as its leader and centre, laboured at the introduction into pure geometry of those ideas which were peculiar to the analytical method, and which gave to that method its unity, generality, and comprehensiveness. Two ideas presented themselves as requiring to be geometrically dealt with: the infinite and the imaginary—*i.e.*, the elements of a figure which lie at infinity and those which are ideal or invisible, which cannot be construed. It is usually supposed that the consideration in geometry of imaginary or invisible elements in connection with real figures in space or on the plane has been imported from algebra; but the necessity of dealing with them must have presented itself when constructive geometry ceased to consider isolated figures rigidly fixed, when it adopted the method of referring figures to each other, of looking at systems of lines and surfaces, and of moving figures about or changing them by the processes of projection and perspective. The analytical manipulations applied to an equation, which according to some system or other expressed a geometrical figure, found its counterpart in projective geometry, where, by perspective methods,—changing the centre or plane of projection,—certain elements were made to move away into infinity, or when a line that cut a circle moved away outside of it, seemingly losing its connection with it. By such devices, implying continuous motion in space, Poncelet introduced and defined points, lines, and other space elements at
35. Ideal elements. infinity, and brought in the geometrical conception of ideal and imaginary elements. "Such definitions," he says, "have the advantage of applying themselves at once to all points, lines, and surfaces whatsoever; they