middle, which is by much the beſt, will in moſt caſes be found practicable.

In deep wounds, attended with much retraction, it is al­ways a neceſſary precaution, to aſſiſt the operation of the ligatures by means of bandages, ſo applied as to afford as much ſupport as poſſible to the divided parts : But even with every aſſiſtance of this nature, it now and then hap­pens, that the divided parts cannot be kept together, re­traction occurs to a greater or lesser degree, and the liga­tures of courſe cut aſunder the ſoft parts they were at firſt made to surround.

With a view to prevent this receding of the teguments and other parts, it was long ago propoſed to add to the in­terrupted suture what was ſuppoſed would afford an ad­ditional ſupport, viz. quills, or pieces of plaſter rolled up into the form of quills ; one of which being placed on each ſide of the wound, the double of the ligature is made to in­clude the one, and the knot to preſs directly upon the other, inſtead of being made immediately on the edges of the ſore, as was directed for interrupted sutures.

It is at once evident, however, that the ligatures muſt here make the ſame degree of preſſure on the parts through which they paſs as they co in the interrupted suture ; and this being the caſe, it is equally obvious, that the interpoſition of theſe ſubſtances cannot be of any uſe. This suture is accordingly now very rarely practiſed, and it is probable that it will be ſoon laid entirely aside.

By the term tw*isted suture,* is meant that ſpecies of liga­ture by which parts, either naturally or artificially ſeparated, are united together, by means of ſtrong threads properly twiſted round pins or needles puſhed through the edges of the divided parts.

This suture is commonly employed for the purpoſe of uniting the parts in caſes of hare-lip ; and this indeed is almost the only uſe to which it has been hitherto applied : But it may with great advantage be put in practice in a variety of other caſes, particularly in all artificial or acci­dental diviſions either of the lips or cheeks ; and in every wound in other parts that does not run deep, and in which sutures are necessary, this suture is preferable to the interrupt­ed or any other, The pins made uſe of for twiſting the threads upon ought to be made of a flat form, ſo as not to cut the parts through which they paſs ſo readily as the ligatures employed in the interrupted suture. And thus one great objection to the latter is very effectually obviated : for every practitioner muſt be ſenſible of this being the moſt faulty part of the interrupted suture, that when muſcular parts are divided ſo as to produce much retraction, the li­gatures employed for retaining them almoſt conſtantly cut them through before a reunion is accompliſhed ; whereas the flatneſs of the pins uſed in the twiſted suture, and upon which the whole preſſure produced by the ligatuers is made to reſt, proves in general a very effectual preventative againſt all ſuch occurrences.

The pins uſed in this operation are repreſented in Plate CCCCLXXXVII. fig. 15. They are commonly made of gold or silver ; and in order to make them paſs with greater eaſe, ſteel points are added to them. They are ſometimes uſed, however, of gold or ſilver alone.

The manner of performing this operation is as follows. The divided parts intended to be reunited, muſt, by the hands of an aſſiſtant, be brought nearly into contact ; lea­ving juſt as much ſpace between the edges of the ſore as to allow the ſurgeon to ſee that the pins are carried to a pro­per depth. This being done, one of the pins muſt be intro­duced through both ſides of the wound, by entering it on one ſide externally, puſhing it forwards and inwards to within a little of the bottom of the wound, and afterwards carrying it outwardly through the oppoſite side, to the ſame diſtance from the edge of the ſore that it was made to enter at on the other.

The diſtance at which the needle ought to enter from the edge of the ſore muſt be determined by the depth of the wound, and by the degree of retraction produced in the divided parts. In general, however, it is a proper regula­tion, in deep wounds, to carry the pins nearly to the same diſtance from the ſide of the ſore as they are made to pene­trate in depth : And whatever the deepneſs of the wound may be, the pins ought to paſs within a very little of its bottom : otherwiſe the parts which lie deep will run a risk of not being united ; a circumſtance which muſt always give rise to troubleſome collections of matter.

The firſt pin being paſſed in this manner very near to one end of the ſore, and the parts being ſtill ſupported by an aſſiſtant, the ſurgeon, by means oſ a firm waxed ligature, paſſed three or four times round and acroſs the pin, ſo as nearly to deſcribe the figure of 8, is to draw the parts through which it has paſſed into immediate and cloſe con­tact : and the thread being now ſecured with a looſe knot, another pin muſt be introduced in the ſame manner at a proper diſtance from the former ; and the thread with which the other was fixed being looſed, and in the ſame manner carried round this pin, others muſt be introduced at proper diſtances along the whole courſe of the wound ; and the ſame ligature ought to be of a ſufficient length for ſecuring the whole.

The number of pins to be uſed muſt be determined en­tirely by the extent of the wound. Whenever this suture is practiſed, a pin ought to be introduced very near each end of the wound, otherwiſe the extremities of the ſore are apt to ſeparate ſo as not to be afterwards eaſily reunited. In large wounds, if the pins are introduced at the diſtance of three quarters of an inch from one another, it will in ge­neral be found ſufficient; but in cuts of ſmaller extent a greater number of pins become neceſſary in proportion to the dimenſions of the sores.

Thus in a wound of an inch and half in length, three pins are abſolutely requiſite ; one near to each end, and another in the middle oſ the ſore : whereas five pins will always be found fully ſufficient for a wound of three inches and a half in extent, allowing one to be within a quarter of an inch of each extremity of the wound, and the others’ to be placed along the courſe of the ſore at the diſtance of three quarters of an inch from one another.

The pins being all introduced and ſecured in the manner directed, nothing remains to be done, but to apply a piece of lint wet with mucilage all along the courſe of the wound, with a view to exclude, as effectually as poſſible, every acceſs to the external air.

When the pins remain long, they generally do harm, by the unneceſſary irritation and conſequent retraction of parts with which they are always-attended; and if they are not continued for a ſufficient length of time, that degree of adheſion is not produced between the divided parts which is neceſſary for their future retention ; ſo that the effect of the operation comes to be in a great meaſure, if not entire­ly, loſt.

In wounds of no great depth, for inſtance of three quar­ters of an inch or ſo, a ſufficient degree of adheſion always takes place in the ſpace of five days ; and six, or at moſt ſeven days, will generally be found ſufficient for wounds of the greateſt depth. But with reſpect to this circumſtance, it muſt always be underſtood, that the patient’s ſtate of health muſt have a conſiderable influence on the time neceſ­ſary for producing adheſion between divided parts.

When the pins are withdrawn, the uniting bandage may