Section of the History of Medicine

instructors of Vesalius, and later on was appointed professor at Pisa, where he took Holy Orders. He died in that city on May 26, 1569.

From the fact that this table was discovered in a monastery within fifty miles of Florence, it is probable that it was made in that city in the time of Guido Guidi, and may have been one of the models constructed under his direction.

The Scamnum Hippocratis.

By Sir D’Arcy Power, K.B.E., F.R.C.S.

The Scamnum Hippocratis or Hippocratic bench is the apparatus used by our ancient brethren to reduce the fractures and dislocations of the lower limb which occurred so often in the wrestling matches of classical times.

The apparatus dates so far back in the history of surgery as to be antecedent to the use of the screw as a mechanical power. The lever, the crank, the windlass and the pulley are employed, but the screw is conspicuous by its absence. The bench was in use from classical times, and seems to have varied little, if at all, in its passage down the centuries. The description given by Vidus Vidius in 1544 is identical with that of the Hippocratic surgeon. But it was passing into disuse in the sixteenth century, for Vidius says he gives details about it because he once saw a distinguished professor at Padua put to shame before his class when he had to confess his ignorance as to how to use it. Scultetus in his "Armamentarium Chirurgicum," published in 1653, merely copies the figures and description of Vidius, and it is described pro forma in the "The Chyrurgeon's Store-House," published in 1674.

The original description of the Hippocratic surgeon runs:—

"It will be important for anyone who practises surgery in a populous city to have a quadrilateral board prepared, of about 6 cubits or a little more in length, and about 2 cubits in breadth; nine inches will be sufficiently thick. It should be hollowed out from one end to the other, so that the working of the levers may not be higher than is proper, and at both sides there shall be stout posts provided with axles, and the posts should be securely fixed. Five or six long grooves should also be scooped out, about four inches apart—three inches will be a sufficient width for each and the depth should be the same. And although this number of grooves is enough, there is nothing to prevent them being made all over the bench. And this scannum or bench should have a pretty deep hole at its centre, square-shaped and about three inches in size. And into this hole, when it is thought to be necessary, a corresponding piece of wood with a rounded end is to be adjusted between the perineum and the head of the thigh-bone. This upright piece of wood prevents the body yielding to the force dragging downwards from the feet. The piece of wood sometimes serves also to secure counter-extension upwards, and sometimes if it has some degree of movement from side to side it may be used as a lever to push the head of the bone outwards when extension and counter-extension have been made. This is the reason for scooping out several holes in the bench, so that this piece of wood, being erected in the most suitable one, may act as a lever either on the sides of the articular ends of the bone or to press directly on the head during extension, whilst the lever is used to press it inwards or outwards. The lever may be either round or flat, for sometimes one shape and sometimes the other is the better. This method of applying the lever whilst extension is being made is applicable to all forms of dislocated hip, and by means of such an apparatus and of such powers it appears to me that we need never fail to reduce any dislocation."

"Reduction by the wineskin is also favourably mentioned in the treatment of dislocations of the hip, and I have seen certain persons who, from ignorance, tried to reduce dislocations both outwards and backwards by its means, without recognizing that they were rather displacing than replacing the parts. It is clear, however, that he who first invented this method intended it for dislocation inwards. It is proper then to know how the wineskin should be used, if it is to be used at all, because it should be understood that there are many other..."
means which are more effectual. The skin should be placed between the thighs uninfated, so that it may be carried as far up into the perineum as possible, and the thighs, beginning at the patella, are to be bound together with a bandage as far as the middle of the thigh, and then a brass pipe is to be introduced into one of the loose feet of the wineskin, and air forced into it, the patient lying on his side with the injured limb uppermost. But it is not a convenient method of applying force, for the wineskin when inflated does not present its most prominent part to the articular end of the femur (which is the place that ought to be more especially pressed outwards), but its middle, which probably corresponds with the middle of the thigh, or still lower down, for the thighs are naturally curved, being fleshy and in contact above, and becoming smaller below, so that the natural configuration of the wineskin forces it from its proper place. And if a small skin be used its power will be small, and will not be able to overcome the resistance of the dislocated limb."

