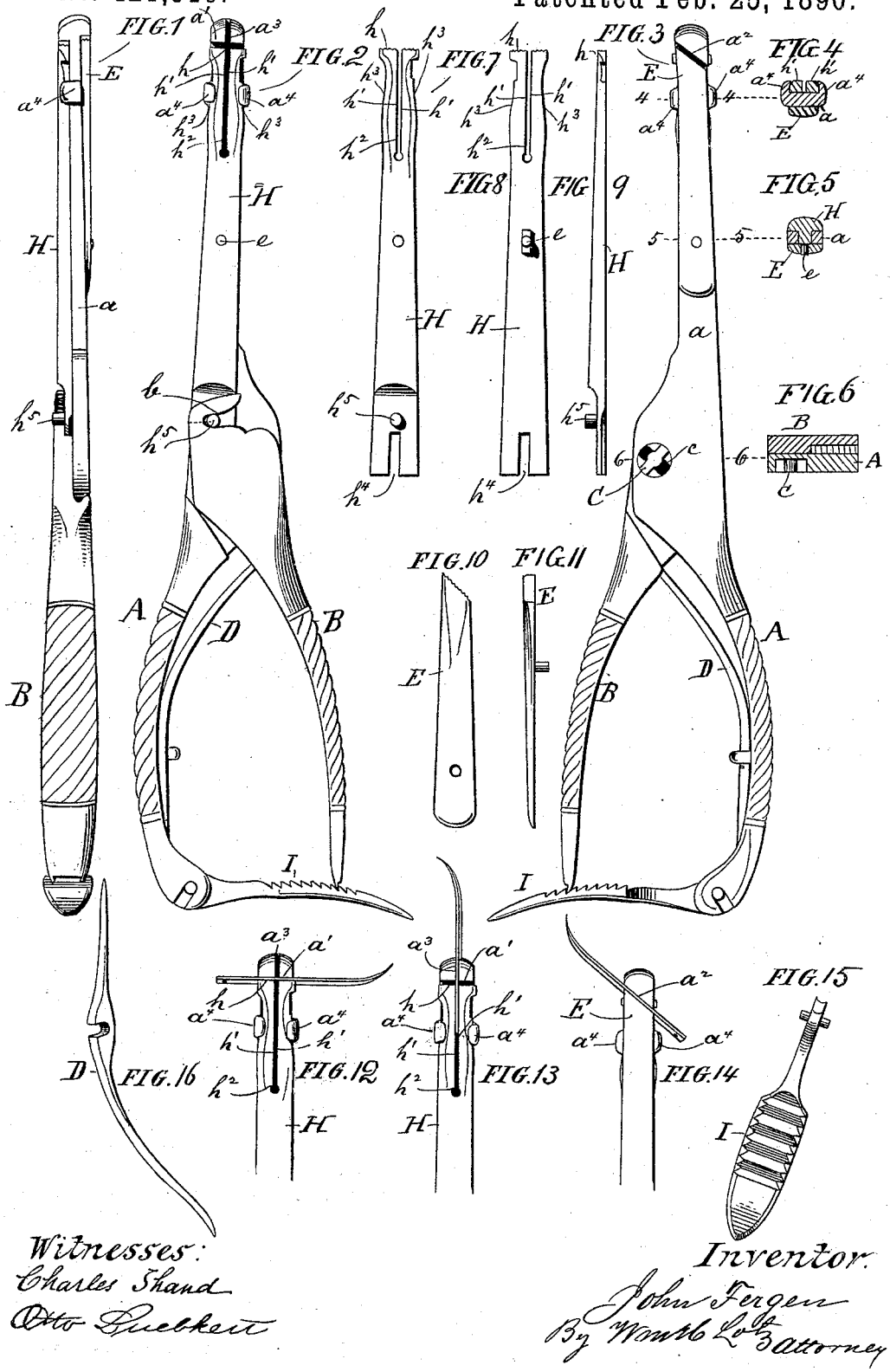
(No Model.)

J. FERGEN.

SURGICAL NEEDLE HOLDER.

No. 421,919. Patented Feb. 25, 1890.



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JOHN FERGEN, OF CHICAGO, ILLINOIS.

SURGICAL-NEEDLE HOLDER.

SPECIFICATION forming part of Letters Patent No. 421,919, dated February 25, 1890.

Application filed November 19, 1889. Serial No. 330,918. (No model.)

To all whom it may concern:

Be it known that I, JOHN FERGEN, a subject of the Emperor of Germany, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hackedorn-Needle Holders, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to needle-holders of that kind in which the needle may be held at various angles for surgical purposes.

The object of my invention is to permit the needle to be held in line with the instrument; to increase the variety of positions in which the needle can be held; to provide improved means for holding the needle, and to provide certain novel and improved features of construction, all serving to render the instrument highly efficient and serviceable.

