

## GLASS-BLOWING FOR LITTLE FOLKS.



THE FALL OF THE GIANT.

**I**F the Pink Page had not forgotten to fasten the edge of the carpet the Giant would not have tripped; and if the Giant had not tripped I suppose the glass-ware would not have been broken. But the Giant not only tripped, but fell headlong, and came to the floor with such a thump that he broke every window in the King's palace. Not only that! His stupid head burst open the door of the King's glass-closet, and his monstrous feet flew out against the parlor-maid, coming up stairs with a tray, and knocked her down stairs again. So there was smashed in the King's palace all the window-panes; all the tumblers; all the lamp-chimneys; all the bottles.

"Why not send out and buy more?"

My dear young friends, that was more easily said than done, for precisely four reasons:

Nobody had window-panes for sale; because one day a circus and menagerie combined passed the palace just as the King was sitting down to breakfast. The King dropped his napkin and rushed to the window, but it stuck fast and refused to open. Consequently the King did not see the elephant, and flying into a rage he ordered every one who had any connection with the making of windows to be hung; which was done before the King had finished his third cup of coffee.

There was no one to make or sell tumblers; for one day the court physicians had said to his Majesty, who drank too much wine,



"Your Majesty must drink only one small tumbler of claret at dinner."

"One small tumbler!" roared the King; and not daring to send away his doctors, he banished instead every one who dealt in tumblers.

All bottle-makers had been packed off for similar reasons, after his Majesty had been ordered to take cod-liver oil.

And nobody dared mention the word lamp-chimney, for his Majesty had beheaded all the lamp-chimney makers, to teach his servants not to break so many in the kitchen.

So you see here was a more serious business than you could have supposed.

When the King heard the news he flew into a violent rage. Now when the King was in a passion he was sure to be very polite. The more furious his anger the more ceremonious he grew. So when he said to the Giant,

"My dear Hotontimorenos, pray come in;

you know I am always charmed to see you," the Giant began to shake in his monstrous shoes.

"Your Majesty," he said, humbly, "I am very sorry for breaking the glass-ware."

"My dear Hotontimorenos," answered the King, "don't mention it. It is not worth talking about. You will make me as many more window-panes, tumblers, and so on within the next week, and that will be the end of it."

"But—but—I don't know how," stammered Hotontimorenos, much frightened.

"My lord Hotontimorenos is too accomplished a gentleman," answered the King, politely, "not to know every thing. But if you really do not know you will discover the method, of course."

"But I have no—no wit, please your Majesty," replied Hotontimorenos, trembling. "I am a clumsy fellow."

"My dear Hotontimorenos, it would grieve me to the heart to think that," said the King; "for if you fail I shall be obliged at the end of the week to cut your head off."

Hotontimorenos fell on his knees.

"My dear fellow, not another word!" said the King, graciously. "If I *must* cut off your head I must, as an example to the rest of my court. But I assure you it will be most painful to my feelings."

"Your Majesty won't feel it half as much as I shall," blubbered the Giant, wiping his eyes on the sleeve of his embroidered jacket.

Now the Giant's next-door neighbor was a poor Wise Man, who, as Hotontimorenos came sulkily home, was laughing in his own door at

the tricks of a little dog. For some reason the sight filled the Giant with rage, and striding up to him, Hotontimorenos said, fiercely,

"If you don't find out how to make them in five days I will have your head, before the King gets mine."

"How to make what?" asked the Wise Man, in astonishment.

"Window-panes—tumblers—bottles—lamp-chimneys!" answered Hotontimorenos, savagely.

"But of what are they made?" cried the Wise Man, still more bewildered.

"How should I know? I am a Lord of the Court, and a follower of the King," replied Hotontimorenos, haughtily. "It is for *you* to learn such things."

Just here came a messenger from the King.

"My lord Hotontimorenos, his Majesty sends his compliments, and reminds you that the whole palace is shivering in the draughts. The Queen has crick in the neck, the Prince has toothache, and all the ladies are grumbling, and have blue noses! So you will please to be quick about the window-panes."

