W. H. BOUTELLE.

DOWEL.

APPLICATION FILED MAR. 2, 1914.

1,199,525. Patented Sept. 26, 1916.

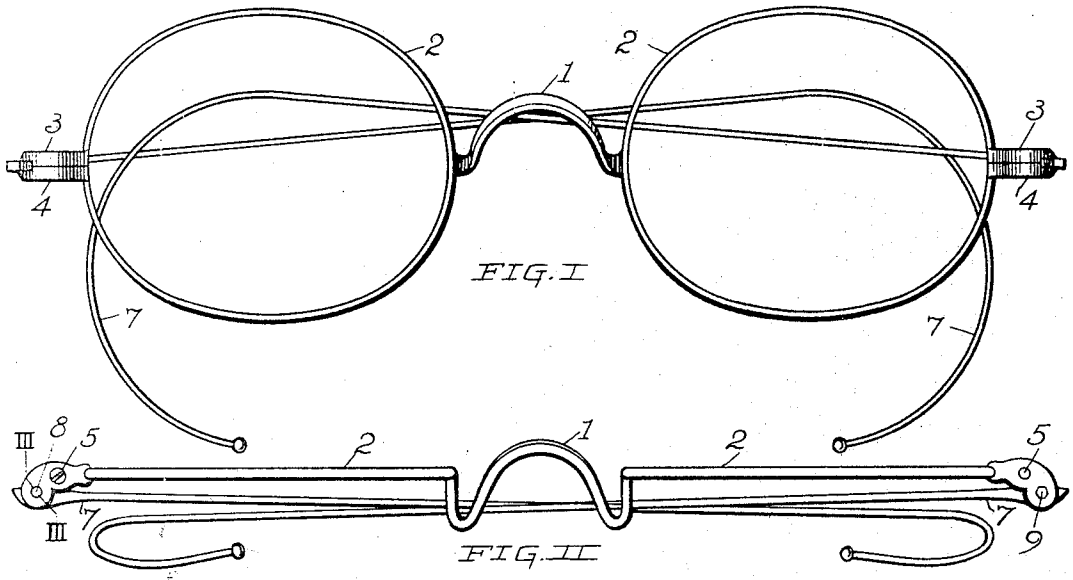


FIG. I

FIG. II

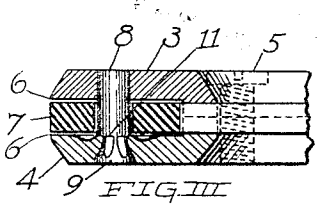


FIG. III

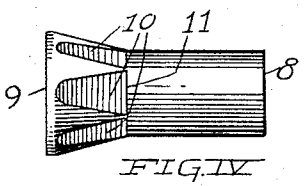


FIG. IV

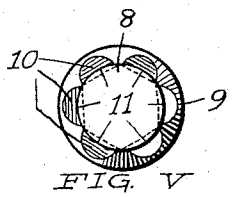


FIG. V

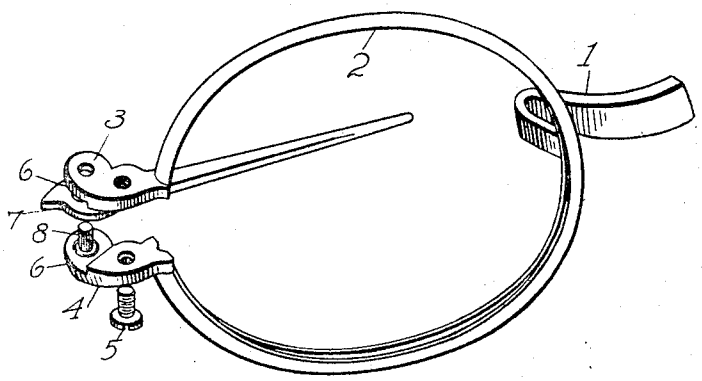


FIG. VI

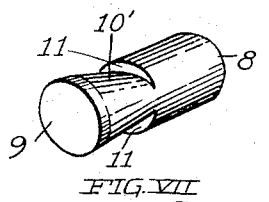


FIG. VII

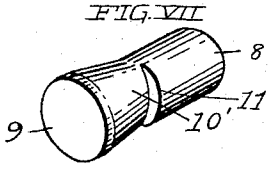


FIG. VIII

WITNESSES:

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UNITED STATES PATENT OFFICE.

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DOWEL.

1,199,525. Specification of Letters Patent. Patented Sept. 26, 1916.

Application filed March 2, 1914. Serial No. 821,981.

To all whom it may concern:

Be it known that I, WILLIAM H. BOUTELLE, a citizen of the United States, residing at Southbridge, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Dowels, of which the following is a specification.