Celsus (Lib. viii, cap. xx) says that, when other means have failed to reduce a dislocated hip,

"the limb may be yet more forcibly extended by placing the patient on the scamnum with pulleys on each side, to which the cords are to be tied. These cords can be tightened by twisting them like a winepress, though care must be taken in doing so not to tear the muscles or tendons. The patient should be placed upon the bench either prone, supine, or on his side, so that the dislocated limb may be uppermost, whilst the fixed portion of the joint is beneath."

Paulus Aegineta (Book vi, cap. 118) in like manner says:—

"Let the patient with a dislocated hip be stretched upon the scamnum like that upon which we stretch those who have dislocated their spine. And along nearly the whole length of the bench let some holes be made not more than three fingers' breadth in width and depth, and not more than four fingers' breadth apart from each other, so that the end of a lever being inserted into them, the limb may be pushed wherever it is necessary. In the middle of the scamnum let another piece of wood be fastened measuring about a foot long, and as thick as the crosspiece in the handle of a spade, so that when extension is made upon the patient this piece of wood comes between the perineum and the upper part of the thigh. This prevents the body yielding when the feet are pulled upon, and thus the necessity for counter-extension is obviated, and at the same time when extension is made upon the body the piece of wood will push the head of the femur outwards. If the dislocation is not reduced by extension the upright piece of wood should be removed and two other pieces of wood fastened to the sides of it like posts, not more than a foot long. Another piece of wood should then be fitted to them like the step of a ladder, so that the figure made by the three pieces of wood may be like the Greek letter H, the middle piece being fixed a little below the upper ends. The patient being then laid upon the sound side, the uninjured leg is brought up between the two uprights and below the horizontal piece, which is like the step of a ladder, whilst the injured limb is brought above it so that the head of the femur is adapted to it; but a folded garment should first be wrapped round it to prevent bruising of the thigh. Another board of moderate breadth and of such a length as to reach from the top of the thigh to the ankle is then to be bound along the inner side of the thigh. Extension being made either by pegs or some other instrument, the leg is to be pulled downwards, together with the splint, which is fastened to it so that by the force used the head of the thigh-bone is replaced in its proper position."

Hippocrates and his successors also used the scamnum for straightening curvatures of the spine. He gives the following directions, which were transmitted to surgeons for many hundred years, although it is very doubtful whether they were really used. He says:—

"The bench is to be covered with clothing or anything else which is soft, and the patient is to be stoved with vapour if necessary, or bathed with much hot water, and then he is to be stretched along the scamnum on his face, with his arms laid alongside and bound to the body. The middle of a thong which is soft, sufficiently broad and long, and composed of two cross straps of leather, is to be carried twice round the middle of the patient's breast, as near the armpits as possible, and what is over of the thongs at the armpits is to be carried round the shoulders and afterwards the ends of the thong are to be fastened to a piece of wood resembling
a pestle. These pestles, or pegs, are to be adapted to the length of the bench on which the patient is lying in such a way that the wooden peg resting against the bench may make extension. Another such band is to be applied above the knees and ankles and the ends of the thongs fastened to a similar piece of wood. Another thong, broad, strong and like a bandage and of sufficient breadth and length is to be bound tightly round the loins as close as possible to the hips. What remains of this bandage, with the ends of the thongs, must be fastened to the piece of wood placed at the feet of the patient. Extension is then to be made upwards and downwards, equally and simultaneously, in a straight line. Extension made in this way can do no harm if it be performed properly, unless one purposely tried to do mischief. But the physician, or some person who is strong and not uninstructed, should apply the palm of the hand to the hump and then, putting one hand over the other, he should press upon it, noticing whether the pressure is made best directly downwards, upwards towards the head or towards the hips."

"This method of applying force is particularly safe. It is also safe for a person to sit upon the hump whilst extension is made, and after raising himself up to let himself fall down again upon the patient. And there is nothing to prevent a person from placing his foot upon the hump, supporting his weight upon it and making gentle pressure. A man who is practised in the palaestra would be a proper person to do this suitably."

"I once made trial of the following plan. Having placed the patient on his back, I put an empty wineskin below his hump and afterwards filled it with air by means of a brass pipe. But the experiment was not successful, for when the patient was fully extended the bladder yielded and air could not be forced into it. The hump of the patient, too, was apt to slip off the distended wineskin when they were pressed together. But when I did not extend the patient so strongly, the skin was swelled up by the air and the man became more bent forward than was proper. I have written this on purpose, for it is a valuable piece of knowledge to learn what has been tried ineffectually and to record the causes of failure."