Before Hotontimorenos could reply came a second courier.

"His Majesty," said number two, "is suffering with ague! So is the Dame of the Powder Closet, and twenty of the Pink Pages; and nobody can take any medicine, for there are no bottles."

"His Majesty," shouted a third courier, close behind the second, "desires that you will set about the tumblers at once, as the Bishop of Biscuits is coming to dine to-morrow."

"His Majesty," cried a fourth messenger, "is in the dark. So is all the palace. Not a lamp can be lighted in it. The cooks are waiting for light to cook the supper. The babies are squalling for lights to go to bed. The Queen can't see to put up her curl-papers for the Bishop of Biscuits. The ladies are afraid of ghosts; and every body will be obliged to you for the lamp-chimneys as soon as possible."

"You hear," roared Hotontimorenos, seizing the Wise Man by the throat. "Window-panes—tumblers—lamp-chimneys—bottles!" accompanying each word by a shake. "If you don't have them all by to-morrow morning I will dash your brains out."

Then he turned on his heel, and ordered his cooks to roast him an ox for supper, that while he lived he might live, as became a giant twenty feet high. But the Wise Man shut his door and sat down in his chimney-corner, not to blubber, as the Giant had done, but to think.

It was a huge chimney, large enough to have roasted the Giant's ox; but there smouldered on its hearth only one little half-dead Coal, for the Wise Man, as I have said, was very poor. There was something, however, peculiar about this Coal, for it seemed to watch the Wise Man, as he sat there with his head on his hand, like



THE WISE MAN AND THE GIANT.



THE WISE MAN AT HOME.

a wide-open eye; and when the Wise Man said aloud in despair, "How can I make these things when I have nothing in the house but a barrel of sand!" it actually winked; and when the Wise Man started, it winked again.

"Eh! What did you do that for?" asked the Wise Man.

"To see how near you came to it," snapped the Coal.

"Came to what?"

"Making your glass. Glass is made from sand and—"

"Soap," guessed the Wise Man.

"No, not soap."

"Soda," guessed the Wise Man, remembering something that he had read.

"Yes. But what are you about there? Don't you see I am going out? Build me up."

The Wise Man ran for chips, but there were no chips; so he split up his three-legged stool.

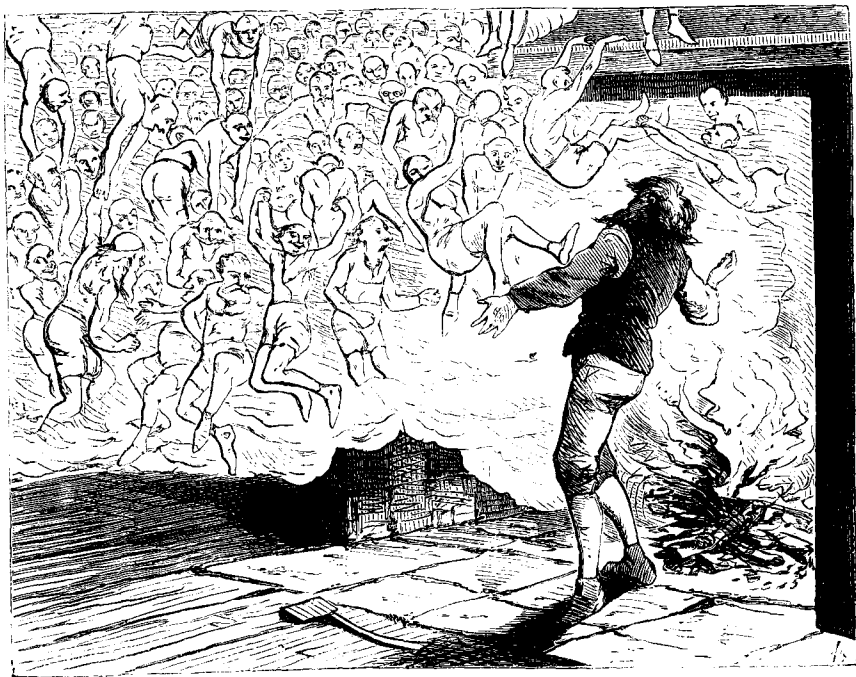
"That is not half enough," crackled the Fire, blazing and sputtering. "Build me higher."

