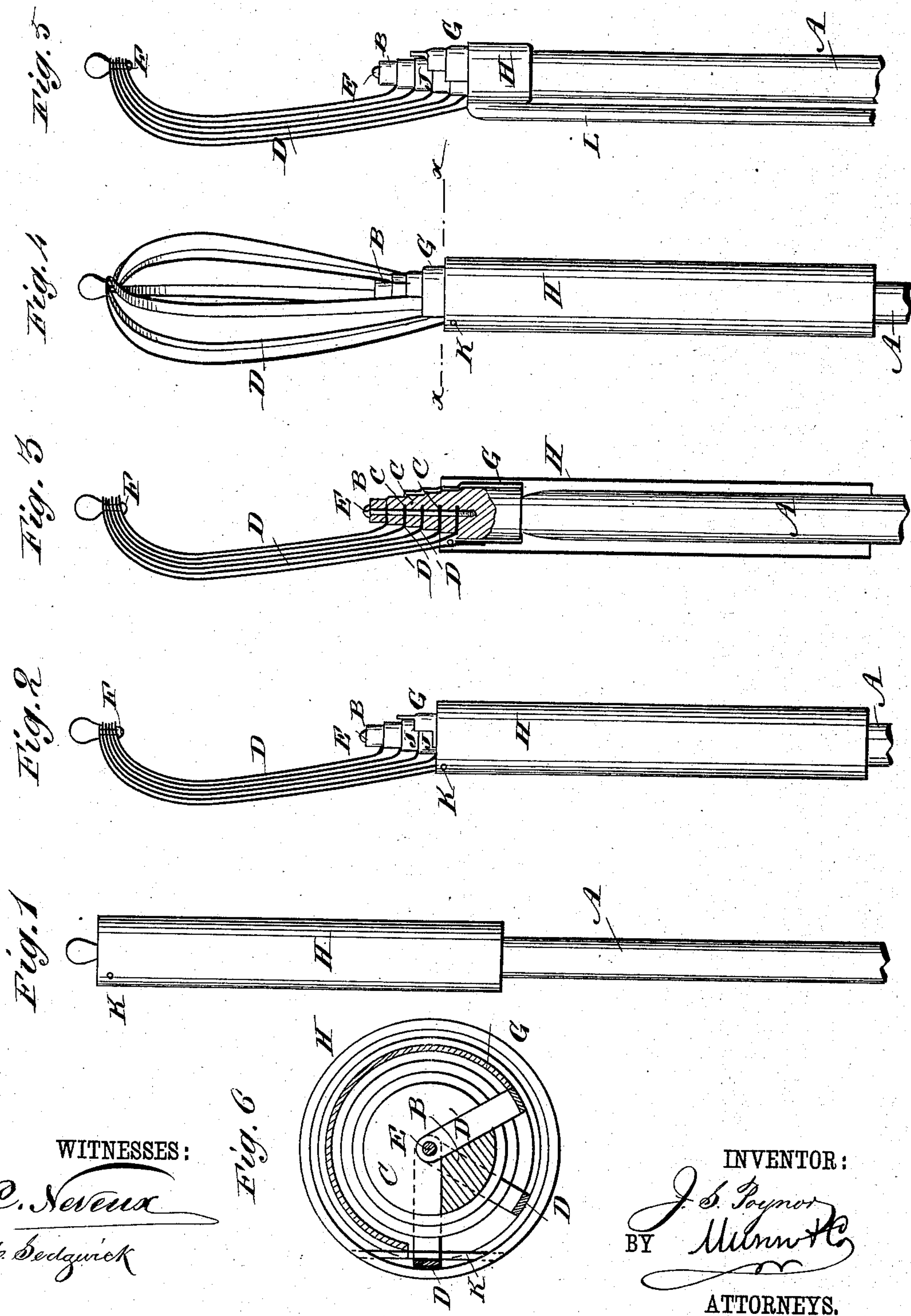


(No Model.)

J. S. POYNOR.
SURGICAL INSTRUMENT.

No. 322,198.

Patented July 14, 1885.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN S. POYNOR, OF WALNUT SPRINGS, TEXAS.

SURGICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 322,198, dated July 14, 1885.

