MARTINEAU, Harriet. 1851. “The Bobbin-Mill at Ambleside”. *Household Words* 4 (88), 29 de noviembre: 224-228.

refrained from firing, in order that I might keep a wary and an anxious eye upon the gentleman who had just shot the dog. My relief was inexpressible, when one of the keepers told me that he could do no farther harm, precaution having been taken to load his gun with powder only, and not to put in very much of that.

My next care was to persuade our sportsmen to leash up their dogs, or at least to send them to the rear; for, as the hares came down, the dogs immediately ran at them and gave chase, so that for some time there was no shooting to be had. One gentleman, who established an acquaintance by asking me whether I came "from England out," warned off the game by his stentorian hunting songs; others broke the line, and ran into the circle, thereby exposing their limbs to the attack of small shot; others flogged their dogs, who responded with discordant yells; and all had horns or whistles, into which they blew with lamentable perseverance, when they were not otherwise employed. I grew at last accustomed to this mode of sport. As the kreis or circle included only too much game, by the time our lines closed we had killed one hundred and forty-five hares, and twenty-three brace of birds.

It was now about three o'clock in the afternoon; for we had begun late, and with one delay or another the day had almost slipped out of our hands. The keener sportsmen of our party were very anxious, therefore, to make the best use of our remaining time. But the appearance of a bevy of ladies wandering towards us through the distant fields, with a few symptoms of lunch, gave us now reason to expect a rest of some duration. So it turned out. Our quarter-master had pitched upon a pleasant nook in one of those elegant little patches of ground, half wood, half shrubbery, which is the favourite resort of pheasants. There, disembarrassing ourselves of our guns, which had been slung over the shoulder, after German fashion, we sat down upon the grass. The afternoon had cleared again, and the day now felt to us quite warm after our exercise. The ladies hung their bonnets on the boughs of trees, and lucky beaux obtained the care of shawls and parasols. We grouped ourselves unconsciously into a Watteau picture, and enjoyed one of the pleasantest of luncheons. The light wavy foliage of some young trees formed a bower overhead; a glorious hill-country, with the peaks of the Schneeberg, bounded the view before us in the distance. Pleasant words and merry tales went round with the good wine, and before long a vagrant fiddle and a strolling flute had been attracted by the distant music of our laughter. The fiddle and the flute made it quite certain to the meanest comprehension that our shooting for the day was over. So we yielded ourselves gladly to a dance.

The peeping of the stars admonished us at last to wander homeward. We departed through the fields and vineyards, singing as we came; for Germans breathe an atmosphere of music. The clear bell-like voices of the young girls sounded very sweetly in the still air of the evening, as we trooped pleasantly along. Of one voice I still remember the soft, liquid, pleading tones; the songstress looked so placid and so gentle, that one felt angels to be possible even on this side of the stars.

And so our shooting party ended.

THE BOBBIN-MILL AT AMBLESIDE.

October is the time for the late traveller in the Lake District to wonder why little parties of men are roaming at mid-day on the hill-sides, leaving their business below just as the daylight hours are becoming precious. October is the time for residents in the district to look up anxiously to these hill-sides, and to peep into the recesses of the mountains, to see what woods are to fall this year under the axe. October is the time when the gentleman checks his horse under the great sycamore in the village, or before the market-cross in the little towns, and reads, over the heads of the group on foot, the hand-bills, nailed up, or stuck on, which tell what lots of coppice-wood are on view for sale during the latter days of the month. October is the time when the land agent, well-booted, makes his way through moss, bog, brambles, and underwood, into every corner of certain plantations, followed by a labourer, who carries a great pot of white or red paint, and a brush, wherewith he marks the wood that is doomed. October is the time when the cooper, and the hooper, and the field-carpenter, and the bobbin-maker, come up from town and village to the mountain side, to inspect the timber and coppice that are to be sold. These are the little parties that the late tourist watches from below. They are not leaving their business in the shortening days. They come here in the course of business, to measure, and inspect, and calculate, and make up their minds how high to go, in bidding on the auction day. It does not follow that they have no pleasure, because they come upon business. It is probable that the weather is delicious. It usually is so towards the end of October, in this region. The air is probably so still that the wet is heard to drop before the intruders reach the hazels, and the acorn to fall as they pass the larger oaks. The bulrush is as still on the brink of the tarn, as the grey rock which juts into it; and both are reflected, sharp and clear, by waters which are not disturbed by the wing of fly above, or the fin of fish from below.

