Patented June 19, 1923. 1,459,380

UNITED STATES PATENT OFFICE.

EDGAR D. TILLYER, OF SOUTHBRIDGE, MASSACHUSETTS, ASSIGNOR TO AMERICAN OPTICAL COMPANY, OF SOUTHBRIDGE, MASSACHUSETTS, A VOLUNTARY ASSOCIATION OF MASSACHUSETTS.

LENS-PROTECTING COMPOSITION.

No Drawing. Application filed November 27, 1920. Serial No. 426,747.

To all whom it may concern:

Be it known that I, EDGAR D. TILLYER, 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 Lens-Protecting Compositions, of which the following is a specification.

This invention relates to a novel and improved process of manufacturing lenses and an improved composition for use in connection with such process.

The principal object of the present invention is the provision of a novel and improved process of protecting lenses during the manufacturing operations to the end that the percentage of imperfect lenses or lenses which must be either refinished or thrown away from a given lot may be greatly reduced.

A further object of the present invention is the provision of a novel composition for use in my improved process, which composition shall be of such a nature as to form a hard non-scratching relatively impervious coating upon the lens substantially protecting it under ordinary conditions, which will remain permanent under the action of water but which may be readily removed in a simple manner when desired.

A further object of the present invention is the provision of a composition of this character particularly adapted for use in connection with bifocal or other high grade surfaces, which may be allowed to remain indefinitely on said surfaces protecting them from scratches, and which may be removed from said surfaces only when the articles are ready to be put into use.

Other objects and advantages of my improved construction should be readily apparent by reference to the following specification and it will be understood that I may make any modifications in the specific features described within the scope of the appended claims without departing from or exceeding the spirit of my invention.

As mentioned, prior to my invention there has been considerable loss occasioned in the manufacture of ophthalmic lenses due to the fact that while the surfaces originally produced on a lens may be proper and satisfactory yet during the several steps in the process of handling, including removal from the block, washing or cleaning of the material employed on the block, etc., there is considerable liability of the polished surface being scratched or injured. This is a matter of particular importance in connection with one-piece bifocal lenses, and similar high grade articles, although a matter which must be considered in connection with any lens manufacture.

My improvement, therefore, consists in applying to the lenses immediately upon the completion of the polishing and before other steps have been taken, a coating which will at once dry hard and relatively impervious to scratching, which will thoroughly protect the surface to which it is applied, will be permanent in character, will not be affected by water, but may be removed through the action of a soapy water, the soap so affecting the protecting coating as to remove the same.

For this purpose I find a desirable composition is formed by the use of benzol, resin and tar oil, and as a particular formula especially desirable for this purpose I have found that about 88 parts by weight of benzol, ten of resin, and two of tar oil, produces a very desirable fluid which may be applied to a lens surface, which will adhere or stick to said surface, will properly protect said surface, but may be dissolved in soapy w ter through the action of the soap on the resin so the surface may be readily and quickly cleaned when desired.

I might also mention that this composition is desirable both for application to the polished surface and to the edges of a lens blank before grinding and polishing to prevent rouge or the like sticking to said edges, with the attendant difficulty in cleaning and removing same, and said composition may also have mingled with it a suitable coloring medium such as lamp black, when it may be used in colored form to indicate the power, axis or other features of the lens forming a semi-permanent readily removed indication for the desired purpose.

While I have above referred to one particular composition for attaining the desired result, it is to be understood that one of the essential features of my invention resides in the employment of a combination including a resin or its equivalent, a softener for the resin of suitable fluid organic compound, as

for example tar oil, or the like, which has a low vapor pressure and is miscible with the resin, and in combination therewith a solvent, high vapor pressure fluid organic compound, such as benzol, or the like, in which the resin and softener are freely soluble.

I claim:

1. The process of protecting lenses consisting in applying to the lens a hard film insoluble in water but removable through the action of a soapy water.

2. A protecting composition for application to a polished lens surface comprising benzol, resin and tar oil.

3. A composition for application to a lens surface comprising substantially 88 parts benzol, 10 parts resin, and 2 parts tar oil.

4. A lens protecting and marking substance comprising benzol, resin, tar oil and a coloring ingredient.

5. The process of protecting lenses consisting in applying to a lens a composition having a resin base, a fluid organic compound of low vapor pressure and a second fluid organic compound of high vapor pressure which will produce on the lens a hard film impervious to water but soluble in soapy water.

In testimony whereof I have affixed my signature, in presence of two witnesses.

EDGAR D. TILLYER.

Witnesses:

ESTHER M. LAFLER,

ALICE G. HASKELL.