The Wise Man broke up his table and bedstead, and threw the bits on the flame.

"More!" roared the Fire. "Build me higher, or you will never do what you wish."

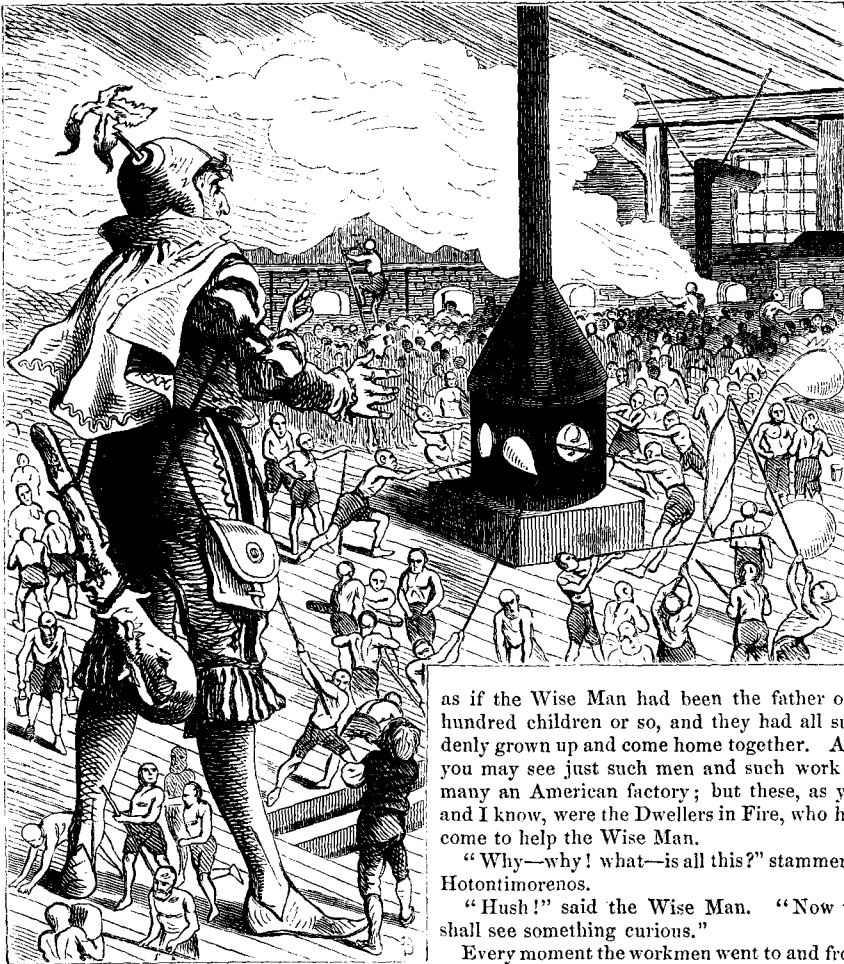
The Wise Man looked all about him. There was nothing except the outer door of his crazy old dwelling. With a dozen blows he broke down the door and flung it on the hearth. The flame leaped up broad and red, filling the chimney with a shower of sparks, and looking toward the ceiling the Wise Man saw the fire-light, not dancing there but coming down in hundreds and hundreds of bright, twinkling feet, crowding one behind the other.

Hotontimorenos was troubled that night with bad dreams. Now he was a bottle full of nauseous medicine, and the King *would* tilt him up by the heels; and now he was a window-pane, and every moment in danger of being broken. Consequently he woke up trembling and in an ill humor; but remembering the Wise Man, he determined to go and dash his brains out without further ceremony. He walked along with monstrous strides, muttering to himself and fumbling with the club in his belt, and met the Wise Man in the door.