In that looking-glass, too, may perhaps be seen the first party of wild swans, arriving in good time from the north, and now looking down from their lofty flight, to see where they

will alight, and which of these mountain pools has the best promise of withered reeds and rushes for the nest, with seeds and roots and water-insects for food. The sandpipers, which were running about so busily a month ago, are gone; but the stonechat is flitting among the bushes, and click-clicking amidst the silence.

The season has been fine here: it must have been fine, by the quantity of foliage left in the woods. Here and there a dead branch hangs down, torn by the equinoctial winds; but the leaves hang thick: not only the red leaves of the oak, but the spotted leaves of the sycamore, and the lemon-coloured leaves of the birch. The season has been a fine one here; what has it been in Alabama and South Carolina? That is the question which most nearly concerns the bobbin-makers of this party. Their purchases of these coppices depend mainly on whether the cotton crop in America has been a good or a deficient one. It is of some importance to them whether the mulberries have flourished in Italy and India; and whether the flax has ripened well in Ireland; and whether the farmers at home are caring most about their sheep or their corn; but the grand question is, what the season has been in the cotton-growing states of America. If Manchester is in good spirits, these bobbin-makers on the mountain may make up their minds to pay as high for coppice as they ever do, even to eighteen pounds per acre. If Manchester is low-spirited, they may even refuse to go beyond four pounds per acre. They may resolve to buy, each for himself, ten thousand or twelve thousand feet; or to buy only enough to hold on, until better news shall come to Manchester from over the Atlantic Ocean. Perhaps there may be among the bobbin-makers one as sure of a demand for his article as the coopers and hoopers. There are powder-mills at Elter Water; and, as fire-arms are not out of use yet (nor likely to be), charcoal is wanted; and there is a viewer from the powder-mills out on the hills to-day.

The explorers have examined the mountain ash, and the birch, in the more exposed situations. They now come down among the ash and beech groves; and leap from tuft to tuft in the bogs, after the alder and the willow; and look well to the hazel, and the aspiring sycamore, in the sheltered recesses. The wood is, for the most part, of from fourteen to sixteen years' growth; though some may be of twenty. Thus, the excursion is to some new place, every October, for nearly twenty years,—the distance, however, is seldom more than twenty miles from any one man's home.

The wood will need a year's seasoning in the sheds of the bobbin-mill; and by that time the prospects of trade may have changed; but it comes to the same thing as if this growing wood were to be used immediately; for there is last year's purchase stored up at home, and more or less of it may be used this year, or left over for next.

