mended never to amputate immediately in private practice, unleſs when the bones are ſo much ſhattered that they can­not reunite, or the texture of the ſoft parts completely deſtroyed ; becauſe, even if amputation be at laſt necessary, the patient will have a greater chance of recovering than if it had been performed immediately after the accident : for the ſtate of weakneſs to which he is generally reduced ren­der the attendant ſymptoms leſs violent. On the other hand, it has been conſidered as no bad rule in the army or navy, where patients cannot be kept in a proper ſituation, and where sufficient attention cannot be given, to amputate immediately in caſes of compound fractures of the large bones of the extremities. When amputation is not performed immedi­ately, it is not, for ſeveral days at leaſt, admiſſible. It may af­terwards be rendered necessary by hemorrhagies, which can­not be stopped but by means more dangerous than amputation itſelf; by extenſive mortification ; or by the ends of the frac­tured bones remaining long disunited, while a great discharge of matter endangers the patient’s life.

In treating compound fractures, all extraneous bodies ſhould be removed, as alſo all thoſe ſmall pieces of bone which will probably not unite with the rest. For this pur­poſe the opening, if necessary, ſhould be enlarged with a ſcalpel. The next step is to replace the bones by relaxing the muſcles as in ſimple fractures. Sometimes part of a bone projects ſo far through the integuments that it cannot be replaced without either ſawing off the end of it, or en­larging the wound. If the fractured bone be long, ſharp, and projecting much, it is beſt to ſaw it off ; for though it were reduced, it would not readily reunite, and it would be apt to excite much pain and inflammation : But if it be broad at the baſe, and of no great length, it ought cer­tainly to be ſawed, even though it cannot be reduced with­out enlarging the wound. For the most part, it is only the ſkin which it is necessary to cut ; but even the muſcles ought to be divided, though as much as poſſible in the direction of their fibres, when the bone cannot otherwiſe be replaced. After the reduction, a pledget of ſome emollient ointment is to be laid over the wound, and the limb placed on a firm ſplint, and still kept in a relaxed posture. In dreſſing the wound, the limb ought not to be moved : the many­tailed bandage, therefore, ſhould be uſed rather than a roller. Various contrivances have been fallen upon to al­low the limb to be at reſt while the ſurgeon is dreſſing it. The fracture box, invented by the late Mr Rae ſurgeon in Edinburgh, is one of the best. When the leg is laid on this, it may be dressed with tolerable facility without moving it. We are happy to have it in our power to announce to the gentlemen of the medical faculty, that another machine has lately been invented by Mr Samuel James ſurgeon in Hoddeſden, Herts, which, we are told, will effectually relax the muscles, and retain the bones in their natural ſituation, without pain to the patient or the leaſt inconvenience to the operator. See fig. 110.

It is of the greateſt importance to prevent inflammation, which is apt either to produce mortification, or to give riſe to extenſive abſcesses. The dreſſings ſhould be removed once or twice daily according to the quantity of matter. The common application of warm poultices, on account of their inconvenience, may be deferred till they become ne­cessary by the approach of inflammation, which they are to be conſidered as the ſureſt means of preventing by exciting a discharge of matter. Whenever the inflammation sub­sides, and a free diſcharge of pus is produced, the poultices ought to be laid aside, lest they do harm by relaxing the parts too much, and exciting too copious a diſcharge. The ſore ought then to be dressed with mild astringents, and the patient kept on a nouriſhing diet with tonic medicines. A free paſſage ſhould be given to the matter by putting the limb in a favourable poſture, and by making a counter open­ing, if necessary, to the moſt depending part. But this may be frequently avoided, by covering the sore with ſoft lint or ſponge to abſorb the matter. If the diſcharge become exceſſive, and cannot be leffened by the means above-men­tioned, it will be found to proceed from a portion of looſe bone which has not been earlier noticed, by the re­moval of which it may be stopt. If, instead of producing matter, the inflammation terminate in gangrene, the danger is still greater than under the most extenſive abſcesses. For the treatment of this, the reader is referred to Chap. III. Sect. 2d.

Chap. XXXIIΓ. *Of Distortions.*

Distortions of the bones may ariſe from external in­juries, from diſeaſed constitutions, from a morbid state of the bones, or a contracted state of the muſcles, or both ; but the affection is most frequently owing to a weakly, delicate conſtitution, as in rickety or ſcrophulous caſes.

In the treatment of distortions of the ſpine, particular at­tention ought to be paid to the cauſe of the diſorder. If it appear to ariſe from the patient continuing too long in any particular posture, every habit of this kind ſhould be guarded against on the first appearance of the diſeaſe. If the patient has turned too much to one ſide, the reverſe of this ſhould be adviſed. He ought to ſleep upon a firm hair mattress, that his body may lie upon an equal ſurface. He ſhould uſe an invigorating diet, the cold bath, bark, and other tonics. By a ſtrict attention to the uſe of theſe re­medies the diſeaſe has ſometimes been retarded in its progreſs. Various machines have been invented for removing distortions of the ſpine by pressure ; but conſiderable cau­tion is here required, otherwiſe much injury may ariſe from it. Some advantage, however, in certain caſes, has been derived from the uſe of the common collar (fig. 111.) ; or the stays and machinery adapted to them (fig. 112.), in­vented in France, and aſterwards brought into uſe in this country by Mr Jones of London, are found to be still better ſuited to this purpoſe.

The ſame cauſes which produce distortions of the ſpine may likewiſe produce distortions of the limbs. Sometimes the distortion takes place with the original formation of the bones, at other times it occurs in infancy, and now and then at a more advanced period of life. In early infancy the bones are ſo pliable as to be readily affected by the poſtures of the body. When a child is too ſoon allowed to attempt to walk, its legs are apt to become crooked from their inabi­lity to ſupport the weight of the body. Certain diſeaſes like- wise, eſpecially rickets, soften the bones ſo much, that they yield to the posture of the body, and to the common action of their muſcles.

When the distortion of a limb is owing to a curvature in a bone, if the caſe be recent, and eſpecially if it occur in childhood, it may frequently be removed, without much difficulty, by making a gradual but constant preſſure, by the uſe of machinery, on the convex ſide of the limb, till it recover its natural appearance. When the deformity occurs in the leg, a method has been uſed, in ſeveral instances, which is to fix a firm ſplint of iron, lined with leacher, in the ſhoe, on the concave ſide of the leg, the other end of the ſplint to rest against the under end of the thigh; when, if a broad strap or two be applied round the leg and ſplint, an eaſy gradual pressure may be made, and conſiderable advantage derived from it. See fig. 113.

Along with the curvature above mentioned, it com­monly happens that the feet and ankles are affected. When the bones of the leg are bent outward, the fore part of the foot is turned inward, and the inner edge upwards ; and the reverſe, if the leg be bent inward. In theſe caſes the affec-