

7 inches in length, $1\frac{1}{2}$ inch in diameter, and weighing $13\frac{1}{2}$ lbs., the charge suddenly exploded. The iron bar, propelled with its pointed end first, entered at the left angle of the patient's jaw, and passed clean through the top of his head, near the sagittal suture in the frontal region, and was picked up at some distance covered with 'blood and brains.' The



patient was for the moment stunned ; but within an hour after the accident he was able to walk up a long flight of stairs and give the surgeon an intelligible account of the injury he had sustained. His life was naturally for a long time despaired of ; but he ultimately recovered, and lived twelve years and a half afterwards. Unfortunately, he died (of epileptic convulsions) at a distance from medical supervision, and no *post-mortem* examination of the brain was made ; but, through the exertions of Dr. Harlow, the skull was exhumed and preserved. Upon this the exact seat of the lesion can be determined. The line of union of the cicatrices of entrance and exit, however, allowed a pretty accurate estimation of the track of the bar during life, and Dr. Bigelow did so with considerable accuracy.

"Dr. Bigelow, who examined the man two years after the accident, thus describes the appearances presented : 'A linear cicatrix of an inch in length occupies the left ramus of the jaw near its angle.... The eyelid of this side is shut, and the patient is unable to open it ; the eye considerably more prominent than the other.... (Vision lost.—Harlow.)

.. Upon the head, and covered by the hair, is a large unequal depression and elevation.... A piece of the cranium of about the size of the palm of the hand, its posterior border lying near the coronal suture, its anterior edge low on the forehead, was raised upon the latter as a hinge, to allow the egress of the bar ; it still remains raised and prominent.'

"From his examination of the skull itself, Dr. Harlow thus describes the track, of the bar : 'The missile entered, as previously stated, immediately anterior and external to the angle of the inferior maxillary bone, proceeding obliquely upwards in the line of its axis, passed under the junction of the superior maxillary and malar bones, comminuting the posterior wall of the antrum, entered the base of the skull at a point the centre of which is an inch and a quarter to the left of the median line, in the junction of the lesser wing of the sphenoid with the orbital process of the frontal bone, comminuting and removing the entire lesser wing with one-half of the greater wing of the sphenoid bone, also fracturing and carrying away a large portion of the orbital process of the frontal bone, leaving an opening in the base of the cranium after the natural efforts at repair by the deposit of new bone of one inch in its lateral, by two inches in its antero-posterior, diameters.' Dr. Harlow does not describe the further track of the bar through the frontal bone, but you will clearly see from the figures that the whole lesion is situated anterior to the coronal suture. If, now, you will compare the track of the bar through the skull and brain with the diagram before you, showing the relations between the skull and the brain, you will, I think, have no doubt in convincing yourselves that the whole track is included within that region of the brain which I have described as the *præfrontal* region, and that, therefore, the absence of paralysis in this case is quite in harmony with the results of experimental physiology. The only other region which the bar could have injured is the tip of the *temporo-sphenoidal* lobe and the outer root of the *olfactory* bulb. Respecting the condition as to smell, nothing is, however, said either by