

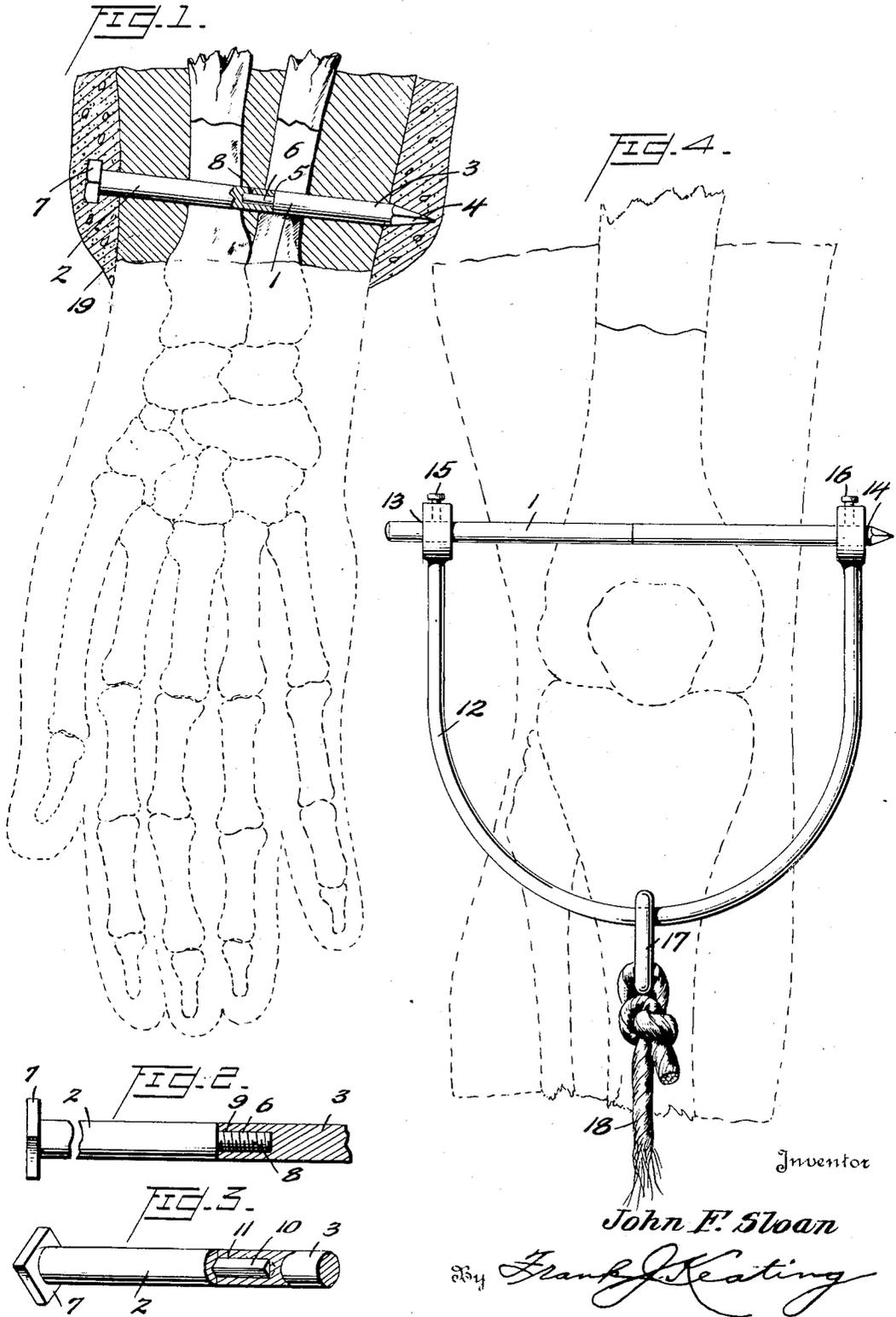
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J. F. SLOAN

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BONE SPIKE OR PEG

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Inventor

John F. Sloan

By *Frank J. Keating*

Attorney

# UNITED STATES PATENT OFFICE

1,933,825

## BONE SPIKE OR PEG

John F. Sloan, Peoria, Ill.

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8 Claims. (Cl. 128—84)

My invention relates to improvements in bone spikes or pegs in which one or more spikes or pegs, made of suitable material, is passed through a fractured or broken bone for the purpose of immobilizing or making extension. For example, one of the methods of using my invention is to pass a spike or peg thru the bone or bones near both ends of the fractured bone or bones on opposite sides of the fracture, incorporating their protruding ends in a cast or splint thus holding the bone or bones in proper position and preventing their displacement thru muscular action or other forces.