In passing from wood to wood, our party winds through streams, and round lakes of arable lands, to reach the islands and promontories of coppice which are scattered between. It is curious that the seasons in America, and the spirits of the Manchester people, should affect the scenery of the Lake District; but it is so. Hundreds of years ago the whole region was covered with wood, except where the Romans made clearings, for a camp here, and a road there. The Saxons afterwards settled on their traces. When the Normans came, and their monks established themselves at Furness, they sent out their husbandmen and herdsmen to till the ground, and to pasture their flocks, farther and farther in the dales, and higher and higher up the hill-sides, building walls as they went, until the sunshine was let in over wide tracts, and the forest-like look of the region nearly disappeared. Yet, when Wordsworth was young, some old people at Wythburn (about ten miles on the Keswick road, under Helvellyn) told him of the time when the squirrel could go from Wythburn to Keswick on the tops of the trees, without touching the ground. In those days, the people grew their own flax or hemp, and their own wool; and the spinning and weaving were done at home; and itinerant tailors went their rounds through the district, staying at the farm-houses to make up the clothes. It did not occur to any one then (about a hundred years ago) that the woods of the district would be required to make this matter of popular clothing easier to everybody. Hence the felling went on too fast. Many patches of holly and ash were preserved within the higher enclosures, to feed the cattle and sheep, with the sprouts, where no other pasturage could be obtained; but large tracts of rocky soil were laid bare, which had better have remained clothed with wood. Some improvement in the process of weaving had before this taken place. The Kays, father and son, of Bury, in Lancashire, had invented the flying shuttle and the drop-box, by which much time was saved to the weaver, and a wider cloth could be produced by one pair of hands. But there was not thread enough or yarn enough, spun, to keep the shuttle going so fast as was wanted. The weaver had to go about something else, while waiting for the spinners; yet, in thousands of cottages, the wheel was whirring from morning until night, every day but Sundays.

This was a state of things which could not last; for, in regard to the arts of life, a great want is sure to be soon met with a remedy. Several ingenious men invented spinning-machines, during the latter half of the last century, and before its close, it was shown that one thousand threads could be spun by one pair of hands. Instead of the pack-horse toiling along the mountain-path, which was then the only way open from Kendal to Whitehaven, there might now be seen the carrier's wagon,

winding round the hills on a broad road, bringing the new cotton fabrics to the "statesmen's" dwellings, but still carrying away the "homespun," in which the Westmoreland folks were as yet dressed. The "single thread" wheels were destined to whirr for some time longer; but a new source of profit was opening to those who held land. There was a call for an infinity of bobbins for the new spinning-machines; and the proprietors of bobbin-mills came from a distance to buy up the coppices of the district. At first, the effect of this new demand was to lay the hill-sides barer than ever; but, as the wood grew again, and its owners saw that the demand was likely to be a lasting one, they began to foster their woods, and to plant anew on soil which could not grow anything more immediately profitable. They arranged a succession of coppices, so as to render it feasible to sell to the axe one after another, as it reached the age of from fifteen to twenty-one years. Thus, with every extension of the growth of cotton abroad, and of its manufacture at home, there has been a new cherishing of coppice in the Lake District; and much is the beauty of the scenery enhanced by this, and very valuable is the shelter given to flocks, and to human habitations, and to the tilled lands which lie between the woods.

There are myriads of bobbins sent from the neighbourhood of Windermere, all over Lancashire and Yorkshire, and into Scotland and Ireland, and to the United States, and our own colonies, and many to busy Belgium, where the sound of the loom is heard in clusters of towns. The bobbin-mills round Windermere are, five mills (belonging to three establishments) at Stavely; one at Troutbeck; one at Hawkshead; one at Skelwith; and one at Ambleside; all, probably, visible at once from the top of Wansfell. That Ambleside mill was a very humble affair a quarter of a century ago. Let us see what may be found there now.

The viewers have made up their minds about some tracts of coppice on the sides of Wansfell, and we see by their looks that before the primroses and wood anemones cover the ground, in some dearly loved dells, every sheltering twig will be gone, and only stumps left. The axe will soon be calling out the echoes from the rocks above, and then we shall see piles of fagots, and stacks of bark, awaiting the wains which will come clinking and clanging and creaking along the wintry road. While the viewers go down one side of the mountains to see such portions of Bishop Watson's woods, at Calgarth, as are on sale this year, we will go down the other to Horrox's mill at Ambleside.