THE WISE MAN'S HOME CHANGED.





BLOWING GLASS.

"Walk in! walk in!" said the Wise Man, rubbing his hands. "We are coming on finely, my lord Hotontimorenos."

"Bless my soul!" cried Hotontimorenos, staring. And no wonder; for, to begin with, you could never have known the Wise Man's house. If it had been a gutta-percha house, pulled out to twice its size, and with the roof drawn up into a monstrous chimney, it could not have been more altered; and where had been the Wise Man's bedstead and stool were wooden benches, with long iron arms, small cast iron tables, tubs, and pails of water; and around the room a row of ovens heated to a dull redness, as though the Wise Man had suddenly turned baker. In the middle was a huge blast-furnace, like a monstrous bee-hive of brick, with four great round mouths; and in those mouths something that whirled and glowed as though you were boiling yellow flames. And going about among the ovens and tables, without looking to the right or left, as many men

as if the Wise Man had been the father of a hundred children or so, and they had all suddenly grown up and come home together. And you may see just such men and such work in many an American factory; but these, as you and I know, were the Dwellers in Fire, who had come to help the Wise Man.

"Why—why! what—is all this?" stammered Hotontimorenos.

"Hush!" said the Wise Man. "Now we shall see something curious."

Every moment the workmen went to and from the furnace with long iron rods. And one, near Hotontimorenos, dipping his rod in one of its open mouths, brought out something that stuck fast to its lower end; but that looked like a lump of red fire. The rod was hollow, for our workman blew through till his cheeks swelled out like a trumpeter's, and the fiery lump grew longer, and stretched out like India rubber. He twisted and twirled it about, and blew again with all his breath through the rod, and the lump puffed out round and large, as your breath swells out a thin India rubber ball, so that it looked as if he was blowing a red-hot soap-bubble.

"What is he going to make?" asked Hotontimorenos, a little afraid.

"Please to step out of the way," answered the Wise Man, impatiently.

Behind the Giant was a little wooden trough, to which ran the workman, minding Hotontimorenos's twenty feet of gold embroidery no more than if he had been a fly; turning and pressing the bubble on the edge of the trough, and cooling the rod with water. And then in front of

the great furnace somebody had dug a square pit like a cellar, covering it with boards with wide spaces between, as you saw in the floor of your father's house before it was finished. Running across these to the fire the man toasted this wonderful lump, which was red-hot like a coal, and stretched and puffed out like India rubber; and then Hotontimorenos stepped back, he hardly knew why; and backward and forward it began to swing—the long iron rod and the fiery ball—as though the workman were a clock and it the pendulum. Backward and forward, from the oven, down between the boards, out again on the other side, almost to the lower button of Hotontimorenos's waistcoat; and it was no longer a bubble, but a monstrous red-hot pear. And then it was no longer a pear, but long and round, like what we call a cylinder. And if you don't understand that, make the two edges of a stiff sheet of pasteboard meet together, and stand it on end, and you will have a cylinder. Only this cylinder, as the strong workman swung it on his iron rod, was closed at top and bottom, and was as long as your six-year-old sister, and larger around than her body; and though at either end it was still red-hot, the sides glittered and looked like— What do you suppose? Hotontimorenos guessed it.

"It's glass!" shouted Hotontimorenos.

"Exactly!" said the Wise Man, fairly on his tip-toes with delight.

The tall workman drew up the rod. He held the lower end of the cylinder to the fire, and then he blew through the rod. When he had done that he stopped the end through which he had just blown with his thumb. The lower

end of the cylinder, in the terrible heat, began to stretch and spread out, and so grew thinner and weaker. The particles of air blown into the cylinder, being heated, grew larger too, struggled to get out, and burst open the lower end of the cylinder, because it was the weakest—which was just what was wanted.

The workman laid the glass cylinder on a table, and striking the rod gently loosened it from the glass. He brought out on his rod a bit of red-hot glass from the furnace, and pulling it out with a pair of iron pincers like a gutta-percha string, laid it evenly around the closed end of the cylinder.

