

study of it is like the passage of an arid and endless desert—then, indeed, the movement is one which we hail with abundant pleasure, and for which we both desire and anticipate success. It will indefinitely extend the horizon of domestic music, which is far too limited in this country. It will open up to young ladies the treasures of the stringed music of the great writers—treasures of which they are now, for the most part, ignorant. It will enable them to enjoy the great pleasure of playing in symphony parties where the great orchestral works are performed, and we may whisper the hope that they will gradually improve these meetings. Above all, they will be enabled to take part in quartet-playing, which is perhaps one of the purest and most delightful pleasures life affords, one of the strongest incentives to study, and one of its sweetest rewards. The string quartet is not, by a hundredth part, as common in this country as it should be; and any movement which promises to place it within the reach of young ladies, and of a larger number of our young people generally, cannot be too strongly commended. But, as we have before said, it must be intelligently, earnestly, and vigorously directed.

We should be glad of the permission to say one more word to parents on this subject. Be very careful that the child selected as the future violin-player has at once the requisite physical health and vigour, and sufficient musical ardour and sensibility to cope with all the difficulties which the instrument presents. They are, very formidable, and can only be surmounted

by indomitable patience, resolution and tenacity of purpose. The moral quality of a certain order, requisite to make a fine player, is not to be found in every house, and bad violin-playing can gratify or edify no one. It is of no use to take an ordinary child, such as nature provides with such lavish prodigality all over this kingdom, and think to make a violin-player of her. Pearls are not found in every oyster, and thistle-down makes but poor velvet. But if a child shows the requisite moral and emotional quality, place her at ten years of age under a good master; encourage her through the Slough of Despond which lies near the beginning of the road, and which extends farther or less far according to the aptitude, talent, and perseverance of the pupil; exact, and, so far as is possible, superintend, two hours a day of stern hard practice after the age of twelve, until she is eighteen, and by the time she is twenty she will be on the Delectable Mountains, possessing a fine pure taste, a great mastery over her instrument, and a power which, whether exercised in a smaller or larger sphere, will be an abundant and never-failing source of pleasure to herself and her friends. From these heights she may—but without pain and, we trust, without vanity—look back upon the long, toilsome road, the dark valley, the lions, and the Castle of Giant Despair. She may go as much farther as she will, but the air will be always pure and serene, sounds of ineffable beauty will regale her ear, visions of undying loveliness enchant her mind, and the immortals will be her daily companions.

### HOW THEY MAKE BEADS.



It sounds almost incredible, but is nevertheless a fact, that it would take a dozen locomotive engines to transport the weight of glass beads annually purchased by the fair sex.

The best customers of all are the French, and next to them come the

Spaniards of Europe and America; while among the German nations it would seem, according to the testimony of Herr Gampe, that the purer the race, the less the fondness for beads. Thus the Yankees show how mixed their blood is, by buying almost as many beads as the French and the Spaniards; the English are not