Down we go, among the red ferns and green mosses, and through many a boggy spot, to the road, and within hearing of the Stock—the beck (brook) which scampers down the hollow between Wansfell and the road to Patterdale. There lies Ambleside, nestling at the base of the mountain—a mile inland from the lake; and between us and Ambleside is the exquisite waterfall, called Stockghyll Force. Grander cataracts there may be—scarcely a more beautiful one. A breast of rock, feathered with wood, divides the stream exactly in two—and each current takes two leaps; so that the symmetry of the picture is singular. The two lesser falls above, and the two greater below, answer to each other, as by the nicest art; yet the ravine is as wild as if nobody had been here since the old Briton and the wolf hid themselves together from the Romans who were making a camp at Ambleside, and a road along the ridge of the Troutbeck hills. Along the verge of the ravine and of the woods we go down, catching glimpses through the foliage of white foam, of green and brown stones, of clear gushes of water below, until we see a humble grey roof before us, and observe that the woods are opening, and that the waters are smooth as the oily flow of Niagara above Table Rock—smooth, but rapid, as we see by a red and yellow leaf here and there. Those leaves danced merrily down from the bough, and now they are sailing joyously into the midst of a prodigious hubbub. They are close upon the Weir; and we are close upon the old mill, and the great brown water-wheel—a very dark brown, but shedding diamonds when touched by the sun; and now, in its wet sheen, reflecting the emerald colour of the opposite slope of the dell.

This is not much like visiting Birmingham or Manchester manufactories. For the muddy canal, we have a cataract of water "softer than rain-water," the proprietor assures us, and clear as starlight. The very sight of it, slipping over the Weir, and drowning the stones below, makes one thirsty. Instead of the coiling smoke, we have the balancing gossamer above the stream. The stir from the fall shakes, but spares it. Instead of attic-windows opposite, we have the old rookery. The rooks are our spies and gossips here; and they and the babbling waters seem to be telling tales against each other, all the year round. The rooks never fail, and the noise never fails. We asked the proprietor whether he had ever to complain of want of water. "Very rarely, indeed," said he. "It is scant only in very hot and dry summers, and has not been so for some years now." "And the noise; is it always like this?" Does he live in the sound of a cataract? O yes! and he never knows it, unless reminded of it. And perhaps his men do not know what an infernal din they are living in, with those circular saws, and the whirring of a multitude of wheels and lathes. We begin to shrink from it, though we have as yet got no further than the old mill. We just look into it as we pass, and find it a mere room, packed now with materials. The path which winds up into the wood was the old road to the mill; and this little yard held all the timber.

It is very different now. We pass and examine large stacks of timber and poles—beech, ash, mountain-ash, sycamore, "seal" (sallow), hazel, birch, and alder. The greater part is stacked under slated roofs; but some piles stand uncovered at present. There is timber thick enough to make posts; and much of fourteen years' growth—as large as a stout man's leg—which is split and dressed into rails. While the circular saws and the lathes are at work, it is as well to make other things, besides bobbins; so we observe a new and much-improved kind of mangle in the old mill; and besides the posts and rails for fences, we see the legs of bedsteads lying about, and other neat pieces of turnery.

The knots of the stouter wood are sliced off before the splitting; and the peeling is done on the premises, while the wood is fresh. The peel serves for fuel; the baker buys for his ovens the chips and dust which lie almost knee-deep everywhere within the mill. As for the corners, and odds and ends of the wood, they are sold for "kindling" to the neighbours round.

The circular-saws are from Sheffield. The rest of the machinery is home-made. Down in a chamber below the rest of the mill, are the cog-wheels, which are turned by the great water-wheel. There they whirl, smoothly, steadily; and between, and under them, may be seen again the clear gushing waters, and green and grey rocks; and over them the sunny wood, where the latest bees are swinging in the last blossoms of the year. Mr. Horrox's house is completely covered with ivy; and the fuchsia and China-rose blossom beside the door.

