

T. T. SANDMARK.  
SURGICAL APPLIANCE.  
APPLICATION FILED JUNE 15, 1911.

1,051,850.

Patented Jan. 28, 1913.

Fig. 1

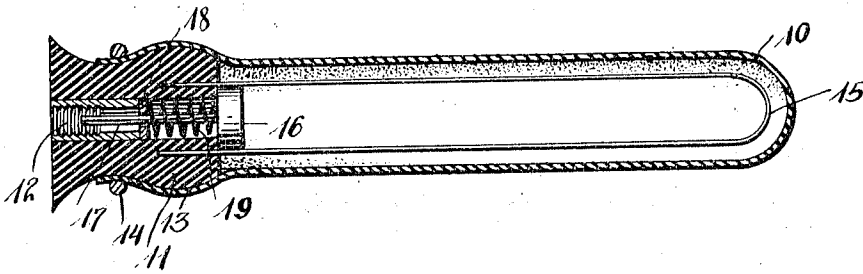
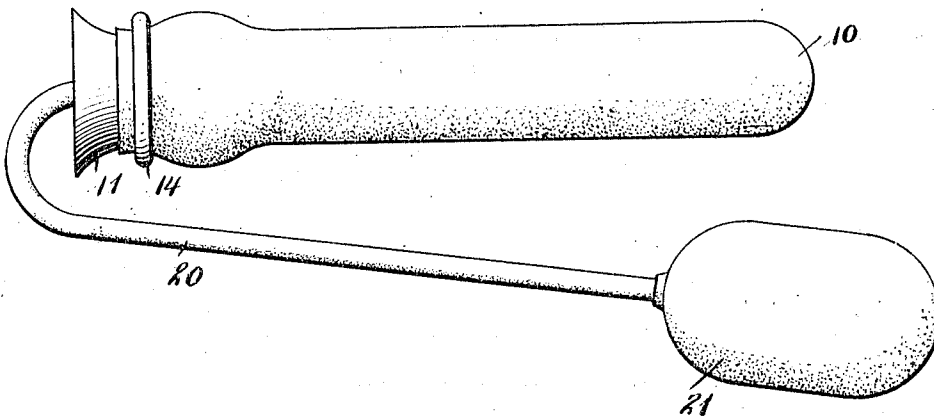


Fig. 2



Inventor

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Witnesses

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By

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# UNITED STATES PATENT OFFICE.

THOMAS T. SANDMARK, OF PORT TOWNSEND, WASHINGTON.

## SURGICAL APPLIANCE.

1,051,850.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed June 15, 1911. Serial No. 633,325.

*To all whom it may concern:*

Be it known that I, THOMAS T. SANDMARK, a citizen of the United States, residing at Port Townsend, in the county of Jefferson, State of Washington, have invented certain new and useful Improvements in Surgical Appliances; 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.

This invention relates to surgical appliances.

The object of the invention resides in the provision of a surgical appliance which may be used with efficiency in stopping the bleeding of the membranes of the nasal passages.

A further object of the invention resides in the provision of an appliance of the character named which includes an elastic inflatable member adapted to be inserted in the nasal passage in a deflated state and then inflated so as to press firmly against the membrane of the nasal passage and thereby serve to close any abrasions of said membrane and stopping the flow of blood that may be issuing from such abrasions.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and particularly pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawings, wherein like characters of reference denote corresponding parts in the several views, and in which—

Figure 1 is an enlarged longitudinal section of the appliance shown in a partial inflated state, and Fig. 2, an elevation of the appliance on an enlarged scale and having a pumping device of the type used in inflating same connected therewith.

Referring to the drawings 10 indicates the inflatable member of the appliance and is constructed preferably of very soft, thin, strong rubber. This member is formed with an open end which is closed by a head 11 provided with a longitudinal bore 12 communicating with the interior of the member 10. The inner end of the head 11 is provided with an angular enlargement forming a shoulder 13. This shoulder 13 is inserted

within the open end of the member 10 and a clamping wire 14 disposed outwardly of the shoulder 13 serves to securely bind the member 10 and the head 11 together. Disposed within the member 10 and having its terminals anchored in the head 11 is a U-shaped wire 15 which serves to prevent longitudinal collapse of the member 10 as it is inserted in the nasal passage. The inner end of the bore 12 is closed by a valve 16 which is provided with a stem 17 extending through said bore beyond the outer end thereof. This stem is slidably mounted in a strut 18 spanning the bore 12. The valve 16 is normally held seated against the inner end of the head 11, to close the bore 12, by means of a spring 19, one end of which is secured to the strut 18 and the other end to the valve 16. The member 10 is adapted for detachable connection with one end of a tube 20 which carries at its opposite end a rubber bulb 21, that by compression lifts the valve 16 from its seat and forces air into the member 10 to effect the desired inflation of the latter. It will of course be understood that the bulb 21 is of the type ordinarily employed for pumping air.

In use the member 10 is inserted in the nasal passage in a deflated state, the U-shaped wire 15 readily permitting such insertion. The free end of the tube 20 is then secured in the outer end of the bore 12 and the bulb 21 operated to inflate the member 10. During this inflation of the member 10 the walls thereof will expand so as to bear continuously against the membrane of the nasal passage and effectively close any abrasions thereof and stop any flow of blood issuing from such abrasions. When the desired inflation of the member 10 is had the free end of the tube 20 is removed from the bore 12 and the appliance allowed to remain within the nasal passage until the blood has sufficiently coagulated to prevent further bleeding upon removal of the appliance. The member 10 is then deflated by pressing the projecting end of the stem 17 of the valve 16 so as to lift said valve from its seat against the influence of the spring 19 and the air pressure within the member 10 to permit the air contained within the member 10 to escape to the atmosphere.

It will be noted that the check valve 16 engages the arms of the U-shaped wire 15 at

diametrically opposite points so that said valve is guided by the arms of the U-shaped wire during its movement.

What is claimed is:

- 5 A surgical instrument comprising a head having an opening therethrough, an elongated elastic and flexible bulb fitted onto the head in communication with said opening, means communicating with said opening for inflating said bulb, and a wire loop  
10 fixedly secured to the head and extending approximately throughout the length of the elongated bulb, said wire loop being equi-

lateral and having substantially rectilinear sides and therefore properly related to the bulb when inflated for holding the latter extended and in the form of a flat strip, whereby the curvatures of the nasal cavities may be easily penetrated. 15

In testimony whereof, I affix my signature, in presence of two witnesses. 20

THOMAS T. SANDMARK.

Witnesses:

E. K. WYCKOFF,  
W. M. S. MCGEE.