied so prodigiously as to be a great nuisance. They are often so numerous in kitchens and lower rooms in the metropolis as literally to cover the floor, and render it impossible for them to move, except over each other's bodies. This, indeed, only happens after dark, for they are strictly night insects, and the instant a candle is intruded upon the assembly they rush towards their hiding-places, so that in a few seconds not one of the countless multitude is to be seen.

In consequence of their numbers, independently of their carnivorous propensities, they are driven to eat anything that comes in their way; and, besides devouring every species of kitchen-stuff, they gnaw clothes, leather, and books. They likewise pollute everything they crawl over, with an unpleasant nauseous smell.

These "black-beetles," however, as they are commonly called, are harmless when compared with the foreign species, the giant cockroach (*Blatta gigantea*), which is not content with devouring the stores of the larder, but will attack human bodies, and even gnaw the extremities of the dead and dying.—(Drury's *Illustrations of Nat. Hist.* iii. Pref.)

Cockroaches, at least the kind that is most abundant in Britain, hate the light, and never come forth from their hiding-places till the lights are removed or extinguished (the *Blatta Germanica*, however, which abounds in some houses, is holder, making its appearance in the day, and running up the walls and over the tables, to the great annoyance of the in-

habitants). In the London houses, especially on the ground-floor, they are most abundant, and consume everything they can find—flour, bread, meat, clothes, and even shoes. As soon as light, natural or artificial, appears, they all scamper off as fast as they can, and vanish in an instant.

These pests are not indigenous to this country, and perhaps nowhere in Europe, but are one of the evils which commerce has imported. In Captain Cook's last voyage, the ships, while at Husheine, were infested with incredible numbers of these creatures, which it was found impossible by any means to destroy. Every kind of food, when exposed only for a few minutes, was covered with them, and pierced so full of holes, that it resembled a honeycomb. They were so fond of ink that they ate out the writing on labels. Captain Cook's cockroaches were of two kinds—the *Blatta Orientalis* and *Germanica*.—(*Encyc. Britan.*)

The following fact we give from Mr. Douglas's *World of Insects*—

"Everybody has heard of a haunted house; nearly every house in and about London is haunted. Let the doubters, if they have the courage, go stealthily down to the kitchen at midnight, armed with a light and whatever other weapon they like, and they will see that beings of which Tam o'Shanter never dreamed, whose presence at daylight was only a myth, have here 'a local habitation and a name.' Scared from their nocturnal revels, the creatures run and scamper in all directions, until, in a short time, the stage is clear, and, as in some legend of *diablerie*, nothing remains but a most peculiar odour.

"These were no spirits, had nothing even of the fairy about them, but were veritable cockroaches, or 'black-beetles'—as they are more commonly but erroneously termed—for they are not beetles at all. They have prodigious powers of increase, and are a corresponding nuisance. Kill as many as you will, except, perhaps, by poison, and you cannot extirpate them—the cry is, 'Still they come.'

"One of the best ways to be rid of them is to keep a hedgehog, to which creature they are a favourite food, and his nocturnal habits make him awake to theirs. I have known cats eat cockroaches, but they do not thrive upon them."

"One article of their food would hardly have been suspected," says Mr. Newman, in a note communicated to the Entomological Society, at the meeting in February, 1855. "'There is nothing new under the sun;' so says the proverb. I believed, until a few days back, that I possessed the knowledge of a fact in the dietary economy of the cockroach of which entomologists were not cognisant, but I find myself forestalled; the fact is 'as old as the hills.' It is, that the cockroach seeks with diligence and devours with great gusto the common bed-bug.

"I will not mention names, but I am so confident of the veracity of the narrator, that I willingly take the entire responsibility of the following narrative:—

"Poverty makes one acquainted with strange bedfellows;" and my informant bears willing testimony to the truth of the adage. He had not been prosperous, and had sought shelter in a London boarding-house; every night he saw cockroaches ascending his bed-curtains; every morning he complained to his very respectable landlady, and invariably received the comforting assurance that there was not a "black-beetle in the house." Still he pursued his nocturnal investigations, and he not only saw cockroaches running along the tester of the bed, but, to his great astonishment, he positively observed one of them seize a bug, and he therefore concluded, and not without some show of reason, that the cockroach ascended the curtains with this especial object, and that the more odoriferous insect is a favourite food of the major one.