We may seem to dwell long on the natural features of the place; but there is an unspeakable charm in seeing the commonest manufacturing toil cheered and brightened by the presence of that antique and ever-young beauty, who is supposed to be mournfully displaced by the establishment of the arts of life.—We would fain convey some sense of this charm to our readers. We are thankful to be able to add, that there is here no drawback from the vice which is the curse of the district,—as of too many rural neighbourhoods. The one great pain to the inhabitants of the exquisite valley in which Ambleside lies, is the intemperance of the people. It is not quite so bad as it was; but still, the early walker, who begins the winter day by a walk under the stars, when the last fragment of the gibbous moon hangs over Wansfell, is but too likely to meet the labourer staggering tipsy to his work. In the summer twilight, or the repose of Sunday afternoon, when the mind should be awake and enjoying the interval from bodily labour, too many two-legged brutes may be seen, who have abdicated their prerogative of reason, and are courting disease and early death from drink, amidst a scene and an air which should make men wise and long-lived. It is pretty sure that no such sinner belongs to this mill. It is known that Mr. Horrox will employ none such. From the moment that a man is found to have been drunk, he must come no more there. And this is an important discouragement of vice; for nine-and-twenty men and boys (only eight boys) are employed at the mill; and that is a number which tells upon so small a population as the people of Ambleside.

They are paid by the gross of bobbins; and they earn from fourteen shillings to twenty-three shillings a week, at an average of fourpence per gross. There must be a change soon. The "thread-men," (spinners of sewing-cotton) in manufacturing towns, have new machinery, by which bobbins can be produced at five farthings, which here cost fourpence halfpenny. There have been contentions and strikes in those towns, ending, as strikes on account of machinery always do: and the change must reach this place in natural course.

And now for the process. The wood being sorted,—some sold in blocks to the turners at so much per solid foot, and poles to the hoopers by the thousand (six score to the hundred),—the tree-stem to be wrought is brought to the circular saw. It is first cut across into blocks. Then, the block is split into slices. A man and boy sit opposite each other, at each end of the saw. The man applies the block, and pushes it from him some way; and the boy finishes the severance by drawing it towards him;—their fingers being thus kept out of danger. No accidents of consequence have happened at this mill; but, elsewhere, it has been no uncommon thing for a careless workman to have all the fingers of one hand sawn off across the middle. The wood is sliced into squares, about a quarter of an inch thick, and of different sizes, according to the sort of bobbin, of which these slices are to make the ends. The squares are baked, dry as a brown crust, in an outhouse which has an iron floor, heated by a furnace beneath. On this floor the squares are laid in rows, thick and close, and shut in until they are done enough. After they are cool, they are bored with a round hole in the middle, which is to receive the shank. Two slices are glued together,—the corners of one crossing the sides of the other, that the grain may cross, and obviate fracture. One has a smaller hole than the other, that the end of the shank may fit in more securely. When glued, the cross-pieces are strung on a round iron bar, and screwed tight upon each other, to prevent warping. While they are thus drying, the shank is preparing.

The shank is made round, in the lathe. It has next to be bored. This is done by boys, who simply drive the end against the steel borer which is turned by machinery. In an instant of time, the borer makes its way through to the inner end. The shank goes

again to the lathe, to be made a little smaller at each end, in order to fit into the holes in the cross-pieces. Next, the end and the shank are to be united. A little boy, sitting at a glue-pot, holds a dauber (as we may call it), which is made of two rings, answering to the margins of the two holes in the cross-pieces. He dabs these holes with glue, and hands the pieces to a man at his elbow, who inserts the end of the shank, and puts it in the way of a sharp rap from a driven hammer, which fixes it in its place. When both ends are thus glued on, we have a bobbin; but with ends that are square, large, and rough. The bobbin goes to a lathe, where, in turning, it is met by a stout, three-sided sharp tooth or blade, which, quicker than the eye can follow, cuts off the corners, and leaves a bobbin, perfect in shape. It is still rough, however; and it must be finished in the lathe;—rounded at the edges, and smoothed, and, if necessary, grooved.

