

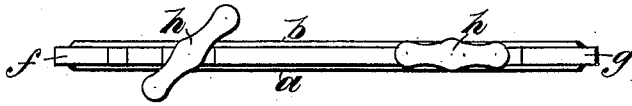
(No Model.)

G. DITTERT.  
SURGICAL KNIFE.

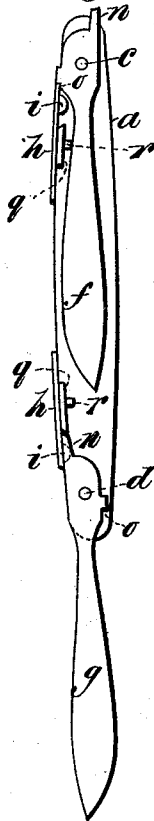
No. 432,517.

Patented July 22, 1890.

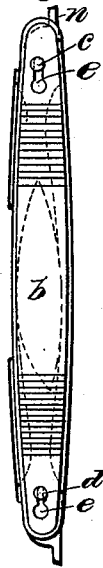
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*  
*Robert Everett*  
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# UNITED STATES PATENT OFFICE.

GUSTAV DITTERT, OF NEUSTADT, SAXONY, GERMANY.

## SURGICAL KNIFE.

SPECIFICATION forming part of Letters Patent No. 432,517, dated July 22, 1890.

Application filed November 12, 1889. Serial No. 330,063. (No model.)

### *To all whom it may concern:*

Be it known that I, GUSTAV DITTERT, a citizen of the German Empire, residing at Neustadt, in the Kingdom of Saxony and the Empire of Germany, have invented certain new and useful Improvements in Chirurgical Knives; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The objects of this invention are to provide a knife in which the blades are held firmly in an open or closed state, and to so construct said knife that it may easily be taken apart and said blades removed for sharpening or cleaning. I attain these objects by devices illustrated in the accompanying drawings, in which—

Figure 1 represents a top longitudinal view of my knife; Fig. 2, a side elevation with one sheath or side of the knife removed, and Fig. 3 the same with said sheath attached.

*a* represents one sheath of my knife; *b*, the other and detachable sheath; *ee*, the slotted holes (in sheath *b*) into which the headed pins *cd* slide, and thereby lock said sheath *b* to said sheath *a*; *fg*, the two blades provided each with shoulders *o* and *n*; *hh*, the turn-button catches, which engage with the shoulders *oo* when the blades are closed, and thereby hold said blades in said closed position, and *i* the shoulder on under side of turn-button catch *h*. Said shoulder *i* rests between sheaths *a* *b* when said turn-button catch is closed, and thereby keeps said turn-button catch *h* from slipping out of engagement with either shoulder *o* or *n*.

*q* represents a cross-plate with one end cut obliquely to engage and lock (in one direction) shoulder *n* when the blade is open. The turn-

button catch turns on pivot *r*, which is journaled in cross-plate *q*. The blades *fg* turn on pivots *cd*. The blades of my knife are operated by no springs, and when the blade is opened and fastened by catch *h* it cannot turn either way, as will readily be seen by reference to Fig. 2 of the drawings. When the button *h* is to be closed, the shoulder *i* must be forced over one of the sheaths and it will then spring down between them, thus preventing its turning.

The only operation needful to take the knife apart is to slide the sheath *b* along until pins *cd* come to the enlargement of slot *ee*. The sheath *b* can then readily be slipped off, and the blades having nothing now to confine them can readily be removed for cleaning or sharpening.

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

1. In a chirurgical knife, the combination of the sheaths *a* and *b*, the latter to be loosened by slipping sidewise the catches *h*, turning on plate *q*, for the purpose of fixing blades *f* and *g* in open and closed position.

2. In a chirurgical knife, the combination of the detachable blades *f* *g*, provided with shoulders *no*, the sheath *a*, provided with fixed pins *cd*, on which said blades are pivoted, the sheath *b*, provided with slots in order to loosen it from pins *cd*, and the button *h*, turning on plate *q* and locking said blades in open or closed state.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GUSTAV DITTERT.

Witnesses:

GOTTH. LEO LEVY,  
PAUL DRUCKMÜLLER.