MARTINEAU, Harriet. 1852. “The English Passport System”. *Household Words* 6 (131), 25 de septiebre: 31-34.

are they consigned and carried away; and if they have anything to be robbed of, and are robbed, they have, at least, the satisfaction of being robbed by their compatriots.

These woeful travellers have been gently pushed and hustled on shore by hundreds, and when the last bell-crowned hats have passed the gangway I am about departing, when I am informed that there is yet more live stock to be landed. More! What more can remain, after all this misery and all these rags, and all these walking typhus fever and small-pox hospitals?

As I have asked the question, I must answer it. There is a great deal more on the deck of the steamer yet. Pigs more. Cattle more. Sheep more. Stand on the extreme verge of the quay and peep over on the deck of the steamer. Do not turn sick and rush away in horror, but look. Look at this Smithfield in miniature; Smithfield, but infinitely more crowded in proportion; Smithfield, but ten times dirtier; Smithfield, with more cruelty, and wanton neglect, and shameful filth, than you would find any Monday or Friday morning, between Cock Lane on the one side and Barbican on the other. Are you a Common Councilman? If so, snuff up the balmy, piggy, beefy, muttony gale with a relish. Are you a slavery abolitionist? Look on these beasts so scientifically geometrically packed for economy of space, that every sheep's leg fits into its fellow's eye, and every bullock has a sheep between its horns, and you will have a very apt idea of how herrings are packed in a barrel, and how negroes are stowed for the middle passage. Are you a statist? Speculate on the exact amount of suffering, the nice quota of torture, the justly balanced ratio of maddening thirst these miserable animals undergo during a twelve, a fifteen, or a twenty hours' passage. Are you a plain man with a plain English tongue? Lift it up, and with a will, against the shameful cruelties of the cattle transit system; against that monstrous inconsistency which can make governments and municipalities argus-eyed to petty nuisances, and stone blind to these abominations; which can make mayors, and corporations, and police authorities, strain at the gnat of an orange-woman or a halfpenny candle sold on a Sunday, and swallow this enormous camel. To look at these dumb creatures panting with agony, their tongues hanging out, their eyes dilated, their every muscle throbbing: staggering on their legs, wallowing in filth, too stupified with agony to low or bleat or squeak, too sick to move, too cowed to struggle: is enough to rouse a man of adamant. Some of the animals are so wedged and packed together that they are suffocated, and, not able even to lie down and die, die standing. Here is a wretched bullock—luckier than its fellows, for it has some two inches space on either side of it—lying desolately by the funnel, with its eyes piteously turned up, and seeming to entreat slaughter. Nor will slaughter be long in coming; for the deputed slaughterer, nice in such matters, and knowing to a hair the power of endurance in the beast, kills it just before it would otherwise die. The dead carcase would be unsaleable, or at best would have to be surreptitiously disposed of; but, slaughtered alive, it is genuine imported meat, and fetches its price.

Cheerily oh, cheerily!

THE ENGLISH PASSPORT SYSTEM.

About thirteen years ago, a Quaker was walking in a field in Northumberland, when a thought struck him.

Well! what of that? There are men walking in fields in Northumberland every day; and there are Quakers walking in fields everywhere in England, at all times, and all with some thought or another in their heads. What is the wonder of that particular case, thirteen years ago?

Why, the idea was a noticeable one. It has produced some rather important results—results which make that walk in the field a matter of considerable consequence to everybody who reads this page.

The man who was walking was named Thomas Edmondson. He had been, though a Friend, not a very successful man in life. He was a man of integrity and honour, as he afterwards abundantly proved, but he had been a bankrupt, and was maintaining himself now as a railway clerk at a small station on the Newcastle and Carlisle line. In the course of his duties in this situation, he found it irksome to have to write on every railway ticket that he delivered. He saw the clumsiness of the method of tearing the bit of paper off the printed sheet as it was wanted, and filling it up with pen and ink. He perceived how much time, trouble, and error might be saved by the process being done in a mechanical way; and it was when he set his foot down on a particular spot in the before-mentioned field that the idea struck him how all that he wished might be done by a machine:—how tickets might be printed with the names of stations, the class of carriage, the dates of the month, and all of them, from end to end of the kingdom, on one uniform system. Most inventors accomplish their great deeds by degrees—one thought suggesting another from time to time; but, when Thomas Edmondson showed his family the spot in the field where his invention occurred to him, he used to say that it came into his mind complete, in its whole scope and all its details. Out of it has grown the mighty institution of the Railway Clearing House; and with it the grand organisation by which the railways of the United Kingdom act, in regard to the convenience of individuals, as a unity. We may see at a glance the difference to every one of us of the present organised system—by which we can take our ticket from almost any place to any other, and get into a

