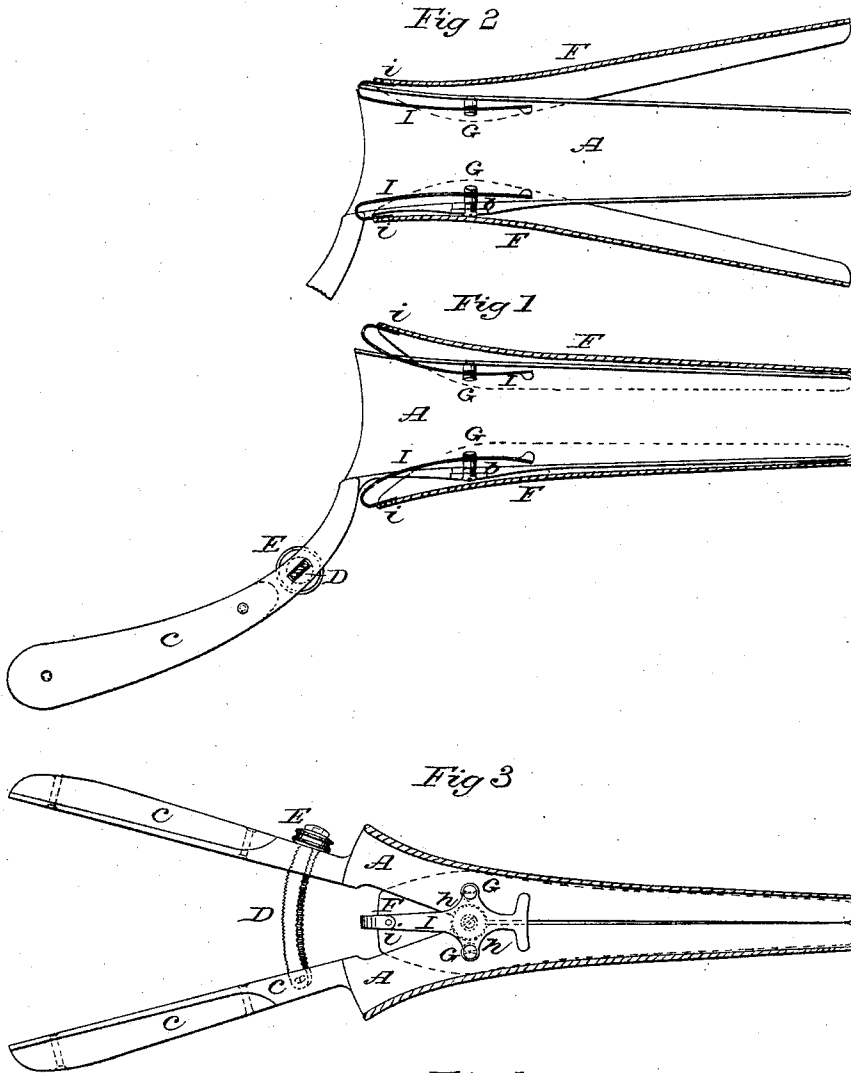


*C. Leutz,
Speculum,*

N^o 55,511,

Patented June 12, 1866.



Witnesses:

*Theodore Bergner
Chas. E. Fawcett*

Inventor:

Charles Leutz

UNITED STATES PATENT OFFICE.

CHARLES LENTZ, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SPECULUMS.

Specification forming part of Letters Patent No. **55,511**, dated June 12, 1866.

To all whom it may concern:

Be it known that I, CHARLES LENTZ, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Speculums; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, and to the figures and letters of reference marked thereon.

My invention relates to that class of surgical instruments named "speculums," which are provided with four valves or leaves, and so arranged in the manner of tongs that the leaves may be dilated after insertion and secured at any required point of expansion.

The object of my invention is, on the one hand, to simplify the mechanical arrangement of such instruments, and also to so construct the same that the most ample space is provided in the neck or joint of the same for the purpose of ocular examination, or for the insertion of instruments in operating, while the exterior surfaces of the instrument shall be entirely free from perforations or projecting bulbs, which are liable to injure the patient. All instruments of this class are necessarily so arranged that they can be readily taken apart for the purpose of cleaning or examining them thoroughly, and in their ordinary construction the pins or buttons by means of which the outer pair of leaves is hinged to the inner pair are provided with one-sided heads and arranged to swivel on their axes, so that when they stand in one position the heads will hold the outer leaf to its place, while a partial turn of the button will permit the removal of the leaf. In addition to this mode of jointing the outer pair of leaves to the inner ones, springs were provided, which tend to keep the instrument closed, and which must also be made detachable from the other parts.

In my improved construction of the speculum the outer leaves are provided with rigidly-fastened buttons of the simplest form, and the springs, which in their ordinary construction only served as a means of closing, are in their improved form made to serve also as a means of keeping the outer leaves in place upon the inner pair.

In order that my said invention may be fully

understood, I will now proceed more particularly to describe the same.

On reference to the drawings making part of this specification, and in which similar letters of reference allude to like parts throughout the several views, Figure 1 is a sectional side view of the improved speculum in its contracted condition. Fig. 2 is the same view with the leaves dilated. Fig. 3 is a sectional plan of the instrument, and Fig. 4 a sectional end view of the joints of the leaves.

A A are the inner leaves of the speculum, jointed like scissors or tongs at *b*, and provided with handles C C. D is a quadrant, in the form of a flattened screw, hinged to one of the handles at *c* and provided with a milled nut, E, by means of which the instrument can be secured in any required position of its leaves between the point of closing and extreme dilation.

The outer leaves, F F, are each provided with a pair of inwardly-projecting pins, G G, which pass through corresponding holes in the inner leaves, A A. These pins are notched in the manner best seen at Fig. 4, the notches being provided to receive the sidewise-projecting wings *h h* of the springs I, whereby the outer leaves are held in place upon the inner leaves. In the holes there is, however, enough play allowed for the pins G, that the instrument may be freely opened and closed without binding in these joints. The shape of springs I I and the manner in which they are attached to and actuate the leaves of the instrument are best understood upon reference to Figs. 1 and 2. By means of a small pin, *i i*, on their outer ends they are held in place.

To take the instrument apart it is simply required to lift the pins *i i* out of their sockets, and to withdraw the springs from their hold in the notched pins G G, whereby the outer leaves, F F, become detached from the inner leaves, A A.

To put the instrument together again, the leaves F F are first laid in their places, and then the springs I I are pushed inward until their wings *h h* have entered their notches, and the dowel-pins *i i* are made to enter their respective sockets in the leaves F F.

Having thus described the nature and con-

struction of my invention, I wish to be understood as not desiring to confine myself to the described arrangement of the parts in every minutia; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The described improvement in speculums, consisting in the use of the springs I I and

notched pins G G, or their equivalents, when arranged relative to each other and to the leaves A A and F F, substantially as and for the purpose specified.

CHARLES LENTZ.

Witnesses:

THEODORE BERGNER,
CHAS. E. PANCOAST.