"The following extract from Mr. Webster's 'Narrative of Foster's Voyage,' corroborates this recent observation, and illustrates the proverb which I have taken as my text: 'Cockroaches, those nuisances of ships, are plentiful at St. Helena, and yet, bad as they are, they are more endurable than bugs. Previous to our arrival here in the Chanticleer we had suffered great inconvenience from the latter; but the cockroaches no sooner made their appearance than the bugs entirely disappeared. The fact is, the cockroach preys upon them, and leaves no sign or vestige of where they have been. So far, the latter is a most valuable insect.'"

So great is the annoyance and discomfort arising from these insects in Cockney households, that the author of a paper in the *Daily News* discusses the best means of effecting their extirpation. The writer of the article referred to avows his conviction, that the ingenious individual who shall devise the means of effectually ridding our houses of these insect pests will deserve to be ranked amongst the benefactors of mankind. The writer details the various expedients resorted to—hedgehogs, cucumber-peel, red wafers, phosphoric paste, glazed basins or pie-dishes filled with beer, or a syrup of beer and sugar, with bits of wood set up from the floor to the edge, for the creatures to run up by, and then be precipitated into the fatal lake, but believes that "none of these methods are fundamental enough for the evil," which, so far as he is yet aware, can only be effectually cured by heating our houses by steam!

BEEBLE DESTROYERS.

A FIRM, which has been established in London seven years, and which manufactures exclusively poison known to the trade as the "Phosphor Paste for the destruction of black-

beetles, cockroaches, rats, mice," &c., were kind enough to give me the following information:—

"We have now sold this vermin poison for seven years, but we have never had an application for our composition from any street-seller. We have seen, a year or two since, a man about London who used to sell beetle-wafers; but as we knew that kind of article to be entirely useless, we were not surprised to find that he did not succeed in making a living. We have not heard of him for some time, and have no doubt he is dead, or has taken up some other line of employment.

"It is a strange fact, perhaps; but we do not know anything, or scarcely anything, as to the kind of people and tradesmen who purchase our poison—to speak the truth, we do not like to make too many inquiries of our customers. Sometimes, when they have used more than their customary quantity, we have asked, casually, how it was and to what kind of business-people they disposed of it, and we have always been met with an evasive sort of answer. You see tradesmen don't like to divulge too much; for it must be a poor kind of profession or calling that there are no secrets in; and, again, they fancy we want to know what description of trades use the most of our composition, so that we might supply them direct from ourselves.

"From this cause we have made it a rule not to inquire curiously into the matters of our customers. We are quite content to dispose of the quantity we do, for we employ six travellers to call on chemists and oilmen for the town trade, and four for the country.

"The other day an elderly lady from High-street, Camden Town, called upon us: she stated that she was overrun with black-beetles, and wished to buy some of our paste from ourselves, for she said she always found things better if you purchased them of the maker, as you were sure to get them stronger, and by that means avoided the adulteration of the shopkeepers. But as we have said we would not supply a single box to any one, not wishing to give our agents any cause for complaint, we were obliged to refuse to sell to the old lady.

"We don't care to say how many boxes we sell in the year; but we can tell you, sir, that we sell more for beetle poisoning in the summer than in the winter, as a matter of course. When we find that a particular district uses almost an equal quantity all the year round, we make sure that that is a rat district; for where there is not the heat of summer to breed beetles, it must follow that the people wish to get rid of rats.

"Brixton, Hackney, Ball's Pond, and Lower Road, Islington, are the places that use most of our paste, those districts lying low, and being consequently damp. Camden Town, though it is in a high situation, is very much infested with beetles; it is a clayey soil, you understand, which retains moisture, and will

not allow it to filter through like gravel. This is why in some very low districts, where the houses are built on gravel, we sell scarcely any of our paste.

"As the farmers say, a good fruit year is a good fly year; so we say, a good dull, wet summer, is a good beetle summer; and this has been a very fertile year, and we only hope it will be as good next year.