"What is *that* for?" asked Hotontimorenos, much surprised.

With his pincers the man took away the red-hot circle, and under it the Giant saw a line burned in the glass. He struck the closed end of the circle lightly outside of the burned line, and it fell off, leaving the cylinder open; because glass is made up of atoms or little particles holding tightly together by what is called attraction of cohesion; just as you and your little friends might stand in a circle and hold each other tight by the hands. But the particles under the red-hot line were so violently heated that they grew suddenly larger and pulled apart, as if you and your friends should only hold each other by the tips of your fingers. Then, you know, if any one came suddenly and pushed or startled you, how easily he could break your circle. So when the red-hot circle was taken away, the cold, striking on the heated particles, made each particle suddenly draw itself together; and with that they quite lost their



IT'S WINDOW GLASS!

hold on each other and around the heated line. The man could break away the glass as evenly as if it had been cut off. I tell you this because in this way glass can be broken off smoothly in any direction that you like. But the Wise Man did not have time to explain it to Hotontimorenos, for just at that moment the King popped his head in at the door.

His Majesty, like Hotontimorenos, had passed a bad night. First, he was cold. Next, he was afraid in the dark; and rising early he determined to have off Hotontimorenos's head without further ceremony; but when he came to the Giant's house the Giant was not at home, and following him to the Wise Man's house his Majesty was struck dumb with astonishment, as Hotontimorenos had been.

"What is all this?" exclaimed the King, staring wildly at the fires, and the furnace, and the tall workmen, and the table covered with glass cylinders.

"Window-glass, your Majesty," answered the Wise Man, proudly.

"Window-glass! Likely story!" said the King. "Window-glass is flat. How can you make a flat sheet out of these brittle rolls of glass?"

"Walk this way, your Majesty, and you will see our men sawing through and through these cylinders with a red-hot iron bar to cut them open on one side," answered the Wise Man. "Here they are, your Majesty, and you see they are cut as straight as possible. And now, if your Majesty will step a little further, you will see these rolls opened into flat sheets of glass, out of which can be made as many panes as are needed for the windows in your Majesty's palace. This way, your Majesty."

"Yes, yes," answered the King.

But, to tell the truth, he was a little flurried. He was afraid of the grimy workmen, shouting and waving what looked to him like fire. Tyrants are always afraid, you know; and his crown was too large, and would tumble over his nose, and in trying to settle his crown he swept down a pile of glass with his sleeve, and was so startled by the crash that he nearly fell headlong into the oven, where a workman was watching a cylinder about to open.

"Your Majesty sees," said the Wise Man, taking no notice of the King's furious looks, "how the glass is growing soft and sticky in this great heat, like a sheet of jujube paste. And now you see it is so soft that it can no longer hold together in its round form, but is opening; and now see, your Majesty, it falls quite open and lies out flat on the hot stone, while the workman smoothes out the wrinkles and creases with his wooden roller. Your Majesty sees also that this wide stone on which the glass lies in the oven is one of four which are joined together and swung around on a pivot. The workman cries out 'Hola!' and they swing the stone and its sheet of glass around to a little railroad running from the oven to the open air. Watch him now. Here you

see is a little car having four shelves of zinc. He will lift the sheet of glass on that metal pitchfork to one of the zinc shelves; and, as all the shelves are now full, we shall send the car down the railroad track, the glass sheets cooling on the way; while here, you see, is a fresh stone waiting for a fresh cylinder to be pushed upon it from that round throat in the back of the oven."

Bang—boom—whiz—crash!

"Oh! ow! murder!" roared the King. "What's that?"

"Nothing, your Majesty," answered the Wise Man, nearly choked in trying not to laugh. "Only the rattling of the shelves of the car as it rolls on the track. Here is the cutting-room, your Majesty, and the cutting-table, with the inches marked on it. How large shall your Majesty's windows be?—thirty-six inches wide? This man, with his rule and pencil, will rule out the panes on this sheet of glass as you might rule a sheet of note-paper; only there is a diamond in his pencil, and as he marks his line he has cut it also through the glass. Here is a pane, your Majesty, of the size you desired."

