

lameness was from an accident, but he suffered a great deal of pain, for the accident had caused disease, as is often the case. And this disease, though it had itself been subdued, if not cured, had left great weakness, which made his back ache often, and his poor little frame feel ill all over. But this did not prevent his being extremely pretty—indeed,

his delicate health rather added to than diminished his beauty, giving him a fragile almost spiritual appearance, like that of an angel boy in a picture or a dream.

"Oh, Adela! it is good that you came; I am so glad you did!" he cried. "Do cousins always love each other so? Is cousins always so nice?"

(To be continued.)

## SOME NEW GLIMPSSES OF DOLL-LAND AND TOY-LAND.

### I.—A VISIT TO A DOLL-FACTORY.



IN the world of Toys Dolly reigns supreme. She is to be found in every home in which a little girl resides, and in her structure and dress follows pretty closely the rank of her owner. As she is known to children in the upper classes of society she is a big beauty with blue eyes and a profusion of flaxen hair; her face is finely modelled, her movable eyes are furnished with lashes, and her arms

and legs look like casts from nature, while her clothing is of fine material, and gives evidence of having been made with as much care as if Dolly were a sister to the heir of the family. Between this aristocrat among dolls and the humblest of the sisterhood there are many degrees of rank, and widely different, too, are the materials of which the interesting effigies are constructed.

Many of the cheaper dolls, especially those of wood, are made in Germany and other continental countries, and of the more expensive kinds Paris supplies a considerable proportion; but there are in England a number of factories which turn out large quantities of dolls of the principal varieties. A doll-factory is an interesting place to visit, especially for little folk, for there they can see how the materials of which Dolly is composed are fashioned and put together.

If our readers will give us attention for a brief space we shall tell them what is to be seen in a doll-factory, as the result of a visit paid to one of the largest of these establishments in England.

The factory occupies a building of six floors. The street floor is devoted to the sale of dolls, and in its extensive range of windows are displayed samples of the dolls made on the premises. The variety of these is considerable, and it is not to be wondered at that the children of the neighbourhood

crowd before the windows and gaze by the hour at the interesting collection.

Inside the shop, counters and stands are crowded with dolls, some fully dressed and others whose outfit is left to be determined by the purchasers. There are young lady dolls of large size, attired in morning, dinner, or ball costumes; there are baby dolls, most elaborately dressed in sewed muslin and lace; and there are character dolls, such as Mother Hubbard, Red Riding Hood, Highlanders, and fishwives. In a special compartment are to be seen models in wax of single figures and groups copied from well-known paintings or engravings; and mechanical dolls which move their heads and imitate breathing by means of clockwork. In a show-room on the next floor there is more work of this kind to be seen, and mingled with it are many curious illustrations of the wax-modeller's art—casts of faces taken from life, and some also taken after death; models of persons whom fame or notoriety has brought into prominence; fancy models for displaying the wares of the milliner or illustrating the styles of the hair-dresser, and so forth.

But our business was with the doll-makers, and we found them at work in a number of rooms on the other floors of the building. In the modelling and casting-room we saw how the heads and limbs of dolls are made. At well-lighted benches round the sides of this apartment a number of men and boys were at work, while in boxes and on tables and suspended from the roof were innumerable heads and limbs of various sizes, some formed of wax, some of papier maché, and others of a combination of the two materials. Following the processes in succession, we saw how a model in clay was made to begin with, how from that a cast was taken in plaster of Paris, how this cast was used as a mould, into which the wax was poured, and how the castings in wax were finished. We speak of wax, but as a matter of fact the material is a mixture of spermaceti and clarified wax.

The wax, when melted, had the consistency of cream, and immediately it was poured into the

mould it commenced to solidify. The solidifying process began next the mould and extended towards the centre. When a layer of sufficient thickness had become solid the workman seized the mould, and turning it upside down poured out the still liquid portion of the wax, and thus obtained a hollow copy of the mould. If you examine the detached or broken head or limbs of a wax doll you will understand what is meant.