"We don't believe in rat-destroyers; they profess to kill with weasels and a lot of things, and sometimes even say they can charm them away. Captains of vessels, when they arrive in the docks, will employ these people; and, as we say, they generally use our composition, but as long as their vessels are cleared of the vermin, they don't care to know how it is done. A man who drives about in a cart, and does a great business in this way, we have reason to believe uses a great quantity of our Phosphor Paste. He comes from somewhere down the East-end or Whitechapel way.

"Our prices are too high for the street-sellers. Your street-seller can only afford to sell an article made by a person in but a very little better position than himself. Even our small boxes cost at the trade price two shillings a dozen, and when sold will only produce three shillings; so you can imagine the profit is not enough for the itinerant vendor.

"Bakers don't use much of our paste, for they seem to think it no use to destroy the vermin—beetles and bakers' shops generally go together."

CRICKETS.

THE house-cricket may perhaps be deemed a still more annoying insect than the common cockroach, adding an incessant noise to its ravages. Though it may not be unpleasant to hear for a short time "the cricket chirrup in the hearth," so constant a din every evening must greatly interrupt comfort and conversation.

These garrulous animals, which live in a kind of artificial torrid zone, are very thirsty souls, and are frequently found drowned in pans of water, milk, broth, and the like. Whatever is moist, even stockings or linen hung out to dry, is to them a *bonne bouche*; they will eat the skimmings of pots, yeast, crumbs of bread, and even salt, or anything within their reach. Sometimes they are so abundant in houses as to become absolute pests, flying into the candles and even into people's faces.—(Kirby and Spence's *Ent.* i. 206, 7.)

The house-cricket (*Acheta domestica*) is well known for its habit of picking out the mortar of ovens and fire-places, where it not only enjoys warmth, but can procure abundance of food. It is usually supposed that it feeds on bread. M. Latreille says it only eats insects, and it certainly thrives well in houses infested by the cockroach; but we have also known it

eat and destroy lamb's-wool stockings, and other woollen stuffs, hung near a fire to dry. Although the food of crickets consists chiefly of vegetable substances, they exhibit a propensity to carnivorous habits. The house-cricket thrives best in the vicinity of a baker's oven, where there are plenty of bread crumbs.

Mouffet marvels at its extreme lankness, inasmuch as there is not "found in the belly any superfluity at all, although it feed on the moisture of flesh and fat of broth, to which, either poured out or reserved, it runs in the night; yea, although it feed on bread, yet is the belly always lank and void of superfluity."—(*Theatre of Insects*, p. 96.)

White of Selborne, again, says, "as one would suppose, from the burning atmosphere which they inhabit, they are a thirsty race, and show a great propensity for liquids, being frequently found dead in pans of water, milk, broth, or the like. Whatever is moist they are fond of, and therefore they often gnaw holes in wet woollen stockings and aprons that are hung to the fire. These crickets are not only very thirsty, but very voracious; for they will eat the scummings of pots, yeast, bread, and kitchen offal, or sweepings of almost every description."—(*Nat. Hist. of Selborne*.)

The cricket is evidently not fond of hard labour, but prefers those places where the mortar is already loosened, or at least is new, soft, and easily scooped out; and in this way it will dig covert channels from room to room. In summer, crickets often make excursions from the house to the neighbouring fields, and dwell in the crevices of rubbish, or the cracks made in the ground by dry weather, where they chirp as merrily as in the snugest chimney-corner. Whether they ever dig retreats in such circumstances we have not ascertained, though it is not improbable they may do so for the purpose of making nests.

"Those," says Mr. Gough of Manchester, "who have attended to the manners of the hearth-cricket, know that it passes the hottest part of the summer in sunny situations, concealed in the crevices of walls and heaps of rubbish. It quits its summer abode about the end of August, and fixes its residence by the fireside of kitchens or cottages, where it multiplies its species, and is as merry at Christmas as other insects in the dog-days. Thus do the comforts of a warm hearth afford the cricket a safe refuge, not from death, but from temporary torpidity, though it can support this for a long time, when deprived by accident of artificial warmth.

