the thigh. The ſplints and bandages may be put on in the following manner: The patient being placed on a firm hair mattreſs, with his knee moderately bent, the long ſplint ban­dage and pillow are to be applied to the outſide of the thigh, and the patient ſhould be turned ſomewhat towards the af­fected side, with the knee and leg raised a little higher than the body : the ſhort ſplint ſhould then be applied along the inside of the thigh, and the bandage already placed without the other ſplint, applied ſo tight as to make an equal mode­rate preſſure over the whole : (See fig. 106.). To make the part ſtill more ſecure, it is proper to inſert a long firm ſplint of timber under the middle of the pillow, and to fix it by two broad ſtraps to the upper part of the limb. To pre­vent the limb from being affected by involuntary ſtartings, the pillow ſhould be fixed to the bed by ſtraps : to keep off the weight of the bed-clothes, a frame with hoops ſhould be placed over the thigh. The parts ſhould be examined after ſome time to see that the bones be not diſplaced. When there is pain, ſwelling, and inflammation, leeches and other remedies ſhould be applied. To render the ſituation of the patient as eaſy as poſſible during the cure, he may be allow­ed after the second week to turn a little more towards his back, and at the ſame time to extend the joint of the knee in a ſmall degree : after this time a little flexion and extenſion of the limb may be daily repeated to preſerve the uſe of the joint.

The method here deſcribed generally ſucceeds. Sometimes, however, notwithſtanding all our care, the ends of the bone slip over each other. To prevent the deformity which this occaſions, it has been attempted to make extenſion and counter-extenſion by machines : but the pain and irritation have always been ſo great that little advantage has yet been de­rived from such means. The invention (fig. 107.) of the late Mr Gooch of Norwich, improved by the late Dr Aitken of Edinburgh, has been recommended as one of the beſt machines for oblique fractures of the thigh. After endeavouring to remove the pain, ſwelling, and inflamma­tion, which are ſometimes ſo great as to preclude the appli­cation of the ſimpleſt bandage, this machine may be tried. But if it be found impracticable to uſe it, the cure muſt be conducted in the uſual way with the chance of the fractured pieces overlapping one another, and of courſe the limb being ſomewhat ſhortened.

The *patella* is moſt frequently fractured tranſverſely, ſometimes lengthwise, and ſometimes into ſeveral pieces. Fractures of this bone have been ſaid commonly to end in a ſtiff joint ; but this is perhaps moſt frequently owing to the limb being kept too long in an extended poſture. In the treatment of fractures of this bone, the leg ſhould be ex­tended to relax as much as poſſible the soft parts connected with the bone. The patient ſhould be placed on a firm mattreſs, and a ſplint be placed under the limb long enough to reach from the top of the thigh to the under end of the leg, to which the limb ſhould be fixed by a number of ſtraps to keep it in a ſtate of extenſion. The fractured bones are then to be brought together, and ſuch a number of leeches applied to the joint as will remove as much blood as the pa­tient can bear ; and as long as much pain and tenſion con­tinue, ſaturnine and other aſtringents are to be uſed for re­moving them. When this is accompliſhed, and the parts properly adjuſted, a large pledget of Goulard’s cerate ſhould be laid over the joint, and a hooped frame employed to keep off the bed-clothes. In a longitudinal fracture the parts are eaſily kept together by a common uniting bandage or adheſive plaſter ; but in tranſverſe fractures more force is neceſſary. Various bandages have been employed for drawing the pieces together in ſuch fractures ; one of the beſt of theſe is that repreſented fig. 108. We need not be anxious, however, about bringing the pieces very cloſe to­gether, as a cure may be made though they remain at a conſiderable diſtance. The bandages, unleſs particular ſymp­toms occur, ſhould not be removed till the end of the ſecond week ; after which the joint ſhould be cautiouſly bent every ſecond day to prevent stiffness.

The leg is commonly fractured near the lower end, this being the weakeſt part of the bones. In the treatment of a fractured leg the ſame rules apply which were given for a fractured thigh bone. The muſcles ſhould be relaxed by bending the knee ; but little advantage can be derived from bending the foot, for in proportion as the muſcles behind are relaxed thoſe before are put on the ſtretch : the pa­tient may be therefore allowed to keep the foot in the eaſieſt poſture. The bones are commonly replaced by the gentle extenſion of the upper part of the limb by an aſſiſtant, while another ſupports it at the ankle. The bones being repla­ced, and the limb laid on its outſide with the knee bent, two ſplints (fig. 109.) are to be applied, long enough to reach from the upper part of the knee to the edge of the ſole, ſo as to prevent the motion both of the knee and ankle. The ſplints are to be retained by a twelve-tailed bandage, as in the caſe of fractured thigh bone. See fig. 106.

If the patient be either very reſtleſs or troubled with ſpaſmodic affections of the muſcles of the leg, an additional ſplint, ſhaped to the form of the leg, ſhould be applied along the outſide of it, and fixed by a ſtrap at the upper, and an­other at the under part of the leg. When the patient can­not reſt when lying on either side, he may be placed on his back, and the curved ſtate of the knee ſtill preſerved by raiſing the leg a little above the level of the body on a frame made for the purpoſe. This variety of poſture may like- wiſe be uſed in fractures of the thigh. The patient may from the firſt be laid in this poſture, or he may alternately change from the one to the other. No change of poſture, however, ſhould be allowed for the firſt ten or twelve days. When the fibula only is fractured, it is apt to be conſidered as a ſprain of ſome of the muſcles ; but this ought to be particularly attended to, as the miſtake may be followed by bad conſequences. When both the bones of the leg are broken, the portion next the foot is commonly drawn towards the back part of the leg, ſo that a prominency is produced by the fractured part of the upper portion of the bone ; and this is improperly termed the rising end of the fractured bone. The appearance is entirely produced by the inferior portion falling back. Hence no advantage is derived from preſſure being made on the upper end of the bone : the in­ferior portion ſhould be raiſed ſo as to bring the parts into contact, and then by proper bandages they ought to be ſupported till they are perfectly united.

Fractures of the bones of the foot and toes are treated nearly in the ſame manner as fractures of the hand and fin­gers. Beſides the ſplint which may be neceſſary for the particular part, a large one ſhould be appled over the ſole ; nor ſhould any motion be allowed for a conſiderable time either in the foot or ankle, otherwiſe the bones may be displaced, and a proper cure prevented.

Sect. VI. *Of Compound Fractures.*

By compound fracture is now generally meant a fracture of a bone communicating with an external wound in the integuments. They are much more dangerous than simple fractures. The generality of authors have conſidered am­putation as indiſpenſable in cases of compound fractures ; while a few, particularly Mr Bilguer, ſurgeon-general to the armies of the late king of Pruſſia, affirm that it is scarcely ever neceſſary. Both ſeem to have carried matters too far. Some of the lateſt and beſt ſurgeons have recom­