"Hum!" said the King, beginning to look gracious; for here were no pitchforks or balls of fire to frighten him. "And who found all this out?"

Hotontimorenos, whom nobody had noticed, thought that here was his time.

"It is only a little invention of my own, your Majesty," he said, loftily, not supposing that the Wise Man would dare to contradict him.



MY LITTLE INVENTION.

"Only a little invention of *yours*!" cried the Wise Man, turning sharply on him. "Why, man, glass beads are found in the wrappers of mummies three thousand years old; and there are pictures of glass-blowers made in the days when the Jews lived in Egypt. An invention of *yours*, my lord Hotontimorenos! There is a country called the United States, which has not the honor and glory of being governed by your Majesty, in which are glass-factories to which this is but a toy. In Lenox, Massachusetts, they cast plate-glass. The melted glass is poured from the pots upon a huge cast iron table, provided with a metal ledge which keeps the glass from running over and regulates the depth of the plate; and on this ledge moves a copper roller, pushing before it the excess of glass, in which you may see all the colors of the rainbow; after which—"

"Yes, yes," said the King, impatiently; "but what were you saying of this country of the United States?"

"That there is a glass-factory in a city called Newark, in the State of New Jersey, where glass is bent in shape for bow-windows, and where is made the most beautiful enameled glass; not to mention many other glass-works, all larger than this; or a country called England, where—"

"The United States!" interrupted the King, sticking to his first idea. "Where there are so many factories there must be money. I will send an army there to-morrow."

"But, your Majesty, the United States is a vast country, with more than thirty millions of inhabitants," answered the Wise Man, aghast.

"Why didn't you say so, then?" snapped the King, flying into a rage. "And what has all this to do with tumblers and lamp-chimneys, I should like to know? Window-panes are very well; but something more is needed, I assure you."

"If your Majesty will come this way you will see that something else is being done," returned the Wise Man. "But that my lord Hotontimorenos invented glass-making is simply absurd. All the world has known for thousands of years that glass is made from sand and soda. For flint-glass you must have pure quartz sand, and also red-lead. For plate-glass you need pure materials and considerable quantities of soda. We are using sand purified with lime and potash. A mixture of iron gives a dark green color. Black bottles are made from river sand, rock-salt, and carbonate of lime. But whatever are your materials, you mix them well with broken glass, and heat the pots to a white heat. We make our pots from clay brought from Germany, another country which has the misfortune not to be governed by your Majesty. We try the boiling glass mixture from time to time, skimming off the scum, which we call sand-gall; and when the glass is properly melted we let it cool from forty to forty-eight hours. And there is all the process, that all the world has known for hundreds of years;

and in this way the glass becomes as you see it here, where the men are blowing your Majesty's lamp-chimneys and tumblers."

"Tumblers!" echoed the King, eagerly. But, alas! one should never visit glass-factories in crowns and robes trimmed with ermine; and if I have any young princes among my readers, I hope they will remember the warning. For the King tripped in his ermine robe, and pitching forward, his crown, which, as you know, was too large, fell off and was crushed under the feet of a workman on his way to the furnace.

"Fellow!" roared the King. But the workman paid no sort of attention. He dipped a bit of red-hot glass from the pot in the furnace on the end of his iron rod. He blew through the rod and puffed out the glass. He waved it about, and it stretched out longer. He rolled and turned and pressed and shaped it on the bed of a little cast iron table—the bed not lying flat, as in common tables, but slanting downward. He pinched and nipped the glass at top with a pair of iron pincers. He drew out the pulp with his pincers, and with one nip cut off the other end. He toasted the lower end at the fire, and it grew larger; drew it out, measured it with compasses, struck on his rod, and the pulp fell into a box of sand a lamp-chimney. A boy handed him a second rod, with the red-hot glass already a little blown, and he twirled and blew and shaped and pinched and clipped it; toasted and measured and threw it off, precisely as before; twenty other men all working about him in precisely the same way, never hesitating for an instant, and all faster than I can tell you about it, as if they had been so many iron men working by steam.

