entire hiatus had closed in and the surface outline of the tibia was firm over point of fracture. Full use of the limb followed.

This case illustrated the important principle laid down by Ollier, viz., that for all varieties of bone-grafting the autoplastic takes the first place, and hence, in all cases of comminuted fractures, provided the great blood trunks and nerves have escaped. Hence, we should look well to the preservation of fragments, no matter how small, which have an attachment to the soft parts, as it is through this bond the capillary vessels pass, every fragment so preserved becoming later an ossific centre for osseous regeneration.

Perhaps we make a mistake in many of these cases of even removing all the loose fragments when there are some left that are held by the soft parts. Bone tissue is slow to part with its vitality, though entirely separated from the body, and, moreover, if the replaced fragment should later necrose or undergo resorption, no alarm can come from it.

Case 4.—Fracture of tibia and fibula just below the knee-joint, with Pott's fracture below. Secondary osteoplasty.

Patient, aged 32, a locomotive engineer, injured on March 11th, 1898, in a "head-to-head" collision, was badly bruised about the body, sustained a scalp wound, and had the left lower limb so badly injured that for some days it was doubtful if it could be preserved. The knee had been violently wrenched, some of the ligament detached and the capsule lacerated, with free hemorrhage into the synovial membrane; there was a transverse fracture through the tibia and fibula, three inches below the knee-joint, with a vertical fracture through tibia, opening into the knee-joint. Besides, there was an incomplete Pott's fracture.

In this young man's case the vitality of the limb was for several weeks so feeble and the extent of tumefaction so great that no suitable adjustment could be borne. In consequence of this and the irritable, restless state of the patient when he left the bed, after four months, the lower limb was found greatly distorted, painful, stiff at the joint and useless for support or locomotion.

The knee was ankylosed at right angles, there was a sharp deflection and angular union of the fragments; the foot was turned up as in varus and ankle-joint action limited. After a time, under judicious treatment, some movement was secured at the knee and ankle joints, and the muscles largely recovered from the atrophy so conspicuous after he left the bed. Yet, however, the deformity remained, with marked limitation of motion at the knee and ankle, and paralysis of the peroneal group of muscles. The position of the limb remained so faulty that it was only a burden to him, as he had to support himself entirely on one limb, walking by the aid of crutches.