

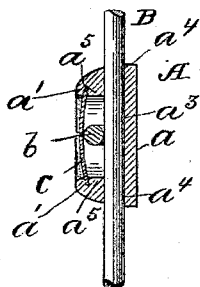
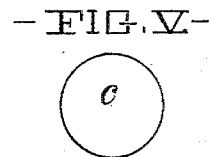
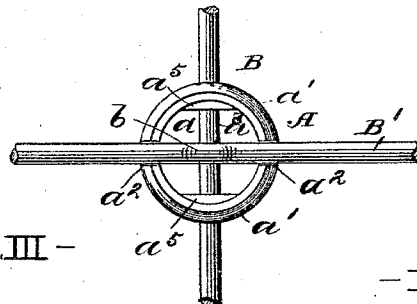
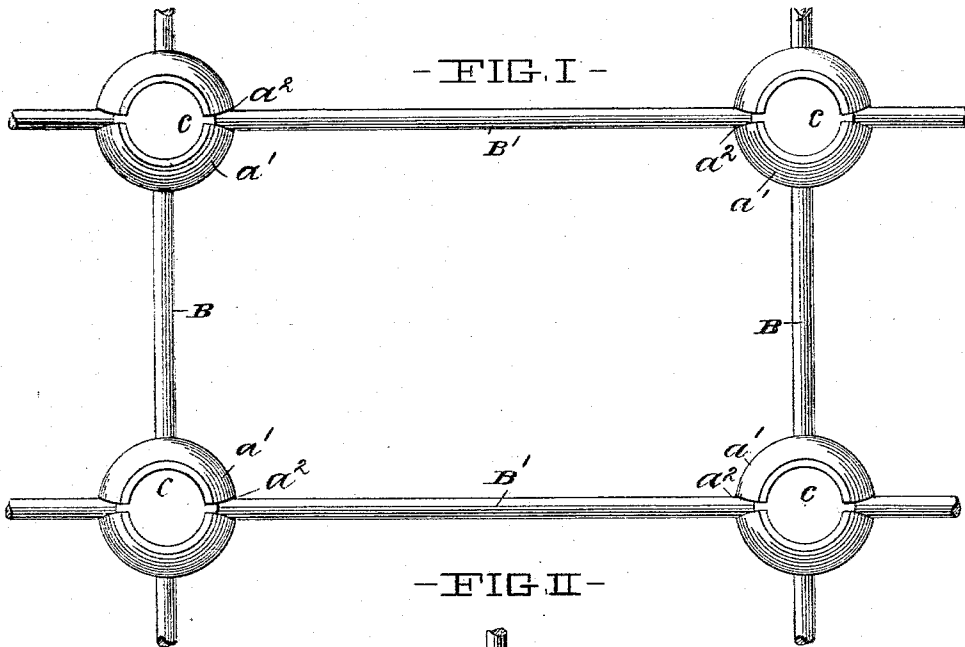
(No Model.)

S. H. DICKERSON & F. S. GILBERT.

SEAL FOR JOINING WIRES OR RODS.

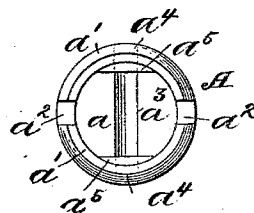
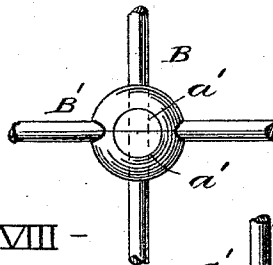
No. 552,990.

Patented Jan. 14, 1896.



- FIG. IV -

- FIG. VI -

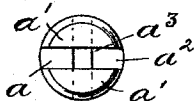


- FIG. VII -

- FIG. VIII -

WITNESSES,

J. C. Turner
Jm Lecher



INVENTORS,

S. H. Dickerson
and F. S. Gilbert
By Hall & Fay Attys.

UNITED STATES PATENT OFFICE.

SAMUEL H. DICKERSON AND FRANK S. GILBERT, OF CLEVELAND, OHIO.

SEAL FOR JOINING WIRES OR RODS.

SPECIFICATION forming part of Letters Patent No. 552,990, dated January 14, 1896.