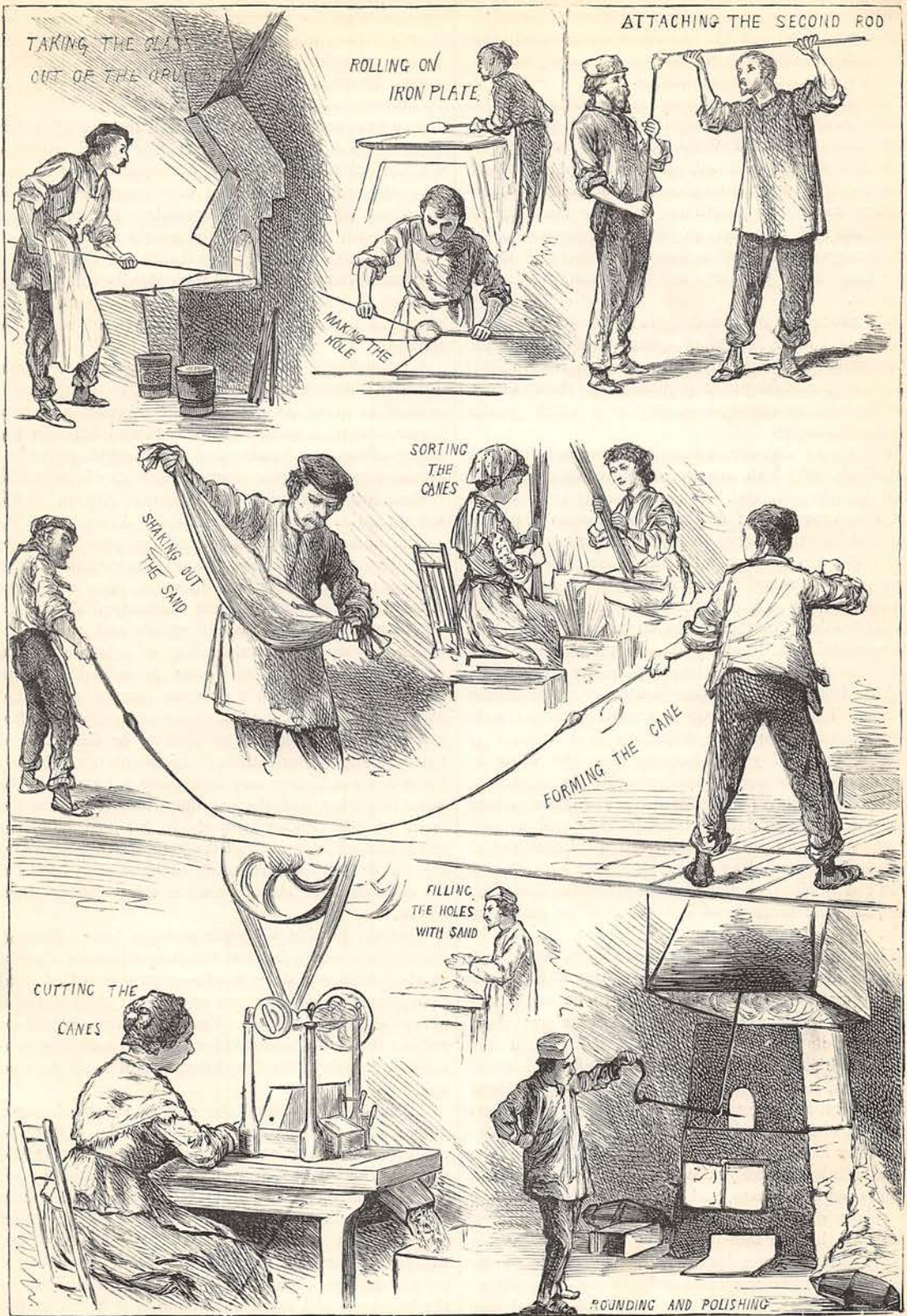
such good customers, but they imported 2,204,241 lbs. in the year 1871; while the Germans stand third on the list, and the Scandinavians last. The latter are, perhaps, too sober-minded and grave to care for such frivolous vanities.

Of the Turks and Hungarians, only the upper classes wear beads at all, as they would be quite out of keeping with the national costumes of the people.

As a rule, the civilised European, no matter what her nationality, buys only the cheapest kinds of glass-beads, and leaves the best and most expensive for the barbarous and semi-barbarous natives of India and Africa. Strings of beads adorn the throat, neck, hair, arms, and ankles of the Hindu and Malay, and often enough form the sole costume of the Ethiopian, and in the interior of Africa they frequently take the place of money as a medium of exchange.

Among the Mongolians, the Japanese are the only customers, but they are rather good ones, while the Chinese ladies apparently despise beads of all sorts.

Although the Italians do not share the love of beads manifested by the other Latin races, it is from Venice that the whole world, civilised, semi-civilised, and uncivilised, is mainly supplied; the Bohemian manufacturers, energetic as they are, have only just begun to



HOW BEADS ARE MADE.

(From Sketches obtained by kind permission of the Venice and Murano Glass and Mosaic Company.)

turn their attention to this branch of industry, while the few smaller factories in the Levant are hardly of sufficient importance to require notice.