When spikes or pegs are used the protruding ends of the spike or peg will become contaminated with bacteria. The removal of the spike or peg without destroying the infecting bacteria on the protruding ends would cause the infection to be carried into the tissues and bones through which the spike or peg was drawn. The destruction of the bacteria upon these protruding ends of the spike or peg without injury to the surrounding tissue may be very difficult or impossible to accomplish. It is well known that infection of the bone is very serious and destructive and is one of the slowest of recovery. Consequently any operation upon a bone must be done with the greatest care and cleanliness to prevent infection. The introduction into and removal of any foreign body from a bone must be done under perfect asepsis.

It is my purpose to provide a spike or peg so constructed that it will separate in a location within the member or limb in which it is used so that one part can be removed from one side and the other part from the other side. In this way both parts of the spike or peg can be drawn from within the bone and tissues toward the surface and thus prevent any bacteria, which might be on the protruding ends of the spike, being drawn into the tract which it had occupied.

Referring to the accompanying drawing which illustrates preferred embodiments of the invention:

Figure 1 is a view partly in plan and partly in section illustrating the invention in operative position.

Figure 2 is a fragmentary view partly in plan and partly in section illustrating a modification of the spike or peg illustrated in Figure 1.

Figure 3 is a fragmentary perspective view partly in plan and partly in section of a further modification and

Figure 4 is an elevation of the device shown attached to a yoke for the purpose of making trac-

tion on a fractured bone and limb in proper position.

Like numerals of reference indicate the same parts throughout the several figures, in which:

1 indicates the spike or peg, which as shown in the drawing is separable about its center into two portions 2 and 3. The portion 3 is sharpened or pointed at one end 4 and at the other end has a shoulder 5 and a reduced portion 6. The portion 2 may have a head 7 at one end and a recess 8 at the other end to receive the reduced portion 6 of the portion 3 so that when the same is assembled as shown in the drawing the peg or spike will present a smooth and uninterrupted surface.

In the interest of simplifying the illustration only one spike or peg is shown in operative position in each of Figures 1 and 4, though it is to be understood that a duplicate spike or peg may be employed above the fractures indicated in said figures as conditions may require. In order to hold the fractured bones against displacement a cast 19 may be employed as hereinbefore mentioned.

Referring to Figure 2 it will be noted that the reduced portion 6 is formed on the portion 2 of the spike and is threaded as shown at 8. The portion 3 has a recess 9 which is also threaded to receive the threaded reduced portion 6.

In Figure 3 portion 2 has a reduced swaged or rectangular portion 10 which fits into a like shaped recess of portion 3.

Figure 4 shows the bones of a limb in dotted lines through which the spike or peg 1 is passed and attached to a yoke 12. In order to secure the yoke to the spike, the yoke may be provided with apertures 13 and 14 through which the ends of the spike pass. It will be noted that in this modification the spike or peg may be provided with a head and a sharpened end or both ends may be blunt. Set screws 15 and 16 are provided to firmly secure the yoke to the ends of the spike. The yoke 12 has a ring 17 fastened around it with which a cord or other suitable means 18 may be tied to extend the limb in proper position.

While I have shown but two embodiments of my invention, it is obvious that many modifications thereof may occur to those skilled in the art and I desire therefore, that my invention be limited only by the scope of the appended claims. Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A surgical bone spike or peg separable about its center into two portions, the said portions in-

cluding means for effecting a separable inter-engagement with each other.

2. A headed and pointed surgical bone spike or peg separable about its center into two portions, the said portions including means for effecting a separable interengagement with each other.

3. A surgical bone spike or peg separable at a point intermediate its ends, the said portions including means for effecting a separable inter-engagement with each other, the point of separation of the peg or spike being located within the bone of the fractured member.

4. A headed and pointed surgical bone spike or peg separable at a point intermediate its ends, one of said portions being provided with a recess, the other portion being provided with a reduced portion to enter said recess to effect a connection between the two portions, the point of separation of the peg or spike being located within the bone of the fractured member.

5. A surgical bone spike or peg separable at a point intermediate its ends, one of said portions being provided with a recess, the other portion being provided with a reduced portion to enter said recess to effect a connection between the two portions, the point of separation of the peg or spike being located within the bone of the fractured member.

6. A surgical bone spike or peg separable at a point intermediate its ends, one of the portions being provided with a threaded recess, the other portion being provided with a threaded reduced portion for threaded engagement with the recess of the first mentioned portion, the point of separation of the peg or spike being located within the bone of the fractured member.

7. A surgical bone spike or peg separable at a point intermediate its ends, one of the portions being provided with a recess, the other portion being provided with a reduced portion rectangular in cross section to enter the recess of the first mentioned portion, the point of separation of the peg or spike being located within the bone of the fractured member.

8. A headed and pointed surgical bone spike or peg separable at a point intermediate its ends, one of the portions being provided with a recess, the other portion being provided with a reduced portion rectangular in cross section to enter the recess of the first mentioned portion, the point of separation of the peg or spike being located within the bone of the fractured member.

JOHN F. SLOAN.

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