

runs in a given number of degrees of heat or cold to be tested in double that number. This also appears common sense, but it was not the science practiced by my maker, who for extreme degrees of temperature considered a secondary compensation was necessary. This little omission, however, was of no consequence whatever to the professor who now had me under his charge. He tried me in a temperature below the freezing point, and then in another temperature which nearly melted the shellac that held the jewels in my pallets, and in this manner continued to persecute me for nearly a month; but being originally a good watch I was able to stand it all, and was not much the worse. At last this professor of baking and freezing examined his book, added up the figures in the different columns of the page devoted to my record, and I was pronounced to be perfect. My owner cheerfully paid the large bill that had been incurred, and it was considered morally certain that I would run regular this time.

How little dependence is to be placed on human calculations! Our fondest hopes, which to-day seemed on the point of being fully realized, are to-morrow shattered to pieces. The clocks in the towns of the different States that my owner visited in the course of his business still continued to show different time, and of course I was still considered to be running in proportion to the amount I varied from the different clocks. Besides, I had a bent third wheel pivot now, which sometimes caused me to stop altogether. In the course of a year I was at half a dozen different watchmakers, who all said that I needed to be cleaned, and they all cleaned me; but I was not fortunate enough to fall into the hands of one to examine me thoroughly to see really what was the cause of my stopping. One day I stopped after being only two days out of the watchmaker's hands. My owner tried another watchmaker in a town a number of miles distant, who told him the usual story, that I needed to be cleaned; but my owner maintained it could not be possible, as I had been cleaned but two days before. This man wanted a job, and was not particular about the means he used to get it, and, under the pretense of examining me and trying the power that was on my different wheels, with the point of a peg dexterously removed a portion of the dirt from under the nail of his thumb, and showed it to my owner as having been taken out of my works. Of course this was conclusive proof that I needed cleaning, and I was put through the process once more; but my third wheel pivot was not straightened that time either, and of course, I continued to stop running at intervals. My owner was now thoroughly disgusted

with both me and the watchmakers, but was induced to try another one, who was recommended by a particular friend as being a mechanical genius.

This individual belonged to the family of "born watchmakers," and was one of those few who are possessed with that amount of knowledge of watches, and skill in correcting their errors, that only those inspired by nature can be expected to enjoy. He conversed freely about watches in general, and was very severe in his denunciations of regular watchmakers in particular. When my owner handed me to him, and

told the whole story of my bad behaviour, the natural genius looked at me patronizingly, poked my wheels with the point of a piece of wire, quite regardless as to whether he was scratching them or not, then became absorbed in deep meditation for a few minutes. At last he pronounced that my gears (as he called them) did not run deep enough into each other, and that they had too much back lash.

My owner was astonished to hear of such a radical defect in my construction, and appeared a little incredulous at first, for he naturally wondered why the regular watchmakers had not discovered this defect before; but the natural watchmaker clinched his argument by giving him the piece of wire and the eye glass to try for himself; and sure enough there was a play or shake between the teeth of my wheels and the leaves of my pinions, and the born watchmaker convinced him that this shake prevented the wheels from acting constantly on each other. When the watch was being carried about, and especially if he was wearing it while riding on horseback, or in a railroad car, the play in the gears was sure to allow the wheels to move backward and forward, and consequently they could not move regularly, and when the wheels did not run regularly how could the watch be expected to run regularly? My owner soon saw the point of this sensible argument, and when he made the discovery he became perfectly frantic with joy, and nearly made himself as conspicuous in the neighborhood as that ancient philosopher did, who, regardless of ordinary toilet arrangements, ran through the streets of his town shouting "Eureka!"

Of course it was immediately decided that my wheels were to be made to run deeper into each other; the natural watchmaker was empowered to do the work, and in a few days the vandalism was completed. My destroyer first proposed to hammer my wheels and stretch them enough to prevent shake in the teeth, but finally abandoned that idea and bushed up the pivot holes and run the wheels in anew. My frames were fearfully abused in this operation; not one of my pivot holes was straight or properly fitted, and not one of my wheels was up-right, but the wheels all worked as deep into the pinions as they could possibly be made to run, and my owner superintended the alteration in person. After this alteration was completed another one was found to be necessary. My mainspring was too weak, and a stronger one had to be put in, which was so thick that the mainspring box could not hold the usual number of turns and give the necessary freedom for the spring to work. The accurate adjustment of the fusee was entirely destroyed, but this defect was never thought to be of any consequence. At last I was put together, but it was awful hard work for me to keep moving, and were it not for the wide pivot holes I never would have been able to run at all. The points of the teeth of my wheels butted against the backs of the leaves of my pinions; the bent third wheel pivot, which in reality was the original cause of my stopping, was never observed, and was bent still; but the wide pivot holes accommodated in a certain degree, all these defects. I managed to keep moving, and went regular enough to please my owner, who was now settled in one place, and compared me with one clock all the time. Although I was not going one-half as regular as before, he firmly believed that my construction had been greatly improved, and that another laurel had been added to the many already won by this natural watchmaker.

I have already related how I fell into the hands of a "natur-



"He regulated me at every town."