Feb. 22, 1955 A. Y. DEBEH 2,702,540

EYELID RETRACTING DEVICE

Filed July 7, 1953

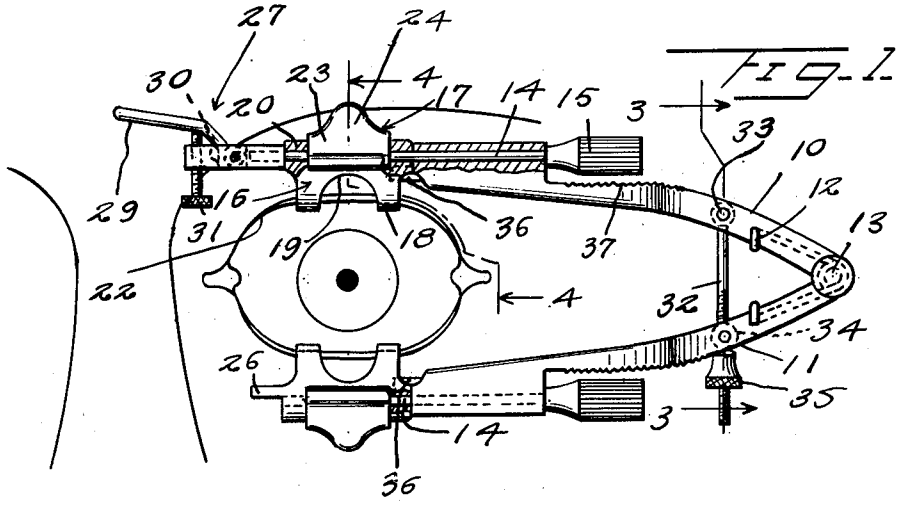


FIG. 1.

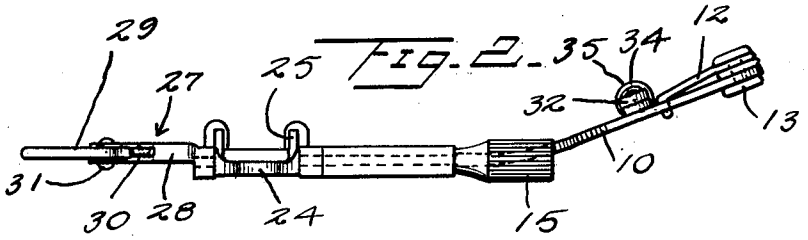


FIG. 2.

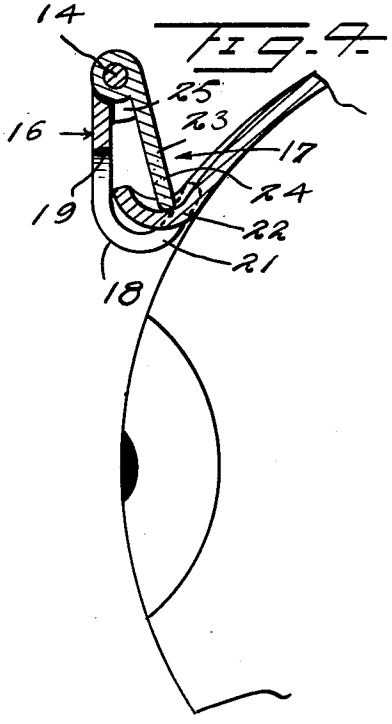


FIG. 4.

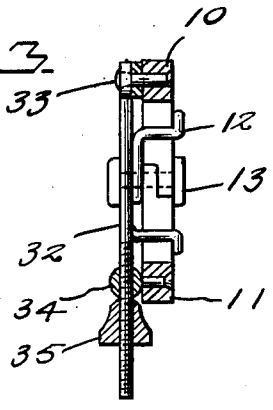


FIG. 3.

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EYELID RETRACTING DEVICE

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4 Claims. (Cl. 128—20)

This invention relates to a surgical speculum for iridectomy.

An object of this invention is to provide a speculum for use in eye surgery so as to expose the eye to full view of the lacrimal glands, part of the upper and lower puncta, of the upper and lower canaliculi, the lacrimal sack and naso-lacrimal duct for further exposure for surgery or treatment.

Another object of this invention is to provide speculum which includes upper and lower everters whereby the components of the eye may be exposed for surgery or treatment.

A further object of this invention is to provide a means adapted to be engaged with the eye which will greatly assist the physician and surgeon in treating any condition or disease of the eye in which the eyelids have to be everted, such as cataracts, cysts, eye carbuncles, carcinoma, styes and the like.

A further object of this invention is to provide an eyelid everter which can be used with either the right or left eyes.

A further object of this invention is to provide a speculum which will permit exposing the tarsal conjunctiva and tarsal and retro-tarsal folds of either eye.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawing and specification, and then more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a detailed front elevation partly broken away and in section of a speculum constructed according to an embodiment of this invention.

Figure 2 is a plan view of the device.