To the attainment of the foregoing and other useful ends my invention consists in matters hereinafter set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figures 1, 2, and 3 respectively show different sides of the needle-holder. Fig. 4 is a section on line 4 4 in Fig. 3. Fig. 5 is a section on line 5 5 in Fig. 3. Fig. 6 is a section on line 6 6 in Fig. 3. Fig. 7 represents the top or outer side of slide H. Fig. 8 shows the inner or under side of said slide, and Fig. 9 is an edge view of the same. Fig. 10 represents a slide which is provided at one end with an oblique jaw, and Fig. 11 is an edge view of said slide. Fig. 12 illustrates a needle held transversely to the length of the instrument. Fig. 13 shows a needle held coincident with the length of the instrument, and Fig. 14 shows a needle held obliquely to the same. Fig. 15 shows the rack-plate. Fig. 16 shows the spring.

The instrument comprises a couple of handles A and B, which are attached to one another by a pivot C, and normally swung open or apart by a spring D. The handle A is prolonged beyond the point at which the handle B is pivoted to it, so as to provide said handle with a stem or shank a. This stem of handle A is provided with two fixed jaws a' and a^2, arranged, respectively, at opposite sides of the stem and near the end thereof. The jaw a' has its face formed transversely to the length of the stem, while the jaw a^2 is formed obliquely to the length of the stem. When therefore a needle is held against the jaw a' it will be positioned at right angles to the stem, as in Fig. 12, while, on the other hand, when a needle is held against the jaw a^2, it will be positioned oblique to the stem, as in Fig. 14. The jaw a' is also intersected by a needle-holding channel a^3, which is formed in a plane coincident with the longitudinal center of the stem, so that when a needle is placed within the channel a^3 it will project from the end of the instrument in a line coincident with the length of the stem, as in Fig. 13.

For the purpose of holding a needle in the several foregoing-mentioned positions it can be clamped between the fixed jaw a' and an adjustable jaw h, so as to hold it as in Fig. 12, or clamped between the fixed jaw a^2 and an adjustable jaw E, so as to hold it as in Fig. 14, or clamped between a pair of jaws h' h', so as to hold it as in Fig. 13. As a means for providing these several jaws, I arrange upon the stem a slide H, which serves as a shank for the jaws h and h'. This slide is divided along its forward end portion, as at h^2, so as to provide it with two prongs or divisions which form the spring-jaws h' h'. The outer end of said slide constitutes the jaw h, which is intersected by the slot or slit h^2. Said slit is in alignment with the needle-receiving channel a^3, so that when a needle is placed between the jaws h' it may also extend along said channel, as in Fig. 13. The slide H lies upon and is parallel with the stem a and is operated from the handle B. As a means for closing the jaws h' upon the needle, the stem a is provided with a couple of dogs a^4, arranged to respectively engage opposite sides of the split end of the slide H. The slide H is provided along its side with inclines h^3, which incline toward its forward end. These inclines h^3 are arranged along the split-end portion of the slide, so that when the latter is moved forward the advancement of its inclined sides against the dogs a^4 will cause the jaws h' to close upon and clamp the needle, while, on the other hand, when the slide is retracted said jaws will be allowed to spring open.

The slide H is at its forward end held and

guided upon the stem by the dogs, and to such end its inclined side portions are desirably formed by curved recesses, and the dogs are slightly bent toward one another, so as to embrace the stem to a suitable extent. The slide H can be guided at its rear end in any suitable way—as, for example, the stem may have a stud (not herein shown) arranged to engage in a slot h^4, formed in the rear end portion of the slide, as in Figs. 7 and 8. The handle B is provided with a cam or notch b, formed eccentric to its pivot and receiving a stud h^5 on slide H, so that by operating said handle the slide can be advanced and retracted at the will of the operator.

The shank of jaw E is formed by a slide which is arranged upon the side of the stem a and connected with the slide H by a pin e, which extends through a slot formed longitudinally in the stem. (See Fig. 5.) By operating handle B, therefore, jaw E can be so advanced as to clamp the needle against the fixed jaw a^2, so as to hold the needle as in Fig. 14.

As a preferred way of pivoting the handles, one of them—for example, the handle B—is provided with a T-headed pivot C, while the pivot-hole c in the other handle consists of a slot which is adapted in length to receive the pivot-head and enlarged between its ends in correspondence with the diameter of the stem of said pivot. By such arrangement the two handles can be pivotally locked to one another when the head of the pivot is across said slot and taken apart when the pivot-head is in register with the slot. One of the handles is provided with a pivoted rack-plate I, which is subject to the spring and normally held by said spring in position to be engaged by an end of the other handle.

What I claim as my invention is—

1. In a needle-holder, the jaws h', formed at one end of a slide, and fixed dogs for closing said jaws when the slide is adjusted.

2. In a needle-holder, the combination of the stem a, provided with a fixed transverse jaw which is intersected by a channel a^3, and a slide H, adjustable upon said stem and provided with the jaws which are parallel with the stem, whereby a needle can be held either transversely to or in line with the stem, substantially as set forth.

3. In a needle-holder, the combination of the stem a, provided with an oblique jaw a^2 and a sliding jaw E, for the purpose set forth.

4. In a needle-holder, the combination of the stem provided at its end with the fixed transverse and oblique jaws, the slide H, provided with jaws parallel with its length and having its forward end arranged to form a jaw opposite the transverse fixed jaw, and the adjustable jaw E, arranged to coact with the oblique fixed jaw and connected with the slide H.

5. The combination of the handle A, provided with a stem a, the slide H, provided with jaws, and the handle B, engaging said slide to operate the same, as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN FERGEN.

Witnesses:
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