

class, was systematically extended to all the others in progression ; and, what is most important with scholastic improvement, moral improvement, not less, in consequence of the system, is said to have kept pace. For the assistant teachers, being invested with authority, not because of their standing in the school, retained their influence at all times, and it was their business to interpose whenever their interference was necessary. Such interference prevented all that tyranny and ill-usage, from which so much of the evil connected with boarding-schools arises ; and all that mischief in which some boys are engaged by a mischievous disposition, more by mere wantonness, and a still greater number by the example of their companions. The boys were thus rendered inoffensive towards others, and among themselves ; and this gentle preventive discipline made them, in its sure consequences, contented and happy. A boy was appointed over each class to marshal them when they went to church or walked out, and to see that they duly performed the operations of combing and washing themselves. Ten boys were appointed daily to clean the school-rooms, and wait upon the others at their meals. Twice a week during the hot season, and once a-week during the monsoon season, they were marched by an usher to the tank, and there they bathed by classes. As to any purposes of instruction, the master and ushers were now virtually superseded. They attended the school so as to maintain the observance of the rules ; though even this was scarcely necessary under Dr. Bell's vigilant superintendence, who now made the school the great pleasure as well as the great business of his life. Their duty was, not to teach, but to look after the various departments of the institution, to see that the daily tasks were performed, to take care of the boys in and out of school, and to mark any irregularity or neglect either in them or the teachers. The master's principal business regarded now the economy of the institution : he had charge both of the daily disbursements and monthly expenditure under the treasurer. The precise date of that experiment which led to the general introduction of boy-teachers cannot be ascertained ; but that these teachers had been introduced in 1791, or early in the ensuing year, is certain. In private letters, written to his friends in Europe, Dr. Bell relates the progress of his improvements step by step, and the impressions made upon his own mind by the complete success of his exertions in a favourite pursuit. These letters show also how soon he became aware of the importance of the system which he was developing and bringing to maturity."

Dr. Bell had of course, to contend against the opposition of masters and ushers, with whose interests the new system seemed to be inconsistent. But such opposition was but a rope of sand contrasted with the decision of his character with whom they had to deal. The measures he took to counteract it were as various as the kinds of annoyance resorted to, and at length succeeded in establishing reform. It was not done, however, without involving the resignation of the schoolmaster, who declared himself incapable of undergoing the fatigues involved in his duties. On Dr. Bell inquiring what duties he meant, he replied "Almost every duty." He was asked also "What fatigues?" and he replied, "The fatigues of the mind." Such is the state of too many professors of education : they desired only mechanical employment, and a routine of tasks, involving no thought, and inducing none in their unfortunate pupils. That this mental indolence has in a great part been now corrected, is due to Dr. Bell's perseverance and sagacity. The boy Frisken proved a capital coadjutor to the doctor ; though only eleven years of age, he taught all the younger classes, amounting to a third of the whole school. The education at the asylum, under Dr. Bell's superintendence, was so complete as far as it went, and the character of the boys so good, that applications were made for them from all quarters. Of one of those boys, named Smith, an interesting account is given, for which, however, our readers must consult the work itself ; where they will find recorded the scientific accomplishments of the celebrated Tippoo Sultan.

Attached as Dr. Bell was to India, still he was haunted occasionally by a desire to return home. The state of his health required change of air. For this purpose he went to Pondicherry, to Tanjore, and to Trichinopoly, but still his health declined. Nevertheless, long after he had obtained leave to return, he still lingered on the scene of his labors. At length, however, leaving the superintendence of the Orphan Asylum to the care of Mr. Kerr, he prepared to return to England.

Previous to quitting India, Dr. Bell took care to embody the re-

sult of his labors and experiments in a final and authentic account of his new system of education, and this report was accepted as a record of the institution which he had established. Soon after his return to Europe, he published his report, with additions, under the title of "An Experiment in Education, made at the male Asylum at Madras, suggesting a system by which a school or family may teach itself under the superintendence of the master or parent." He spared no pains in rendering the report perfect in all its parts ; and thus laid before the public a clear description of the system, together with most abundant testimony to its success in the only establishment where it had been tried.

"The system" was introduced into the school of St. Botolph's, Algate, in 1798, and the second practical experiment was made in the schools at Kendal, by Dr. Briggs, in the following year ; an incidental trial was successfully made in the Blue Coat school, and Dr. Bell also attempted to introduce the system into Edinburgh ; but was met by insuperable obstacles.

The advantages of the methods which he recommended were ultimately acknowledged, and the system was adopted pretty generally in England ; but a similar project having been put on foot by Joseph Lancaster, a controversy arose, which eventually led to the formation of two societies, namely the National Society and the British and Foreign School Society. This period of Dr. Bell's life manifests great activity. He went from place to place, still engaged on his apostolic errand, diffusing the blessing of education wherever he could. There is, however, appointed an end to all earthly labor ; and, in September of the year 1830, indications of declining health became apparent. Ultimately he lost the power of articulation, and was obliged to communicate his wishes by means of a slate and pencil ; still his mind remained vigorous. Having during his active life accumulated a great amount of wealth, his money now became a burthen to him. After changing his mind again and again as to its disposal, he at length suddenly transferred £120,000 to trustees in St. Andrew's, Scotland, for a projected college. One twelfth of the amount he had placed in the hands of trustees ; (£10,000) he subsequently gave to the Royal Naval School, and five other twelfths he transferred to the towns of Edinburgh, Leith, Glasgow, Aberdeen, and Inverness. His estates in Scotland, producing about £400 per annum, he made over to trustees for the purpose of promoting and encouraging the education of youth in Cupar Fife. His princely donation to St. Andrew's proved most unfortunate ; it involved him in disputes with the trustees, terminating only with his death, which took place at Cheltenham, England, on the 27th of January, 1832, in the 79th year of his age. His remains were removed to London on the 9th of February, and interred in Westminster Abbey on the 14th ; the highest dignitaries and other eminent persons attending as mourners. The elements of his character were, a strong mind, with great perseverance, a rigorous sense of order, and a great stock of worldly prudence.

**LORD ROSSE'S DISCOVERIES OF STARRY FIRMAMENTS.**—As professor Nichol very truly remarks, "investigation regarding such aggregations is virtually a branch of atomic and molecular inquiry," with stars in place of atoms—mighty spheres in place of "dust" "the firmament above" instead of "the firmament beneath." In fact, the astronomer, in sweeping with his telescopic eye, the "blue depths of ether," is as it were some Lilliputian inhabitant of an atom prying into the autumnal structure of some Brobdingnagian world of sawdust, organized into spiral and other elementary forms, of life, it may be, something like our own. The infinite height appears in short like the infinite depth, and we knowing not precisely where we stand between the two immensities of depth and height? The shapes evolved by the wonderful telescope of Lord Rosse are, many of them, absolutely fantastical ; wonder and awe are mingled with almost ridiculous feelings in contemplating the strange apparitions—strange monstrosities we had almost called them—that are pictured on the black ground of the illustrations. One aggregation looms forth out of the darkness like the skeleton face of some tremendous mammoth or other monstrous denizen of ancient times, with two small fiery eyes, however, gazing out of its great hollow orbits. Another consists of a central nucleus, with arms of stars radiating forth in all directions, like a starfish, or like the scattering fire sparks of some pyrotechnic wheel revolving. A third resembles a great wisp of straw, or twist or coil of ropes—a fourth a cork-screw or other spiral seen on end—a fifth a crab—a