Plate CCCCLXXXVIII. fig. 23. and 24.; or the operation may be begun and finiſhed with the trephine, while the trepan may perform the middle and principal part of the work. This part of the work is begun by making a hole with the perforator (fig. 24.), which is ſcrewed on to the lower end of fig. 23. deep enough to fix the central pin of the tre­phine, in order to prevent the ſaw from slipping out of its central courſe, till it has formed a groove ſufficiently deep to be worked ſteadily in ; and then the pin is to be removed. If the bone be thick, the teeth of the ſaw muſt be cleaned now and then by the bruſh (fig. 25.) during the perforation, and dipped in oil as often as it is cleaned, which will conſiderably facilitate the motion, and render it more expeditious ; making it at the ſame time much leſs diſagreeable to the patient, if he poſſeſs his ſenſes. That no time may be loſt, the operator ought to be provi­ded with two inſtruments of the ſame ſize, or at leaſt to have two heade which can be readily fitted to the ſame handle.

After having made ſome progreſs in the operation, the groove ought to be frequently examined with a pick-tooth, or ſome ſuch inſtrument, in order to diſcover its depth ; and **if** one ſide happen to be deeper than the other, the operator ought to preſs more on that ſide which is ſhalloweſt. Pre­cautions are more particularly neceſſary when the operation is performed upon a part of the ſkull which is of an unequal thickneſs, eſpecially after the inſtrument has paſſed the di­ploe. And though it be ſaid by writers in general that the inſtrument may be worked boldly till it comes at the diploe (which is generally known by the appearance of blood), yet the operator ſhould be upon his guard in this point, ex­amining from time to time if the piece be looſe, left thro’ inadvertence the dura mater be wounded ; for in ſome parts of the ſkull there is naturally very little diploe, and in old subjects ſcarcely any. It ought likewiſe to be remembered, that the ſkulls of children are very thin. When the piece begins to vacillate, it ought to be ſnapped off with the for­ceps (fig. 26.), or levator (fig. 26. a) ; for the ſawing ought by no means to be continued till the bone be cut quite through, otherwiſe the inſtrument may plunge in upon the brain, or at leaſt injure the dura mater. If the inner edge of the perforation be left ragged, it is to be ſmoothed with the lenticular (fig. 28. b), to prevent it from irritating the dura mater. Particular care is to be taken in uſing the inſtrument, left it ſhould preſs too much upon the brain.

The next ſtep is to raiſe the depreſſed part of the bone with the levator, or to extract the fragments of the bone, grumous blood, or any extraneous body. After this, if there appear reaſon to apprehend that blood, lymph, or mat­ter, is contained under the dura mater, it ought to be cautiously opened with a lancet, endeavouring to avoid the blood-veſſels running upon it, or lying immediately un­der it.

When the trepan is to be uſed on account,of a fiſſure in which the bone will not yield, the inſtrument ſhould be ap­plied ſo as to include part of it, if not directly over it, as it is moſt probable that the extravaſated fluid will be found directly under it. And when the fiſſure is of great extent, it may be proper to make a perforation at each end, if the whole can be conveniently brought into view ; and in ſome caſes ſeveral perforations may become neceſſary.

When it is propoſed to make ſeveral perforations to re­move depreſſed fragments of the bone which are firmly fix­ed, and having the internal ſurface larger than the external, or to raiſe them ſufficiently, it is neceſſary to apply the tre­pan as near the fractured parts as poſſible ; making the per­forations join each other, to prevent the trouble of cutting the intermediate ſpaces.

When the ſkull is injured over a future, and it is not thought adviſable to uſe the trepan, a perforation ought to be made on each ſide of the future, eſpecially in young ſub­jects, in whom the dura mater adheres more ſtrongly than in adults ; becauſe there cannot be a free communication between the one ſide and the other, on account of the at­tachment of that membrane to the future.

After the elevation of the depreſſed pieces, or the remo­val of thoſe which are quite looſe, the extraction of extra­neous bodies, and the evacuation of extravaſated fluids, &c. the ſore is to be dressed in the lighteſt and eaſieſt manner ; all that is neceſſary being to apply a pledget of fine ſcraped lint, covered with simple ointment, to that part of the dura mater which is laid bare by the trepan, or otherwiſe ; after which the edges of the ſcalp are to be brought together or nearly ſo, and another pledget laid along the whole courſe of the wound ; a piece of fine ſoft linen is to be laid over all, and the dreſſings may be retained in their place by a com­mon night-cap applied cloſe to the head, and properly fixed.

The patient is to be placed in as eaſy a poſition in bed as poſſible, with his head and ſhoulders elevated a little more than ordinary. If the operation be attended with ſuc­ceſs, the patient will ſoon begin to ſhow favourable ſymp­toms ; he will ſoon ſhow ſigns of increaſing ſenſibility, and the original bad ſymptoms will gradually diſappear. After this he ought to be kept as quiet as poſſible ; proper laxatives are to be adminiſtered, and ſuch as **may be** leaſt of a nauſeating nature. His food ought to be simple and eaſy of digeſtion, and his drink of the moſt diluent kind. If he complain of the wound being uneaſy, an emollient poultice ſhould be immediately applied, and renewed three or four times in the twenty-four hours. By theſe means there will commonly be a free ſuppuration from the whole ſurface of the ſore.

Every time the wound is dressed, the purulent matter ought to be wiped off from it with a fine warm ſponge ; and if any degree of sloughineſs take place on the dura ma­ter or parts adjacent, it will then be completely ſeparated. Granulations will begin to form, which will continue to in­creaſe till the whole ariſe to a level with the ſurface of the cranium. The edges of the ſore are now to be dressed with cerate ſtraps, and the reſt of it covered with fine ſoft lint, kept gently preſſed on by the night-cap properly tied. In this way the cure will go on favourably ; luxuriance of granulations will commonly be prevented ; the parts will ci­catrize kindly ; and as all the ſkin has been preſerved in making the firſt inciſion, the cicatrix will be but little ob­ſerved.

But things do not always proceed in this favourable man­ner. Sometimes in a few hours after the operation the patient is ſeized with a kind of reſtleſſneſs, toſſing his arms, and endeavouring to move himſelf in bed, while the ſymp­toms of a compreſſed brain remain nearly the ſame as for­merly. In this caſe, eſpecially if the pulſe be quick and ſtrong, the patient ought to be bled freely, as there will be reaſon to ſuſpect ſome tendency to inflammation in the brain. Sometimes, though the trepan has been properly ap­plied, the ſymptoms are not relieved, on account of extrava­ſated fluids collected internally under the dura mater, or be­tween the pia mater and brain, or in the cavity of the ven­tricles. The danger in theſe caſes will be in proportion **to** the depth of the collection. Particular attention therefore ought always to be paid to the ſtate of the dura mater **af­**ter the perforation has been made. If blood be collected below the dura mater, this membrane will be found tense, dark coloured, elaſtic, and even livid ; in which caſe, an opening becomes abſolutely neceſſary to diſcharge the extra-