May 25, 1937. C. D. DAVIS 2,081,293

FRACTURE PIN

Filed Nov. 5, 1935

Fig. 1.

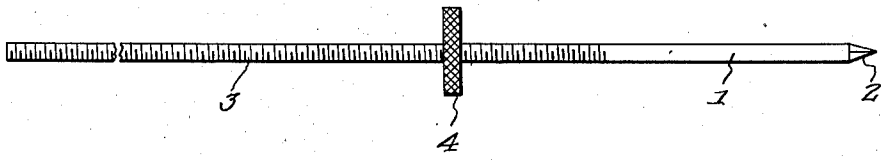


Fig. 2.

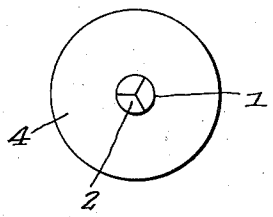


Fig. 3.

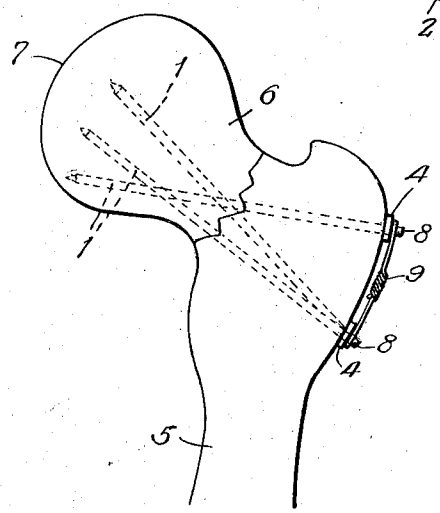
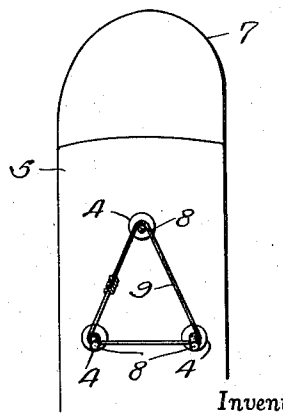


Fig. 4.



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UNITED STATES PATENT OFFICE

2,081,293

FRACTURE PIN

Charles D. Davis, Columbia, S. C.

Application November 5, 1935. Serial No. 48,427

2 Claims. (Cl. 128—84)

The present invention relates generally to the art of surgery and has for its primary object to provide, in a manner as hereinafter set forth, a pin of novel construction for use particularly in the treatment of fractures of the hip joint.

Another very important object of the invention is to provide a novel method of treating fractures of the hip joint.

The foregoing and other objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing wherein like characters of reference designate corresponding parts throughout the several views, and wherein:—

Figure 1 is a view in side elevation of a fracture pin constructed in accordance with the present invention.

Figure 2 is a view in end elevation thereof.

Figure 3 is a view illustrating the manner of treating a fractured thigh bone with a plurality of the pins.

Figure 4 is a view taken at right angles to Figure 3.

Referring now to the drawing in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a shank 1 which terminates, at one end, in a point 2. The shank 1 is of any suitable length and diameter, also of any suitable material, preferably stainless steel of high quality.

From its other or unpointed end, the shank 1 is threaded for a suitable portion of its length, as at 3. Mounted for threaded adjustment on the portion 3 of the shank 1 is a knurled nut or head 4.

In the use of the invention, three of the pins are used. Preparatory to the treatment, the area is treated with a local anesthesia, after which an incision is made below the great trochanter. The three pins are then inserted through the thigh bone 5, the fractured neck 6 and into the head 7 of the femur from a substantially triangular base from which the pointed ends substantially converge and in such a manner that the head is securely held in position. This is best seen in Figures 3 and 4 of the drawing. The points 2 of the pins facilitate pushing said pins through the bones with the aid, if necessary, of any suitable means. When it has been ascertained that the pins have been properly inserted, the nuts 4 are screwed down to the bone and the fracture is impacted by striking the outer ends of said pins with a mallet or other suitable instrument. The outer portions of the pins are then severed, leaving stubs 8 projecting beyond the nuts that can be easily grasped for subsequent removal. A length of stainless steel wire 9 is then wrapped around the pins and extended therebetween for tieing them together. Because of the fact that the pins, as hereinbefore stated, have been inserted with their points converging from a substantially equilateral triangular base, the wire 9 positively prevents any or all of said pins from working out backward. The nuts 4 prevent the pins from going forward and said nuts are prevented from working loose by the wire 9 wrapped about the pins behind said nuts. In this manner the fracture is solidly and permanently fixed in position, after which the wound is sutured. In addition to accommodating the nut 4, the threaded portion 3 of the shank 1 prevents slipping of the pin when said pin is in position in the fracture.

It is believed that many advantages of a fracture pin and method in accordance with the present invention will be readily understood, particularly by members of the medical fraternity, and although a preferred embodiment is as illustrated and described, it will be understood that changes in details may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:—

1. A method of treating fractured bones comprising inserting a plurality of threaded pins into the bone at spaced points with the inner ends of said pins substantially converging, then threading nuts on the pins against the bone, and then tieing the outer end portions of said pins together for preventing said pins from working backward out of the bone.

2. A method of treating fractured bones comprising inserting three threaded pins in the bone from a substantially equi-lateral triangular base with the inner end portions of said pins substantially converging, then threading nuts on the pins against the bone, then severing the outer portions of the pins in a manner to leave stubs projecting beyond the nuts, and then tieing the outer end portions of the pins together with a flexible member wrapped about the stubs.

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