My invention relates to improvements in ophthalmic mountings and has particular reference to an improved form of dowel and method of securing the same, particularly adapted for use in a spectacle end piece or other similar position.

The object of my invention is the provision of a novel, readily constructed dowel which may be easily placed in position and securely held against rotative or longitudinal movement.

Other objects and advantages of my invention should be readily apparent by reference to the following description taken in connection with the accompanying drawings, and it will be understood that I may make any modifications in the specific details of construction shown and described within the scope of the appended claims without departing from or exceeding the spirit of my invention.

Figure I represents a view in elevation of a mounting equipped with my invention. Fig. II represents a top plan view thereof. Fig. III represents a sectional view on the line III—III of Fig. II. Fig. IV represents a detail view of the dowel removed. Fig. V represents an end view thereof. Fig. VI represents a fragmentary view of the mounting. Fig. VII represents a view of a slightly modified form of dowel. Fig. VIII represents a similar view taken in a plane at right angles to that of Fig. VII.

In the drawings, in which similar characters of reference are employed to denote corresponding parts throughout the several views, the numeral 1 designates a bridge or connecting member having secured to each end thereof, a frame or eye wire 2 split at the side and carrying the end pieces 3 and 4, these end pieces being connected in a suitable manner, as by the screw 5, serving to hold the parts in position.

One or both of the end pieces, has, as is usual in constructions of this nature, a recess formed in the outer portion of the inner face thereof, said recesses 6 together forming a space to receive the end of the temple 7, and provide bearings to prevent undue play of said temple. It is the purpose of my invention to provide an improved form of dowel to serve as a pivot for the said temple.

In spectacle construction the parts previously mentioned are usually employed together with a pin or dowel extending through the end pieces 3 and 4 and across the recesses 6 to provide a pivot for the temple. Other means have hitherto been adopted to retain this dowel in position but no simple means have yet been attained, so far as I am aware, which will permit of the separation of the end pieces as desired, without loosening of the dowel, and in which the dowel is locked both against longitudinal movement as well when the end pieces are separated as when they are secured together, and in which the dowel is also locked against any accidental location tending to permit it to wear loose and render it liable to drop out. In the attainment of this result in my present invention I employ a dowel having a cylindrical portion 8 having at one end a head 9 said head being preferably larger than the body portion, and tapering toward the same. In addition, however, to having the head as a whole tapering toward the body portion, I preferably make the head of irregular form. It will be understood that many different shapes of heads might be employed. Consequently, for purposes of illustration, I have shown but two, one as illustrated in Figs. III, IV and V, in which the head is of hexagonal shape to provide the series of flat faces 10, and the other shown in Figs. VII and VIII, in which the head is oval to provide the corresponding faces 10′. I do not wish to limit myself, however, to the particular shapes illustrated but may employ any equivalent thereto within the purview of my invention. It is to be noted that these faces are formed by removing a portion of the material of the taper head 9 and that as this head itself makes a smooth jointure with the cylindrical portion 8 of the dowel, the faces 10 or 10′ consequently extend inwardly of the portion 8, thus forming a shoulder or shoulders 11 at the junction of said faces with said cylindrical portion. The purpose of this shoulder will best be understood by reference to Fig. III, from which it will be seen that when the dowel is in position the end piece is

struck therearound to force the material of the end piece beneath the shoulders 11, the material consequently locking the dowel against withdrawal from the end piece.

In the use of my dowel I form, in the end piece 4, a passage of substantially the same diameter as the diameter of the tubular portion 8 of the dowel. I then force the dowel into said aperture, the tapered head 9 of the dowel thus being swaged into the aperture or passage and the material of the end piece to some extent biting against the flat or irregular head to lock it against turning. The head having been forced into place, I strike the end piece on its inner face around the dowel, as illustrated in Fig. III, thus forcing the material of the end piece into tight engagement with the head of the dowel and behind the shoulders 11 at the junction of the irregular faces of the head with the body of the dowel, this serving at one time to positively lock and secure the dowel against either rotative or longitudinal withdrawing movement, the taper of the head preventing the dowel from moving farther through the end piece.

From the preceding description, the construction and use of my dowel should be readily understood, and it will be seen that I have provided a simple, easily constructed, readily applied dowel, which may be satisfactorily secured in place with minimum labor, and which will be positively held almost as a unitary part of the end piece, and will be prevented from either rotative or longitudinal movement.

I claim:

1. A device of the character described comprising a cylindrical body portion having a tapered head of greater diameter than the body portion, said head being of a lesser diameter than the body portion at its point of juncture therewith to form a shoulder.

2. A device of the character described comprising a body portion and a head, the head having a greater diameter than the body portion at its outer end, and a less diameter than the body portion in at least one point at the juncture of the head and body portion.

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

WILLIAM H. BOUTELLE.

Witnesses:

C. J. TALLIS,

C. FRED HILL.