Heads and limbs cast in wax in this fashion require gentle treatment when the dolls are being played with, because they are easily broken. As a precaution against accidents, however, most dolls have a foundation of papier maché beneath the wax. In these cases the paper is softened by being soaked in starch, and is then pressed into a mould. When dry the paper is hard and firm, and will stand a good deal of knocking about. To give the parts a presentable appearance they are dipped in wax, and then assume the same appearance as if they were wholly formed of that substance.

Following the wax heads and limbs from the caster's bench we saw how they were scraped and trimmed to remove all marks of the joints of the moulds, and give the surface an even and compact appearance. At this stage the heads presented a strange aspect, and gave little promise of the beauty they would display after being subjected to a few more operations. The smoothing having been completed, the heads were passed to workmen who cut apertures for the eyes, being guided by outlines produced in the process of casting. The next thing was the insertion of the eyes. The latter are globes of glass with one side coloured to represent the eyeball. Warming the eyes slightly the workman pressed them into the sockets from the inside, care being taken to adjust them exactly, so as to avoid a squint. Some wax was now poured over the outside of the eyes to fill up any interstices that might be left, and as soon as this cooled it was trimmed off.

Stepping into another room we saw how Dolly is provided with hair. In the case of the cheaper dolls the process is a simple one. An opening is made in the head from back to front, and into this the ends of two tufts of hair are pushed and fixed with paste. The insertion of hair into the wax so as to imitate a natural growth is a process that occupies a good deal of time, and is only resorted to in the case of the more expensive class of dolls. This part of the work was done by young women. Taking a head and placing it on her knee the operator rested the palm of her right hand upon it. A small bundle of the hair to be inserted was taken between the finger and thumb of the left hand, while between the finger and

thumb of the right hand a "stipple," a steel tool resembling a flattened bodkin, was held. Bringing the ends of the hair close to the head the operator caught a few of these at a time with the point of the stipple and forced them into the wax. The hair was inserted in rows from the nape of the neck upwards, and as each row was completed the wax was pressed closely down on the inserted ends to cause them to hold firmly. When the insertion was completed the ends were trimmed and the locks were curled with a tiny pair of curling-tongs. Dolly's eyelashes were inserted in the same manner as the hair of the head.

All that was now necessary to complete the head was the painting of the lips and the application of a little rouge to the cheeks, and that having been done the head, limbs, and body were brought together, the latter having in the meantime been constructed in a special department of the factory. A few stitches of stout thread were sufficient to unite the various parts, and Dolly lay before us ready to receive her clothing.

As may be imagined, in these days when fashion is followed even in the garments of dolls, the dress-making department of the factory is an important one. In it we found young women cutting out and making up diminutive clothing, sewing-machines of toy-like size being employed in the work. A large order for India was just being completed, and this included an extensive array of dolls dressed according to the quaint styles of those artists who have distinguished themselves by illustrating children and their ways.

There is one variety of doll of which large numbers were being made at the factory, namely, the rag doll. This article is not remarkable for beauty, but it is, nevertheless, highly appreciated by the children of the working classes, for whom it is designed. The body, limbs, and head of the rag doll are all in one piece, and are composed of sawdust inclosed in a casing of calico. The face consists of a mask of wax, and is covered with a layer of fine muslin, which being pressed into the wax is scarcely observable. The object of thus covering the face is to strengthen it against rough usage. The face is glued upon the sawdust head, and when this has been done the doll is ready for dressing. At this stage she is far from attractive in her appearance. In the hands of the dressers, however, she is made to look quite smart, and as her clothes are permanently fixed on she will not again be seen at such disadvantage.

A peep into the store-rooms, in which many thousands of dolls were done up in paper, classified and numbered, and packed away in racks ready to meet any order, brought our visit to a close.