carriage on almost any of our great lines, to be conveyed without further care to the opposite end of the kingdom—and the unorganised condition of affairs from which Mr. Edmondson rescued us, whereby we should have been compelled to shift ourselves and our luggage from time to time, buying new tickets, waiting while they were filled up, waiting at almost every joint of the journey, and having to do with divers Companies who had nothing to do with each other but to find fault and be jealous. If we remember what the Railway Clearing House is, and what it does; if we remember that what it does is precisely what it saves travellers and merchants the trouble of doing; if we remember that the two hundred clerks of that establishment dispose of above fifty millions of matters of detail in the course of a year, we shall see that Mr. Edmondson's idea has saved a good deal of trouble to a good many people besides himself.

It was thought a fine thing, and justly, when one railway was complete, for a short distance. It was thought a splendid thing that railways should be opened in various parts of the country; and when it was arranged that some of them should meet at certain points, people asked whether so grand a thing was ever heard of before. But there was something grander to come: a plan by which a dozen Companies should unite to carry a passenger and his carpet-bag as far as he wanted to go, and save him the trouble of dividing the fare among them by doing it themselves. In the central spot at the Euston Square Station where the Clearing House may be found, the railway Companies have their mutual charges computed and the balances struck and cleared, day by day, from the twelfth part of a schoolboy and his box to the charges on "horses, carriages, and corpses," which, the orders declare, "are not to be included in the parcels" transmitted during the day. It would be cruel to torture the reader's imagination with a precise account of what the business is that is accomplished by that courageous band—the two hundred clerks of the Clearing House. It is enough to say that they examine and record the business of (we believe by this time) a thousand stations, with all their complications. Now, if we consider what these complications are—that, for instance, for passengers alone, without regarding the transmission of goods, the changes on a single line of thirty stations may amount to six thousand nine hundred and sixty, we shall shrink from looking more closely into the bewildering business of the Clearing House. The letters received and sent off amount to many thousands per day, and there is a staff of lads whose business it is to open and sort them.

Some of us who have travelled on very short, or very insignificant out-of-the-way lines may have seen, up to yesterday, paper tickets—yellow, blue, or pink—printed in ordinary printing-presses. There are a few such; but they are now quite exceptional. The little cards—blue, for the most part—which gentlemen stick in their hats and ladies carry in their gloves, are Mr. Edmondson's tickets; and they are now well-nigh universal in the United Kingdom, and familiar in France, Germany, Belgium, Switzerland, Italy, the West Indies, and Peru. It is rather confounding to the imagination, in the first instance, to see, as we did the other day at the patentee's office in Dublin, the boxes of cards that had arrived from Delarue's, to be printed. A square deal box, such as would nicely hold a lady's bonnet and be light enough to be carried by the lady herself, is, when packed with these cards, a heavy load for a porter, and a fatiguing sight for unaccustomed eyes. It is fatiguing to think of the crowd that would be formed by the railway passengers who will be transmitted by means of this one boxful of cards. Assembled in Hyde Park or on Salisbury Plain, they would be very alarming in the eyes of the Pope or Louis Napoleon. There are cards of six colours; and of a few more devices. It would be convenient to the printers to have them all alike; and it is no matter of rejoicing to them when any Company falls in love with some parti-coloured device, requiring double printing, or other special management. There is so much convenience, however, in certain cases, in the tickets being distinguishable at a glance—as the Scotch by a thistle at the back, and different Scotch lines by a different grouping of the thistle—that the pattern-book of the patentee will probably always have, as now, a few pages filled with specimens of devices.

We are now to see these tickets printed. But we have first to dispose of our surprise at seeing how circumscribed and quiet is the agency by which so vast a work is accomplished as the providing of the passports of all Ireland. We would not, for all the benefits of travel, exchange our passport system for that of any country on the continent. Here is no staring in one's face, as if one were a criminal, to note the colour of hair and eyes, and the shape of one's visage. Here is no dismal anticipation of future annoyances, of bearded inspectors, of dirty-fisted hirelings, who will turn over one's clothes in one's trunks, and inspect a washing-bill, as if it contained treason and insurrection. Here we have a moderate-sized apartment, fitted up with little besides the apparatus, and tenanted by two neatly-dressed, cheerful-faced, kind-spoken Friends—young brothers, who quietly work out here the invention of their honoured relative. It is in this one room, and by that bright, clean, handsome apparatus, that millions of railway passports are prepared. There is a larger establishment at Manchester; but here this modest one is all-sufficient, as it is easy for one pair of hands to print two hundred tickets

per minute, and possible to print three hundred.