The Wise Man rubbed his hands together for delight.

"We are coming on finely, your Majesty."

"Don't know about that," answered the King, sulkily. "I shall charge you for my crown. It was double gilt. Lamp-chimneys may be all very well, but I see no tumblers."

The Wise Man pointed just before the King.

"Why, that is a pump on a platform," said the King.

"But only wait a little," answered the Wise Man, laughing softly.

On the platform stood an iron box with long handles, into which a workman dropped melted glass, while another cut the glass with a pair of scissors. The inside of this box was shaped and marked like a tumbler. The workman lifted the pump-handle, and there came down, not water, but an iron knob, in the midst of the red-hot glass, pressing the glass, which was as soft and sticky as soft molasses candy, against the tumbler-shaped sides of the box. The man seized the box by the handles, and turning it upside down, there dropped out a red-hot tumbler. A boy was waiting with a rod, which he pressed softly on the bottom of the tumbler, to which it stuck fast as he carried it to the fire to be toasted. By the furnace, on a wooden bench with iron arms, sat a man, who polished the tumblers



as they came from the fire with a bit of wood dipped in water, rubbing it over the tumbler's edge as he held it on the rod across the arms of his seat, and striking the tumblers from the rod into a box of sand.

"But I see no bottles!" said the King, determined to find fault with something.

"Bottles! why, here they are, your Majesty," said the Wise Man, cheerily. "These iron boxes are shaped within like the bottles that we wish to make; and they are in two parts, fastened together by hinges, so that they can be shut by the foot. Your Majesty sees this man blowing this bit of red-hot glass. He drops it into this box, and shuts it with his foot. He blows into the box, forcing the hot soft glass against its sides; and here is the boy ready to cut the neck of the bottle free from the glass still on the end of the rod. The man turns to blow another bottle; but the boy, still holding the bottle-neck in his shears, draws it softly forth from the mould. By the fire a man holds a bottle-case of zinc, into which the bottle just blown is dropped, you see, and held to the fire, that its neck may be softened by the heat; and here, your Majesty, is a man with wooden shears to polish and smooth the rim as the edge of the tumblers was smoothed. Finally, here, your Majesty, is our tempering-oven, where our glass-ware is brought from the boxes of sand on metal pitchforks, and laid out in rows to be hardened in the dull heat of this oven for the next twelve hours."

"Yes—but—" answered the King, "this, after all, is only common glass, and the Queen is very particular about her table-ware."

"Your Majesty," answered the Wise Man, "we are blowing this glass simply that your Majesty need not suffer with cold, darkness, and thirst. We are making flint-glass also; but it is a slower process, as we make it in closed pots, with only an opening in the side of the neck, lest it should be discolored by smoke. We have workmen here who will blow you a tumbler without help of a mould, and will cut you off the top of a wine-glass while he flourishes it on the end of his rod. And we have others who will cut you out these beautiful patterns on bottles and tumblers only by holding them on the edge of these wheels, which are turned by steam. See, your Majesty! the smooth edge of

this wheel is made of a stone which we brought from Scotland last night, fed with water which drops on it from above. Here is a tumbler, your Majesty. There is only a line drawn around the middle, and a few dots here and there on the tumbler; but as the man presses it on the edge of the wheel, now here, now there, your Majesty sees this beautiful vine is cut in the glass! and—"

"Yes, yes!" interrupted the King. "All very fine! But where is Hotontimorenos?"

The Wise Man looked astonished, and no doubt would have opened his eyes wider yet could he have known of what the King was thinking. For his Majesty was not delighted with the window-panes and the bottles and tumblers. On the contrary, he only said to himself that here was a man who knew not only all these wonderful things, but strange countries of which he had never heard, and that one day this Wise Man might take a fancy to his throne. So, stepping to the door, he said to the Giant:

"Hotontimorenos! pitch him in."