"I came to a knowledge of this fact," continues Mr. Gough, "by planting a colony of these insects in a kitchen, where a constant fire was kept through the summer, but which is discontinued from November till June, with the exception of a day once in six or eight weeks. The crickets were brought from a distance, and let go in this room, in the be-

ginning of September, 1806; here they increased considerably in the course of two months, but were not heard or seen after the fire was removed. Their disappearance led me to conclude that the cold had killed them; but in this I was mistaken; for a brisk fire being kept up for a whole day in the winter, the warmth of it invited my colony from their hiding-place, but not before the evening; after which they continued to skip about and chirp the greater part of the following day, when they again disappeared—being compelled, by the returning cold, to take refuge in their former retreats. They left the chimney-corner on the 25th of May, 1807, after a fit of very hot weather, and revisited their winter residence on the 31st of August. Here they spent the summer merely, and at present (January, 1808) lie torpid in the crevices of the chimney, with the exception of those days on which they are recalled to a temporary existence by the comforts of the fire.”—(Reeve, *Essay on the Torpidity of Animals*, p. 84.)

M. Bery St. Vincent tells us that the Spaniards are so fond of crickets that they keep them in cages like singing-birds.—(*Dict. Classique d'Hist. Nat. Art.*, Grillon. Rennie's *Insect Architecture*, 4th edit. p. 242.)

Associated as is the chirping song of the cricket family of insects with the snug chimney-corner, or the sunshine of summer, it affords a pleasure which certainly does not arise from the intrinsic quality of its music. “Sounds,” says White, “do not always give us pleasure according to their sweetness and melody; nor do harsh sounds always displease. Thus, the shrilling of the field-cricket (*Acheta campestris*), though sharp and stridulous, yet marvellously delights some hearers, filling their minds with a train of summer ideas of everything that is rural, verdurous, and joyous.”—(*Nat. Hist. of Selborne*, ii. 73.)

“Sounds inharmonious in themselves, and harsh,
Yet heard in scenes where peace for ever reigns,
And only there, please highly for their sake.”
COWPER, *Task*, Book I.

This circumstance, no doubt, causes the Spaniards to keep them in cages, as we do singing-birds. White tells us that, if supplied with moistened leaves, they will sing as merrily and loud in a paper cage as in the fields; but he did not succeed in planting a colony of them in the terrace of his garden, though he bored holes for them in the turf to save them the labour of digging.

The hearth-cricket, again, though we hear it occasionally in the hedge-banks in summer,

prefers the warmth of an oven or a good fire, and thence, residing as it were always in the torrid zone, is ever alert and merry—a good Christmas fire being to it what the heat of the dog-days is to others.

Though crickets are frequently heard by day, yet their natural time of motion is only in the night. As soon as darkness prevails the chirping increases, whilst the hearth-cricket comes running forth, and are often to be seen in great numbers, from the size of a flea to that of their full stature.