The first thing about the machine which catches the eye is an upright mahogany shaft, about two feet high, large enough in the inside to contain a pile of blank tickets, laid flat upon each other. Hidden within the machine is a little form of type, containing the names of the places to be printed, and the class of carriage. The practice of printing the fare is now nearly abolished, it being found to occasion great loss and inconvenience in case of the fare having to be altered; which must now and then happen. The type is inked by a saturated ribbon, which travels over a wheel, and is brought into contact with the form. A feeder withdraws the blank tickets incessantly, one by one, from the bottom of the pile, and passes them under the form of type, which is pressed down upon each as it proceeds to the opening where it presents itself, face uppermost, to the printer who is working the lever, so that he can see that each is right and complete, before it falls into its place in the receptacle below. As we have said, two or three hundred can pass under his eye every minute that he is at work. But each one of these tickets bears a different number, from 0 up to 10,000. Two brass-banded wheels, so close to each other as to look like one, and each bearing raised figures, revolve at different rates with the working of the rest of the apparatus, the distance of one figure at a time for the units, and the second wheel, the distance of one figure at a time for the hundreds: so that the tickets present a numbered end to the eye of the printer, as he works his lever. Lest there should be any mistake, however, through a moment's lapse of attention on the part of the workman, there is a Checking Machine—also the invention of Mr. Edmondson—by which the printed tickets are finally tested. They are piled in a shaft, and dropped, one by one, by the turning of a handle which turns also an index, numbered; so that the number turned up and the ticket dropped should correspond. This process is so easy that six hundred per minute can be disposed of.

There are specimens in this room of all the receptacles for tickets invented by Mr. Edmondson; the Issue Cases, of various prices and constructions, from the small one needed at a little rural station or on board a steamer, to the great cupboard required at any central railway station. There are the shafts or columns which are to be kept supplied with tickets, the undermost of which tickets is to be drawn out by the touch of a finger-tip; and there are the slips of slate on which the clerk is to note down the number of the ticket with which he begins his issue for the train then in hand. There are drawers or cases, with compartments, with similar slips of slate for humbler uses. There is also a more important little machine than any other but the printing-machine—the Dating-press. We are all familiar with the click of the sort of bottle-jack which stands on the counter of every booking-office; that machine into which the clerk pushes one end of the ticket he is selling, and from which it comes out dated. This is Mr. Edmondson's convenient dating-press, which does its work without any further trouble to the clerk than his changing the type the last thing at night for the next day, and seeing now and then that the ribbon is duly saturated with the mixture which is to ink the type. Let us see—what is there besides in this quiet little Dublin office? There is the box of type, in the slits of which are the arranged types—the names of the stations, all ready to be transferred to the form in the machine. And there is a neat mahogany slide or case, in which the printed tickets are marshalled, to be tied in packets of two hundred and fifty; and whence they are taken to be packed in their proper drawers, in readiness for the orders which will certainly be coming in soon. In the general directions issued, in the form of a pamphlet, to all clerks-in-charge on railways, it is the first order that they are to be incessantly careful to keep a sufficient provision of tickets from their own station to every other to which passengers are booked: and especially when fairs, or other incidents, are likely to cause an increased demand; and next, that the tubes are to be duly replenished with tickets, the lowest number being at the bottom. Each clerk had need be careful to watch lest any of his stock should be misplaced; for, if too high a number gets abroad, he must account for all below it. The rule is, that the clerk must make good all deficiencies, and pay over all surplus money. This is no hardship to an able and honest clerk, who will not get wrong in his accounts; and it is a necessary rule, if the vast host of railway clerks is to be kept in any order at all. But it renders a sharp look-out a matter of indispensable self-defence to the official who lives under such an ordinance. After the closing of the hatch in the booking-office, the account of the passengers just despatched has to be made out; and this is done by means of the numbering on the ticket. The closing number that went away by the preceding train is booked; and at the bottom of the tube is the lowest number remaining; the number between the two is that which has now to be accounted for—that, of course, of the passengers who are now whirling away to their several destinations. The clerk has to record twice the closing number of the tickets for each train; that is, in the compartments at the station, and in the proper column in the passengers' ticket-book, which is ruled and printed for the purpose. There are returns, in a puzzling number, to be filled up daily, several of which are connected, more or less, with the records involved in the delivery of these wonderful tickets. We will not perplex ourselves with

