United States Patent Office.

GEORGE B. BRAYTON, OF PROVIDENCE, RHODE ISLAND.

Letters Patent No. 67,491, *dated August* 6, 1867.

IMPROVED EYELETS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE B. BRAYTON, of Providence, in the county of Providence, and State of Rhode Island, have invented certain new and useful Improvements in Eyelets; and I do hereby declare that the following specification is a full, clear, and exact description thereof.

Eyelets have heretofore been manufactured of a composition metal composed mainly of copper. The process of forming such metal into eyelets by means of dies renders it so dense and unyielding that the eyelets require to be annealed before they are fit for use. Again, it is necessary to electro-plate or by other means "silver" the eyelets before they are suitable for market, and this operation involves the necessity of drying in a bath of heated saw-dust and much incidental manipulation.

It is also true that no one of the various machines which have been constructed for manufacturing eyelets have been practically successful, for the reason that no dies and formers can be made for any continued period to withstand the strain brought upon them in working metal like that heretofore employed with the rapidity requisite to make eyelets in quantities to be profitable.

I propose to manufacture eyelets from metal of a peculiar character, which shall not become dense and unyielding as the effect of being worked, and which shall possess in itself sufficient lustre to render unnecessary any operation of electro-plating.

I make use of a metal for this purpose which is composed of tin and zinc in combination. The proportions which I have found to be the best are four parts of the former to one part of the latter. These metals do not incline to union, and to insure the composition being homogeneous it is necessary, after both metals have been reduced to the point of fusion in the same crucible, to agitate the mass by stirring until a complete amalgamation of the particles ensues. The proportion of zinc may be increased if desired, but care should be taken that it is not in sufficient quantity to render the composition brittle. After the mass has become sufficiently united it is to be cast in moulds into the form of ingots, which are to be rolled into sheets of the proper thickness, and then cut into strips of convenient width, from which the blanks to form the eyelets are to be cut. The strips of metal so prepared may then be made into eyelets by any suitable machine; but inasmuch as the composition metal is less ductile than the metal usually employed, it is necessary to make use in any machine of a die and former which shall act to mould or suage the metal into the form of an eyelet rather than to draw it out into that form.

The advantages which result from the use of this material in the manufacture of eyelets are as follows: The metal being soft and yielding, does not dull the cutting edges of the punches and dies used to form the eyelet nearly as rapidly as in the case where a metal made from copper and its alloys is employed, and in case that an eyelet sticks in the die, or a chip becomes lodged therein, the plastic character of the metal renders breakages less liable to occur. In addition to this advantage, all the necessity for annealing the eyelets is avoided, and they are, as they come from the machine, perfectly ready for the market without being first electro-plated.

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

An eyelet made from metal composed of the elements and possessing the characteristics substantially as described.

GEO. B. BRAYTON.

Witnesses:

W. B. VINCENT,

W. W. RICKARD.