Application filed December 20, 1894. Serial No. 532,412. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL H. DICKERSON and FRANK S. GILBERT, citizens of the United States, and residents of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Seals for Joining Wires or Rods, of which the following is a specification, the principle of the invention being herein explained and the best mode in which we have contemplated applying that principle, so as to distinguish it from other inventions.

The annexed drawings and the following description set forth in detail one mechanical form embodying the invention, such detail construction being but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings, Figure I represents an elevation of four wires secured together by our improved seal; Fig. II, a view of two crossed wires, illustrating them as in position within the seal before the washer is placed in the same and before it is clinched; Fig. III, a section of the seal and wires; Figs. IV and V, views, respectively, of the seal-body and of the washer; Fig. VI, a view of two crossed wires locked by another form of seal; Fig. VII, a section of such wires and seal, and Fig. VIII a view of the seal.

The body A of the seal consists of a base *a* of substantially circular outline and formed with an outwardly-projecting flange *a'* at its periphery, said flange being annular and having two diametrically-opposite notches *a''* extending to the base. The base is formed with a diametrical groove *a'''*, terminating in perforations *a''''* through the edges of the base. Shoulders *a'''''* are formed in the circular recess within the annular flange and above the perforations. The outer face of the base may, if desired, be suitably ornamented, and such ornamentation may extend beyond the edge of the base in the form of projections, such ornamental additions being within the province of the ability of any ordinary mechanic and requiring no illustration. The seal is formed, preferably by casting, from lead or similar pliable, malleable and ductile metal, capable of being compressed by moderate pressure, so that the flange may be pressed over the wires in the seal to have the metal flow together and

lock the former within the latter. When the seal is applied to secure two wires or rods which cross each other, one wire, B, is inserted through the perforations and groove in the seal, while the other wire, B', is placed crossing the first wire in the notches of the flange. A washer *c*, of some moderately hard metal, such as brass or malleable iron, is placed within the circular recess of the seal, over the crossed wires and upon the shoulders of the recess, whereupon, by the application of a suitable tool having dies or by separate dies, the peripheral flange of the seal is forced inward over the washer to lock the latter and the crossed wires in the seal. If the pressure applied in upsetting the metal of the flange is sufficiently strong, the wire which crosses the wire in the groove of the seal will receive a crimp *b*, which will additionally serve to lock the wires together. In the drawings the seal is illustrated as having two passages for two wires crossing each other at right angles. The passages may be placed so as to lock wires crossing each other at different angles, or more than two passages may be provided for a greater number of wires.

In Figs. VI, VII, and VIII is illustrated a form of seal in which the washer is dispensed with and the flange is made sufficiently thick to fill in over the wires when it is compressed. The wires will be entirely embedded in the metal of the seal, and will be more completely covered in this form of seal than in the form having the washer. Furthermore, this form of seal consists of one part only and is therefore less expensive and simpler to apply.

Other modes of applying the principle of our invention may be employed for the mode herein explained. Change may therefore be made as regards the mechanism thus disclosed, provided the principles of construction set forth, respectively, in the following claims are employed.

We therefore particularly point out and distinctly claim as our invention—

1. A seal for joining crossed wires or rods, consisting of a base having a flange of a pliable, malleable and ductile metal having passages for the crossed wires, and a washer having a seat within the flange and over the wires, said flange being capable of being compressed over the washer and crossed wires to

lock the same together, substantially as set forth.

2. A seal for joining crossed wires or rods, consisting of a base having a circular projecting flange of pliable, malleable and ductile metal and having a diametrical groove with perforations through the flange at its ends, and diametrically opposite notches in the flange,—said groove and perforations and said notches forming passages for the crossed wires or rods, and said flange being capable of being compressed by moderate pressure to flow over and cover and lock the crossed wires or rods to form a closed seal, substantially as set forth.

3. In a seal for joining crossed wires or rods, the combination of two wires, a seal consisting of a base having an annular projecting

flange of a pliable, malleable and ductile metal and having a diametrical groove terminating in perforations and diametrically opposite notches in the flange, and a washer resting upon shoulders in the recess of the seal,—the crossed wires resting respectively in the groove and notches and the flange being upset over the washer to lock the several parts together, substantially as set forth.

In testimony that we claim the foregoing to be our invention we have hereunto set our hands this 18th day of December, A. D. 1894.

SAMUEL H. DICKERSON.
FRANK S. GILBERT.

Witnesses:

WM. SECHER,
J. C. TURNER.