them now, but merely glance at the trouble occasioned by any passenger omitting to supply himself with a ticket, or to deliver it up on leaving the platform at any intermediate station; and again, at the business—no trifle—of tying up in one mass the tickets of every arrival train, after the passengers are off and away, into a hundred homes, or inns, or new trains. These used-up tickets are marked with the numbers of each class from every other station, and transmitted to the check-clerk's office by the first through-train the following morning. Thus it is seen that these tickets are the currency by which the bargain of travel is carried on, and without which the business would be as clumsy as a state of barter is in comparison with one of established monetary arrangements.

And how did the invention of Mr. Edmondson reach this extent of perfection?

On his machines may be seen the name of Blaylock; Blaylock was a watchmaker, an acquaintance of Edmondson's, and a man whom he knew to be capable of working out his idea. He told him what he wanted; and Blaylock understood him, and realised his thought. The third machine that they made was nearly as good as those now in use. The one we saw had scarcely wanted five shillings' worth of repairs in five years; and, when it needs more, it will be from sheer wearing away of the brass-work, by constant hard friction. The Manchester and Leeds Railway Company were the first to avail themselves of Mr. Edmondson's invention; and they secured his services at their station at Oldham Road, for a time. He took out a patent; and his invention became so widely known and appreciated, that he soon withdrew himself from all other engagements, to perfect its details and provide tickets to meet the daily growing demand. He let out his patent on profitable terms—ten shillings per mile per annum; that is, a railway of thirty miles long paid him fifteen pounds a year for a license to print its own tickets by his apparatus; and a railway of sixty miles long paid him thirty pounds, and so on. As his profits began to come in, he began to spend them; and it is not the least interesting part of his history to see how. It has been told that he was a bankrupt early in life. The very first use he made of his money was to pay every shilling he had ever owed. He was forty-six when he took that walk in the field in Northumberland. He was fifty-eight when he died, on the twenty-second of June, last year.

When we glance over the Railway Reports of the United Kingdom for a single year, it may strike us that a vast deal of riding has come out of one solitary walk—a prodigious machinery of convenience out of one turn of a sagacious man's thought. It is not an exaggeration to attribute a considerable proportion of the existing passenger traffic to the skilful administration of tickets, any more than it is to ascribe much of the increase of commercial business to the institution of a convenient currency. The present number of travellers could not have been forwarded if their tickets must still have been torn off printed sheets or books, and filled up with pen and ink. If it be said that this is one of the inventions which is sure to come because it is so much wanted, and that Thomas Edmondson happened to be the man: we may safely say that he was the man who conceived a vast idea with the true sagacity of genius, and worked it out with industry and patience, and enjoyed its honours with modesty, and dispensed its fruits with honour and generosity. We do not know what his best friends need claim for him more.

CHIPS.

FAIRY RINGS.

Science, some years ago, used to be only another word for prose. If the fancy took a flight, and created a few beautiful scenes for its own contemplation, down came science and blotted them all out. The rainbows that hung over a waterfall were explained with the most petrifying accuracy. They became mere refractions of the sun's rays from the agitated spray. Echoes had no Lurleis lamenting their miserable fate, and appealing for help or compassion. They were replications of sound, produced by the undulatory air-wave being pushed back by the resistance of a brick wall. Ghosts were Brewstered into natural appearances; and the Fairy Rings were the result of fungi!

Oh! were they? We have a word or two to say on that subject, which we trust will restore those circular ball-rooms to their original possessors, and enable us to look on them once more without disgusting associations with toad-stools and mushrooms. How can fungi keep so exactly circular in their progress? or why should not they stretch their lines straight forward, or to one side, or in squares? Moreover, how is it possible for them to begin their proceedings at the outer portion of the ring? How, then, are the Fairy Rings produced? You don't wish us to believe in the revels of Oberon and Titania, though the peasant, returning from his work, *has* seen the glimmer of the fairies' dance in a corner of the grass-field near the plantation. About six inches high these fairies seem; all clothed in sparkling garments, glittering like ladies at a court ball with diamonds glancing in the light. Sometimes they stand on tip-toe, or spring up to the height of a foot; and sometimes they seem to curtsey to the ground; then, all of a sudden, as if disturbed by the observation of a mortal, they disappear. The peasant rubs his eyes and wonders. He goes up to the place where they have tripped so merrily, and finds the