"Who, your Majesty?" asked the Giant.

"The Wise Man," answered his Majesty.

"He has been guilty of high treason. He knows more than the King. Throw him into



BLOWING UP THE GIANT.



his own furnace. We have glass enough without him."

"Very good, your Majesty," answered the Giant, pulling up his waistband. But in the doorway he met a workman as monstrous as himself.

"What are you doing here?" asked the workman, and fastened the end of his rod on the Giant's nose.

Oh! then the Giant roared; but roaring was of no use. Up he went in the air, for all his twenty feet of length. The workman blew with all his might, and the Giant drew up and rounded into a great glass bubble. The workman dropped him into a bottle-mould and blew again, and the Giant came out a bottle. And it is decreed that he shall always be full of the nastiest medicine, and that he shall always be horribly afraid of being broken.

Just as this was completed the King, hearing the uproar, came running in.

"What is this?" cried his Majesty. "Oh! oh! ow!" for, as quickly as before, the monstrous workman had him also by the nose, and blew him and swung him and moulded him and

toasted him, and he came out a little fat pitcher; and he, also, will always be afraid of being broken, and so sorry that people will wipe him out dry and never leave him a drop for himself.

As for the Wise Man, he blows glass for all the kingdom, and grows richer every day.



THE WISE MAN'S WORK.

## THE SACRED CITY OF THE HINDUS.

THE peculiar interest which antiquity imparts to cities and monuments is not due to age alone, to the lapse of time merely, by which these objects become remote, so as to be seen through the long vista of many intervening generations, but to the unfamiliarity with which age invests all things, separating them from us by abysses which sometimes neither the memory nor the records of men can span or illuminate. They become thus hieroglyphic symbols of a life which in some sense belongs to us, because it is human; but we can only imperfectly read the signs, and though our sympathy is courted, our intelligence is defied. The challenge to our powers of analysis, thus sent, as from a distant star whose light is thrown like a gauntlet at our feet ages after its own dissolution, sharpens curiosity and augments our interest. The very darkness which gathers about the path of the antiquarian lends the romance of wonder and adventure to his most tedious investigations. He is the leader and representative of the telescopic intelligence of his era striving to resolve into constellations the nebulous milky-way of pre-historic times; and even his partial success crowns him with brighter honors than are awarded to triumphant geologists and astronomers.

Antiquity discloses to us a life which is our own and yet not our own, just as old earth-fossils establish a similarity of types at the same time that they indicate forms and proportions with which we are unacquainted. It is the same life, but revolves in a separate orbit and about a different centre. It is not only different because we view it in perspective, but be-

cause also it presents diversities as remarkable as those which separate our flowers and forests and animals from the vegetable and animal monstrosities of pre-Adamite existence. In some respects it is to our modern life like the representations of art, "*similia in alia materia*," like a sculptured bass-relief, or like a drama. The mask and buskin and other paraphernalia of the Grecian stage did not more effectually remove the actor into a sphere separate from that of the spectator (so isolated, indeed, that within this charmed circle the descent of the gods from above, or the ascent of furies from the under world, never taxed the imagination of the Athenian audience to give to these apparitions the semblance of reality) than do the differences of outward circumstance, of temperament, of mental constitution—in fine, of all the conditions which regulate thought and action, separate from us the men and women of the ancient world. Not more unfamiliar to Homer or to his audience appeared the heroes that warred about Troy, or even those ancient ladies of whom Ulysses caught a passing glimpse in the dark recesses of Hades, than do Homer and his contemporaries appear to us. The removal by death of a single generation of men shuts against the following one the gates of a world more alien than it is credited to be, or than the record of it which survives ever perfectly indicates. The Puritan is already a stranger, how much more the ancient Scythian, or Egyptian, or Hindu, who are not only removed from us by a succession of generations, but also by alienation of race and climate—who inhabited regions which even to the cultivated Greeks and Romans