The largest of the seven large glass-bead-factories in Venice and the neighbouring island of Murano belong to a German, named Weberbeck, who employs 500 men and women. In all, some 6,000 persons earn their living by the various processes incidental to bead-making, and a very poor living it is, for the value of the beads made amounts only to some £300,000 yearly, which, equally divided among the "hands," would give them but £50 apiece and leave nothing for the masters.

The process of bead-making is for the most part remarkably simple, the chief essential being that the glass, which is manipulated in a semi-fluid state, should be so tough and ductile as to allow of its being drawn out like rosin or sealing-wax, only to a much greater degree of tenuity.

The glass is coloured before it leaves the furnace by chemicals, of which arsenic, saltpetre, antimony, and lead are the principal. It is then ready to be drawn out into tubes. One of the glass-blowers dips his iron rod into the viscous mass, and taking up a lump about the size of a small melon, first rolls it on an iron plate to round it, and then with a simple tool makes a hollow in it, much like that at the bottom of a wine-bottle. Another workman has meantime done the same thing with another lump; the two then press the edges of these glass balls together until they adhere, and the fusion is so complete that the air within cannot escape. They then take up their rods again and walk quickly away in opposite directions to a distance of about a hundred yards, keeping step the while as exactly as if they were marching with a regiment; the red-hot glass spins itself off from the two balls as long as any remains, or until it becomes too cool to spin any further; and as the enclosed air spins itself out at the same time, a hollow tube is produced instead of a solid rod of glass, as would otherwise have been the case, and the future bead has received its necessary hole.

These glass tubes are of various sizes, and range from the diameter of a lead-pencil to that of the finest knitting-needle. Those which are to be made into variegated beads are formed in the same way, only that the lumps of glass on being taken from the furnace are dipped into liquid glass of other colours in succession, so that they are encased in skins like those of an onion, and the spinning off of the several coats proceeds with wonderful regularity, without any further assistance from the workman's hand. Often, too, the glass balls have merely little knobs of glass of different colours put upon them, and these appear as fine lines or stripes on the tubes. The sorting of the tubes, which are broken into lengths of about three feet, is a very general home-industry in Venice, where the women and girls are constantly to be seen sitting before large baskets full of glass pipes, which look like the quills of a porcupine.

With outspread fingers they feel and weigh these, until all are accurately sorted according to their size;

they are then made up into bundles and taken back to the factories, where they are put into machines exactly like straw-cutting machines, and are chopped up into the size required.

The next process is to remove all sharp angles, and to accomplish this the beads are first mixed with fine sand, which fills the holes and prevents their closing up again, and they are then very carefully heated in cylinders, which are kept revolving in the furnace until the beads are sufficiently smooth and round.

As far as shape goes, the beads are now ready; they are sorted according to their size by being passed through sieves, and then those which are to receive an extra fine polish are put in bags of bran and shaken.

Stringing the beads in skeins is another home-industry. The Venetian women, whose occupation it is, hold as many as a dozen steel needles a foot in length, and often as fine as a silk thread, between the fingers of their two hands; and with these they dive into the heap, picking up as many as they can, hap-hazard.

Herr Gampe reckons that a skilful pair of hands will thread as many as three millions a day.

The manufacture of the beads in which Indians and Africans take delight is a much more complicated process than that described above, as they are made only at the blow-pipe. Great mechanical skill is required to produce the tasteful spirals and arabesques which they exhibit, and the effects of colour are often wonderfully beautiful and quite in accordance with the fabulous ideas of splendour usually associated with those lands for which they are especially destined; but the process is as little to be described as that of modelling or chasing. In the interior of Africa these beads are often used in making payments in the place of money, and the cunning Arab, who has the trade of the country entirely in his own hands, is quick to take advantage of the pleasure they afford to the simple negress. A string of handsome beads is far more effective and ornamental than a sober silver florin.

Contrary to what we might perhaps have expected, these black, woolly-headed children of nature show a marked dislike to shiny beads—a great proof of good taste, for there is always an unpleasant glare about a shiny surface—and the Venetians are obliged to subject the beads intended for them to a dulling process, to do away with the glitter natural to all glass on cooling.

