

(No Model.)

E. WILLBRANDT.  
SCALPEL:

No. 479,102.

Patented July 19, 1892.

Fig. 1.

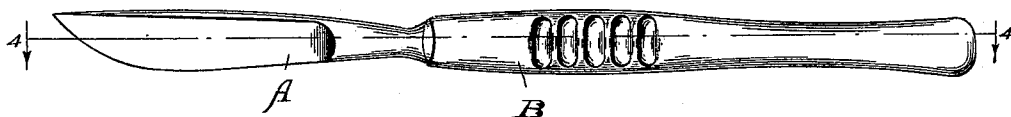


Fig. 2.



Fig. 3.

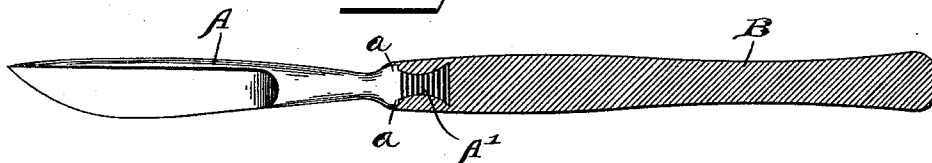
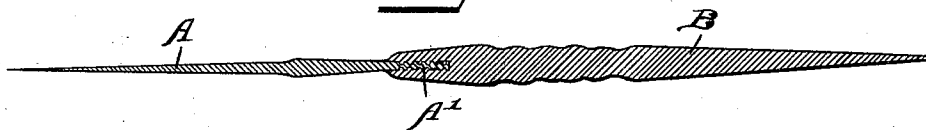


Fig. 4.



WITNESSES:

*J. W. Warner*  
*J. Walsh*

INVENTOR

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per

*Wm. Bradford*  
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# UNITED STATES PATENT OFFICE.

EMIL WILLBRANDT, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO WM. H. ARMSTRONG & CO., OF SAME PLACE.

## SCALPEL.

SPECIFICATION forming part of Letters Patent No. 479,102, dated July 19, 1892.

Application filed May 3, 1892. Serial No. 431,667. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL WILLBRANDT, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Surgeons' Knives, of which the following is a specification.

A surgeon's knife in its greatest perfection should have a handle which is comparatively light, which shall not be subject to injury from ordinary acids and other corroding influences, shall be capable of enduring heat, and which has no interstices at any point, especially where united to the blade, but instead be so united that the surfaces of the blade and handle shall develop into each other smoothly and evenly. To produce such a knife is the object of my invention.

Referring to the accompanying drawings, which are made a part hereof and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a knife embodying my said invention; Fig. 2, an edge view; Fig. 3, a sectional view looking upwardly from the dotted line 3 3 in Fig. 2, and Fig. 4 a sectional view on the dotted line 4 4 in Fig. 1.

In said drawings, the portions marked A represent the blade, and B the handle.

The blade A is formed, as is usual, of steel. Its tang A' has a somewhat peculiar formation, as shown most plainly in Fig. 3. At the point just within the handle said tang is widened, as at *a*, and the width is then reduced, and it afterward spreads out again, as shown. Its sides are corrugated or roughened, so that the handle may be more firmly united thereto.

The handle B, I propose to make of aluminum, which, as is well known, is a light material and not easily corroded. Aluminum from its peculiar nature cannot be soldered to the blade, as other metals can; but I have discovered that it may be cast around such a tang to the blade as I have shown and described, so as to unite the parts firmly and without leaving any interstices to permit the

admission of foreign substances, which might include disease-germs. As shown in the drawings, it is finished over the projecting parts of the tang of the blade, extending down and developing into the shank, and exteriorly the knife is thus caused to present a smooth, even, and polished surface. The handle being cast onto the blade, the metal of which it is composed runs around it closely and insures an absolutely perfect union, the point where the two come together being indistinguishable except from the color of the two metals. The sides of the handle are preferably corrugated for the purpose of giving the operator a better hold thereon.

Surgeons, as is well known, prefer in cleaning their knives to dip them into boiling water to insure the destruction of any disease-germs that might by any possibility adhere thereto. As will be readily understood, this is entirely impracticable with any material other than metal, as other materials would be destroyed or impaired thereby. Ordinary metals, when used for handles, have been soldered to the blades. Aluminum cannot be soldered and to rivet or attach it in any other way necessarily leaves interstices for the reception of foreign substances. Hollow handles are expensive and not so durable, and I have, therefore, by the metal and with the materials specified produced a surgeon's knife which embodies all the advantages and requisites of a perfect implement, which have heretofore not been attained for the reasons stated.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

As a new article of manufacture, a surgeon's knife having an aluminum handle, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 26th day of April, A. D. 1892.

EMIL WILLBRANDT. [L. S.]

Witnesses:

CHESTER BRADFORD,  
J. A. WALSH.