Application filed March 20, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. POYNOR, of Walnut Springs, in the county of Bosque and State of Texas, have invented a new and Improved Surgical Instrument, of which the following is a full, clear and exact description.

The object of my invention is to provide a new and improved surgical instrument for extracting foreign bodies from different parts of the body—for instance, bullets, hardened or semi-hardened matter, bone, splinters, &c.—and which instrument can also be used as a probe.

The invention consists in various parts and details, and combinations of the same, as will be fully set forth and described hereinafter.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of my improved surgical instrument. Fig. 2 is a side view of the same, the tube being withdrawn. Fig. 3 is a sectional view of the same. Fig. 4 is a longitudinal view of the same adjusted for holding the object. Fig. 5 is a side view of a modification. Fig. 6 is an enlarged sectional plan view on the line *x x*, Fig. 4.

On the upper end of a rod, A, a head, B, is formed, which has the shape of a stepped cone. At each step a segmental groove, C, is cut in the head, and in each groove the lower bent ends, D', of a thin curved spring-strip, D, is held by a pin, E, passed down from the apex of the head and through the several ends D' of the springs D. The upper ends of the several springs D are pivoted together by a pivot, F, having a rounded head, to prevent the ends of the springs from tearing or cutting the flesh while inserting the instrument. A stepped shell, G, surrounds the head B, and is provided with the stepped offsets J. A spring, D, is also secured on the shell G, and pivoted at the top with the other springs D. A sliding sleeve or tube, H, surrounds the rod A, and a pin, K, is passed through the upper end of the sleeve or tube H, and between the spring D on the shell G and the lowest spring D on the head B. If desired, a rod, L, may be secured to the stepped shell for operating it.

The operation is as follows: The springs D are adjusted, as shown in Figs. 2, 4, and 5, so that the several springs rest against each other, and then the sleeve H is pushed upward to incase the said springs, as shown in Fig. 1. The instrument is inserted in the wound, oesophagus, nasal canal, &c., and the sleeve H is withdrawn, as shown in Fig. 2. Then the sleeve is held and the rod A turned on its longitudinal axis until the uppermost or inner spring D has made about five-sixths of a revolution, the second spring four-sixths of a revolution, the third three-sixths of a revolution, the fourth spring two-sixths, and the fifth spring one-sixth of a revolution, whereby a basket is formed by the springs D around the object to be removed. The sleeve H may then be pushed up and around the basket formed—that is, into the position shown in Fig. 1—and the instrument is withdrawn and pulls out the object. The movements of the springs while turning the rod A are limited and governed by the stops on shell G. The springs are carried around by the head B until they strike against the shoulders or offsets J of the shell G, which offsets are so arranged that the lowest spring D on the head is stopped after one-sixth of a turn, the next spring above after two-sixths of a turn, the next after three-sixths of a turn, &c. The spring D on the shell G cannot turn, as the shell is prevented from turning by the pin K, and the head B turns in the shell. The first or top spring has no play, the second spring has one-sixth play, the third two-sixths, the fourth three-sixths, the fifth four-sixths, and the sixth five-sixths, or entirely around the cone, but is fixed to the shell or stop.

In place of using six springs, a greater or less number of springs may be used.

The above-described instrument is to be used in place of the forceps. When the body is once grasped, it cannot slip out of the instrument, and the flesh is not torn, cut, or grasped.

The instrument is to be made in different sizes, according to its uses.

I am aware that it is not new to employ in connection with a headed rod a series of springs with their inner ends held to turn in

the head of said rod, and having the outer ends of a number of the same pivoted together.

Having thus described my invention, I claim
5 as new and desire to secure by Letters Patent—

1. In a surgical instrument, the combination,
with the rod A, of the head B, the springs D,
and the sliding sleeve H, substantially as
herein shown and described.
- 10 2. In a surgical instrument, the combination,
with the rod A, of the head B, the springs D,
the shell G, the sleeve H, and the pin K, sub-
stantially as herein shown and described.

3. In a surgical instrument, the combination,
with the rod A, having the stepped head B, 15
provided with grooves C, of the springs D, the
pin E, the stepped shell G, having offsets J,
the sliding sleeve H, and the pin K, substan-
tially as herein shown and described.

JOHN S. POYNOR.

Witnesses:

W. H. RUSSELL,
T. C. POOLE.