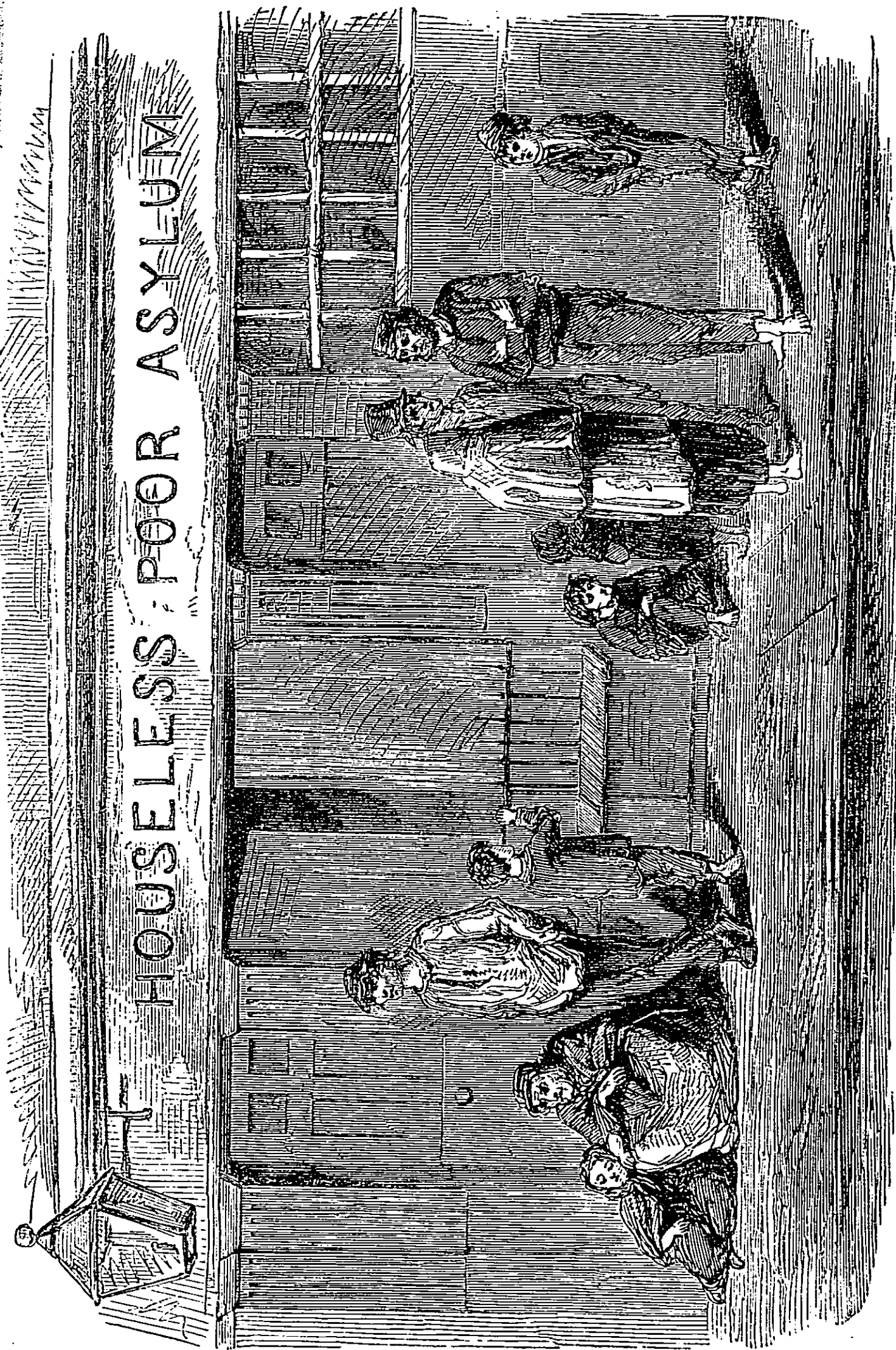
Like the field-cricket, the hearth-cricket are sometimes kept for their music; and the learned Scaliger took so great a fancy to their song, that he was accustomed to keep them in a box in his study. It is reported that in some parts of Africa they are kept and fed in a kind of iron oven, and sold to the natives, who like their chirp, and think it is a good soporific.—(Mouffet, *Theat. Insect.* 136.)

Milton, too, chose for his contemplative pleasures a spot where crickets resorted:—

“Where glowing embers through the room
Teach light to counterfeit a gloom,
Far from all resort of mirth,
See the cricket on the hearth.”—*In Icnoscrota*.

Rennie, in his *Insect Miscellanies*, says, “We have been as unsuccessful in transplanting the hearth-cricket as White was with the field-cricket. In two different houses we have repeatedly introduced crickets, but could not prevail on them to stay. One of our trials, indeed, was made in summer, with insects brought from a garden-wall, and it is probable they thought the kitchen fire-side too hot at that season.”—(p. 82.)

The so-called *chirp* of the cricket is a vulgar error. The instrument (for so it may be styled) upon which the male cricket plays (the female is mute) consists of strong nerves or rough strings in the wing-cases, by the friction of which against each other a sound is produced and communicated to the membranes stretched between them, in the same manner as the vibrations caused by the friction of the finger upon the tambourine are diffused over its surface. It is erroneously stated in a popular work, that “the organ is a membrane, which in contracting, by means of a muscle and tendon placed under the wings of the insect, folds down somewhat like a fan;” and this, being “always dry, yields by its motion a sharp piercing sound.”—(Bing, *Anim. Biog.* iv. 6th edit. Rennie's *Insect Miscellanies*, p. 62.)



ASYLUM FOR THE HOUSELESS POOR, CRIPPLEGATE.
[From a Sketch.]