

UNITED STATES PATENT OFFICE.

ASA W. BURROWS, OF CLEVELAND, OHIO.

IMPROVED ILLUMINATING-OIL.

Specification forming part of Letters Patent No. **70,405**, dated November 5, 1867.

To all whom it may concern:

Be it known that I, ASA W. BURROWS, of Cleveland, county of Cuyahoga, in the State of Ohio, have invented a new and Improved Illuminating Oil or Fluid, which I call "non-explosive mineral oil;" and I do hereby declare that the following is a full and exact description thereof.

The ingredients used are glycerine, tannic acid, sulphuric ether, linseed-oil, tincture of camphor, benzoin, (pulverized,) alum, (pulverized,) paraffine-oil, naphtha. The compound is produced from the admixture of the aforesaid ingredients, although it is not essential that all these be employed to produce a good burning-fluid.

The nature of this improved chemical combination relates to the production of a burning oil or fluid that shall give a brighter, clearer, and softer light, and that is manufactured at a much less expense than any other oil or fluid now in use for illuminating purposes.

The manner of combining the above is as follows: Take about forty gallons of naphtha, one pint of tincture of camphor, two ounces of sulphuric ether, one ounce of linseed-oil, two ounces of glycerine, one ounce of tannic acid, one ounce of benzoin, (pulverized,) four ounces of alum, (pulverized,) one quart of paraffine oil—the above to be mixed in the following order: Mix well together the glycerine and tannic acid in a bottle; then add the tincture of camphor,

and shake well together; next mix well the ether and linseed-oil, and put them in the bottle; next add the benzoin, and then the alum; and, last, add the paraffine-oil. Shake up the whole well together, and let it stand a few minutes. Then put the mixture into the barrel of naphtha, and agitate for a few minutes. Let the barrel stand with the bung out for one hour, when it is ready for use.

The ether is a perfect solvent of the linseed-oil, and holds it in solution when mixed with naphtha. The glycerine is a solvent of the tannic acid, and also serves to give body to the compound. The camphor removes all unpleasant odor from the compound while burning, and causes it to give a clear white light. The alum produces a steadiness of flame, causing it to burn without flickering. The tannic acid, linseed-oil, paraffine-oil, and glycerine totally destroy the explosive qualities of the naphtha, greatly reducing its inflammability, and rendering this compound perfectly safe as a burning-fluid in lamps with or without chimneys.

What I claim, and desire to secure by Letters Patent, is—

The above-described compound, composed of the ingredients herein given, in the manner as and for the purpose set forth.

ASA W. BURROWS.

Witnesses:

G. A. TISDALE,
H. HOUGHTON.