Some bobbins, wanted for certain kinds of spinning, must have their bore lined with a smoother substance than the ordinary wood. When they are thus lined, they are said to be "bushed." Some are "bushed" with metal; some with box-wood. In some, the "bush" goes only part of the way through the bore; in others, the whole way. When the lining is of box, the bobbin and the "bush" are fluted, in order to fit more firmly into each other. All who have examined bobbins may remember that a circle of lighter or darker wood appears round the bore. This is the "bush."

Now we have bobbins before us of various shapes and sizes; some for silk; some for flax; some for wool, as well as the myriads for cotton; and here are also parts of the shuttle of the Manchester weaver. Does anything remain to be done? Yes; some buyers like to have their bobbins dyed; some prefer them black; some, oak colour; some, yellow. The black dye is obtained from logwood and from copperas; the oak from catechu and fustic; and the yellow from fustic, with a little alum. The dye certainly gives a finished appearance to the bobbins; and ladies know that, when buying sewing cotton. The eye is drawn towards the neatness of black or oak-coloured bobbins, in preference to the undyed,—other things being equal. The dyeing is done by boiling the bobbins in coppers, with the chemical materials.

We were tempted to follow the fagots of poles down to the hooper's, to see what was doing there. The new-world spirit, which is found wherever machinery is whirling, has not made its way yet into the hoopers' sheds in Ambleside. Here is no head-splitting din —no cloud of wood-dust, which visibly fills the nostrils of the turners at the lathe, and makes the visitor inquire about diseases of the lungs. Here, half-a-dozen men and boys are at work, with no newer machinery than "the horse," "the mare," "the dog," and the hoop. Do our readers wonder how the horse, the mare, and the dog can help in making hoops? The answer is, these are nicknames, given to the sort of bench on which the workman sits, in different stages of hoop-making. To cleave the poles, the man sits on a raised log, "the horse," and simply splits the unpeeled wood into two or four pieces, with an axe. These pieces are taken possession of by the boy on "the mare," who, by a treadle, raises or lets fall a block, to hold fast his strip of wood, which he thins and equalises with a two-handled knife, to render it smooth, and pliable for the "bending" machine. This machine consists simply of a pair of rollers turned by a cog-wheel and a winch: the strip of wood being drawn out between the rollers.

Next, the strips have to be made into hoops. A man who sits in the middle of the shed, with a stout model hoop on his knees, bends the strip round within the model, takes it out, and ties it with string, and then bends within it another and another strip, (tying none but the first), until he has made a compact mass of hooping. Nothing can well be slower, or more primitive.

Still, the business is a profitable one. Hoops are sent from Ambleside over the far parts of the globe. The very largest go to Liverpool. These sell for about five pounds per thousand (six score to the hundred). In seasons when copses are scarce, or when the demand for casks is great, coopers have given as much as nine or ten pounds per thousand for hoops. This cannot, however, go on. If it be true that, by new machinery, a porter barrel can be made complete, from the tree to the heading, in five minutes, it cannot be that the slow and clumsy method of fashioning hoops by hand can remain, even in the old-fashioned Lake District.

We may soon be having some instrument which will rain hoops as a fire-work gives out sparks, or as rings of luminous vapour ascend from the chemical lecturer's magic wine-glass. Meanwhile, "the horse," "the mare," and "the dog," with their stiff backs and wooden heads, look as if they did not mean to budge, and had never heard of change.

ROOM IN THE WORLD.

THERE is room in the world for the wealthy and great,
For princes to reign in magnificent state;
For the courtier to bend, for the noble to sue,
If the hearts of all these be but honest and true.

And there's room in the world for the lowly and meek,
For the hard horny hand, and the toil-furrow'd cheek;
For the scholar to think, for the merchant to trade,
So these are found upright and just in their grade.

But room there is none for the wicked; and naught,
For the souls that with teeming corruption are fraught;
The world would be small were its oceans all land,
To harbour and feed such a pestilent band.