## UNITED STATES PATENT OFFICE.

ROBERT A. GRAHAM, OF CARROLLTON, OHIO, ASSIGNOR OF ONE-HALF TO ROBERT E. McDONALD AND WILLIAM G. EBERSOLE, BOTH OF SAME PLACE.

## DENTAL ANÆSTHETIC.

SPECIFICATION forming part of Letters Patent No. 420,653, dated February 4, 1890.

Application filed September 26, 1889. Serial No. 325,200. (No specimens.)

To all whom it may concern:

Be it known that I, ROBERT A. GRAHAM, a citizen of the United States of America, residing at Carrollton, in the county of Carroll and State of Ohio, have invented certain new and useful Improvements in Local Anæsthetics, of which the following is a specification, reference being had therein to the accompanying drawings.

My object is to provide a simple, safe, and effective compound adapted for use in the practice of dentistry, or for minor surgical operations, which will render painless the extraction of teeth, and at the same time will not in any wise affect the health of the party

upon whom it is used.

My improved compound consists of the following ingredients, combined in the proportions stated, viz: alcohol, five and two-thirds drams; glycerine, two and one-sixth drams; tincture of aconite, one-sixth dram; menthol, ten grains; sulphate of cocaine, thirty-five grains. These ingredients are to be thor-

oughly mixed, and the compound should 25 always be well shaken before using. Where this anæsthetic is used for prevent-

ing pain in extracting teeth, three or four drops are injected into the gums on each side of the tooth with a hypodermic syringe, and from thirty to ninety seconds allowed to elapse 30 before proceeding to extract the tooth.

Forming surgical operations the compound

is applied locally to the parts.

While I consider the above proportions as being best adapted for the purpose, I do not 35 intend to confine myself strictly to the same, as I am aware that the anæsthetic effect may be produced by the use of the ingredients in other proportions than those stated above.

What I claim, and desire to secure by Let- 40 ters Patent, is—

The composition of matter hereinbefore described, consisting of alcohol, glycerine, tincture of aconite, menthol, and sulphate of cocaine, to be used as a local anæsthetic.

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

ROBERT A. GRAHAM.

Witnesses:

U. C. DEFORD,

J. R. NEELY.