As before mentioned, the pay of the workpeople employed in this manufacture is miserable. Only the most skilful get even fair wages; and as for the women, they earn barely half a paper-franc a day, and are obliged to live on food of the most coarse and scanty description, even the *polenta*, the frugal national dish of Italy, being beyond their means, except on Sundays. During the week they subsist on field-turnips, carrots, &c., which are to be seen in the by-streets of Venice, cooking in vast heaps at the open fire, and are consumed on the spot by the needy purchasers.

While upon the subject of bead-making we may say

a few words about the imitation pearl-beads, in the manufacture of which the French excel.

These are chiefly made in the department of the Seine, but a cheap and inferior quality, known as German fish-pearls, are manufactured in Saxony.

The practice of making hollow glass beads and filling them with pearly varnish was in vogue at an early period among the artists of Murano, but was prohibited by the Venetian Government because it was considered either fraudulent or dangerous to health on account of the quicksilver used. The art was, however, revived and improved by a French bead-maker named Jaquin, who used the scales of the small fresh-water bleak for making a pearly powder, which had all the lustre of the most beautiful pearls, and was named by him *Essence d'Orient*. He first made his beads of gypsum and covered them with the pearl-powder, but this did not answer, for the powder rubbed off the beads and adhered to the skin of the wearer. After this the beads were made of glass, covered inside with a solution of isinglass and the pearl-essence, and filled with wax, which was bored through with a needle; but various improvements have been made in the manufacture since then. In 1834 a French artisan invented an opaline glass of a

pearly colour, very heavy and easily fusible, which gave the beads all the different weights and forms found among real pearls. They are now filled with gum instead of wax, by which means a highly transparent effect is produced, and the surface being deadened by the vapour of hydrofluoric acid, their appearance hardly differs from that of real pearls.

Pearl beads are not made by drawing the glass out into tubes as described above, but are blown separately; one workman being able to blow as many as 6,000 of the commoner quality in a day. But if they are required to be very beautiful he can produce only 1,200 or 1,500, which he makes round, pear-shaped, olive-shaped, or flat on one side, as may be desired.

The bleak, whose scales are employed to make the pearl-powder, is but four inches long; 4,000 fish yield a pound of scales, and these do not produce four ounces of the essence, which is preserved for use in a solution of sal-ammoniac. This is mixed with dissolved isinglass, and blown into each globule by means of a fine glass pipe, the pearls becoming more beautiful and more valuable the larger the quantity of essence used. Some of the best imitations fetch really good prices.

SELINA GAYE.

## WAS IT WISE TO CHANGE ?

By the Author of "A Hard Case," &c.

### CHAPTER THE SEVENTH.



AGNES waited with extreme anxiety for answers to her letters to Rose and Frank. She thought she knew beforehand what Rose would say — that she would blame her, and justly too, but at the same time would show tender sympathy in her pain and difficulty. As for Frank, his letter *must* be a terrible

trial, and would probably contain a pitiful entreaty that she would change her mind and try him again, and see what he could do for her sake; and though she knew that she *could* not change, she looked upon this last evidence of his love, painful though it would be, as a right she could by no means relinquish.

But day after day passed, and no letters came. "They *must* come to-day," she thought every morning when she got up; "I cannot fail to hear to-morrow,"

she said to herself each night as she went to bed; and yet a fortnight passed, and beyond a short, sharp reproof from her father for her folly, she had received no word of recognition from lover, friend, or family.

"Surely Frank cannot mean to give me up without an effort," she thought. "He cannot mean to throw me off like that, after making me think I was so much to him; unless, indeed, it was only an infatuation, and he has ceased to care for me since I have been out of his sight." But this thought was too wounding to be harboured, and each day she grew more puzzled at the continued silence.

At length a letter from Rose came, but it was so unsatisfactory, so different from what she had expected, that Agnes almost wished she had never received it, and could scarcely understand the altered position in which she stood with her friend.

Rose said little, but that little cut Agnes to the heart, for she spoke of the disappointment she felt in her, and of the pain of what was to her a second loss, for she seemed to take it for granted that their friendship must ever be a thing of the past. She said that this would probably be her last letter, for she would have nothing of interest to write about, and she did not suppose that Agnes would wish to continue the correspondence; and then she ended without mentioning Frank's name, or the possibility of Agnes's return. "What did it mean? Did Frank really mean not