Figure 3 is a sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a fragmentary sectional view taken on the line 4—4 of Figure 1.

Referring to the drawings, the numerals **10** and **11** designate generally a pair of elongated levers which are pivotally connected together as indicated at **13**. The levers **10** and **11** are biased away from each other at their free or inner ends by means of a spring **12**. Each lever has rockably mounted lengthwise thereof adjacent the inner end, a shaft **14** carrying a nob **15**. A pair of eyelid everting members **16** and **17** are mounted on the inner end of the shaft **14**, the eyelid everting member **16** being loosely mounted on the shaft **14** whereas the eyelid everting member **17** is fixedly secured to shaft **14**. The eyelid everting member **16** is formed of a pair of hook shaped members **18** connected together by connecting web **19** and the hook shaped members **18** are formed with bearings **20** engaging about the shaft **14**.

The bills **21** of the hook shaped members **18** are adapted as shown in Figure 4 to engage under the eyelid **22**. The everting member **17** is formed of a plate **23** which is fixed on the shaft **14** between the bearing members **20**. The plate **23** is formed of a rounded projection **24** which is adapted upon rotation of shaft **14** to be disposed between the bills **21** of the hook shaped members **18**. The projection **24** is adapted to engage the outer side of the lid **22** for effecting the everting or reversion of the lid **22**.

A pair of stop members **25** are carried by the plate **23** and are engageable with the hook shaped members **18** upon swinging of everting member **17** to an operative position so that the eyelid **22** will not be pinched during the everting process. An inwardly projecting stud **26** which is polygonal in transverse section projects from the inner one of the hook shaped members **18** and a nose engaging member generally indicated at **27** is adapted to telescope over the stud **26**. The nose engaging member **27** is formed of a tubular member **28** and a longitudinally bent bar **29** is pivotally secured in a slot **30** which is formed in the tubular member **28**.

The longitudinally bent member **29** is adapted to engage the bridge of the nose and is adjusted as to its angular relation with respect to the tubular member **28** and the associated lever by means of an adjusting screw **31** which is threaded through the inner end of the tubular member **28**. The levers **10** and **11** are limited as to their movement away from each other at the inner or free ends thereof by means of a bolt **32** which is pivotally secured as at **33** to lever **11**. Bolt **32** loosely engages through guide **34** carried by lever **11** and a nut **35** is threaded in bolt **34**. The everting members **16** are limited as to their swinging movement relative to their associated levers by means of a stop **36** projecting from the inner ends of the levers **10** and **11**.

In the use and operation of this device, the hooks **18** have the bills **21** thereof engaged beneath the upper and lower eyelids and at this time levers **10** and **11** are permitted to swing from each other at their inner ends so as to thereby expose the eye to full view. The upper and lower everting members **17** are then rotated to evert the eyelid and at this time nut **35** may be adjusted to provide for exposing the eye as may be desired. The nose rest **29** is then adjusted to keep the instrument and pressure away from the eyeball. The device hereinbefore described may be used as an everting means for either the upper or lower eyelid or may be used only as a speculum without everting the eyelids.

This instrument will assist the surgeon in eye surgery in that it exposes the eye to full view of the lacrimal glands, part of the upper and lower puncta and upper and lower canaliculi, the lacrimal sack and the naso-lacrimal duct for further exposure for surgery or treatment. The instrument hereinbefore described is also of great assistance to the physician or surgeon in treating any eye condition or disease of the eye in which the eyelids are required to be everted such as cataracts, cysts, eye carbuncles, styes or the like.

What is claimed is:

1. A speculum comprising a pair of pivotally connected levers, a spring biasing said levers apart, adjustable stop means limiting the movement of said levers in one direction, and eyelid everting means adjustably and pivotally carried by each lever, said everting means being pivotal in a direction transverse to the longitudinal axis of said levers.

2. A speculum comprising a pair of pivotally connected levers, a spring biasing said levers apart, adjustable stop means limiting the movement of said levers in one direction, a shaft pivotally carried by each lever extending lengthwise thereof and projecting from the free end of said lever, a hooked everting member pivoted on said shaft and adapted to hook over the edge of an eyelid, and a second everting member fixed on said shaft engageable with the outer side of the lid.

3. A speculum comprising a pair of pivotally connected levers, a shaft rotatably carried by each lever and disposed lengthwise thereof, manually operable means connected with said shafts to effect rotation thereof, an eyelid everting member loose on the inner end thereof, and a second eyelid everting member fixed on said shaft.

4. A speculum comprising a pair of pivotally connected levers, resilient means biasing the said levers for movement relative to each other, adjustable stop means limiting the movement of said levers in one direction, means carried by each of said levers for engaging on opposite sides of an eyelid to effect the evertion thereof, and means carried by said levers to effect a clamping action of said last named means on said eyelid.

References Cited in the file of this patent

1938 General Catalog of V. Muller & Co., Chicago, pp. 13 and 67. (Copy in Div. 55.)