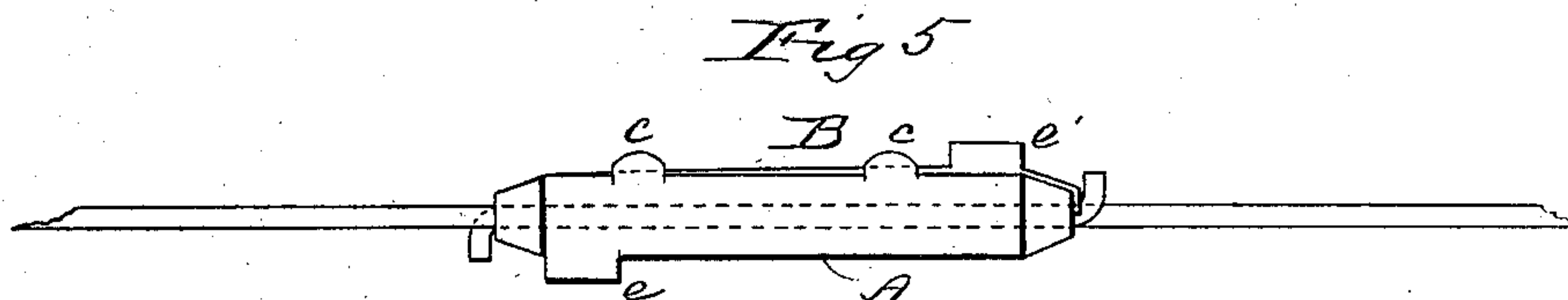
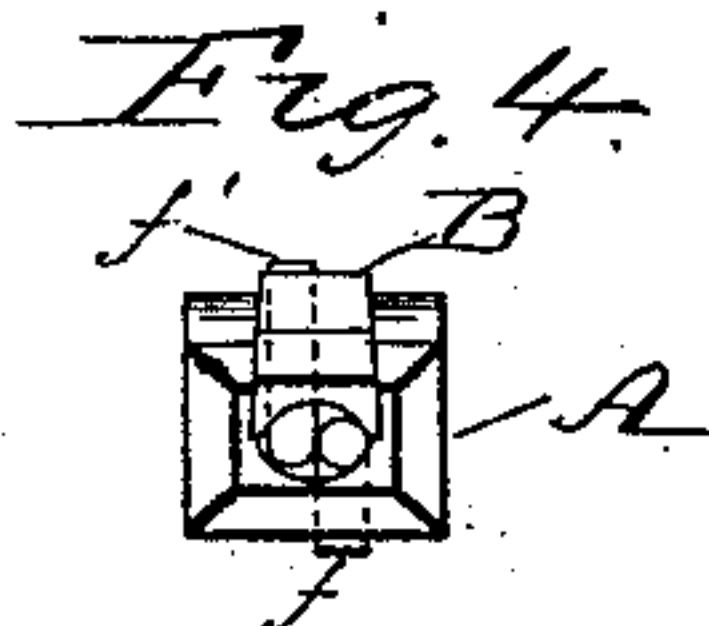
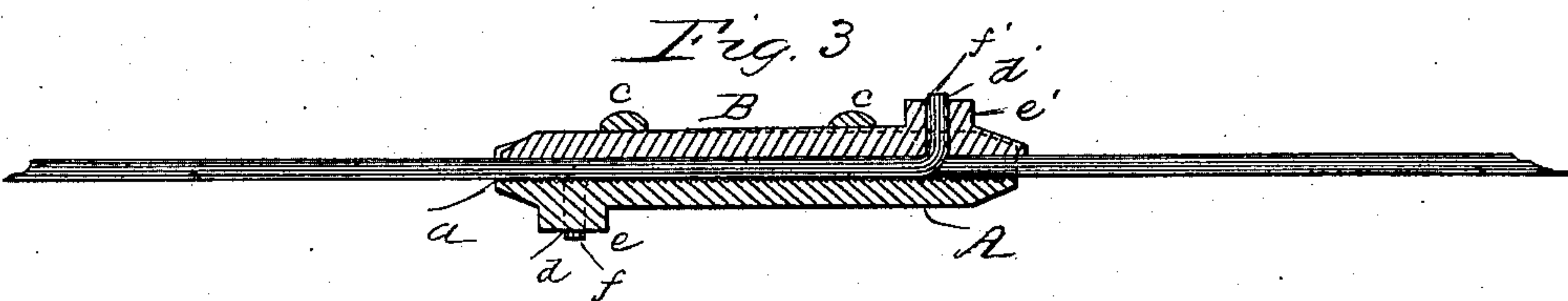
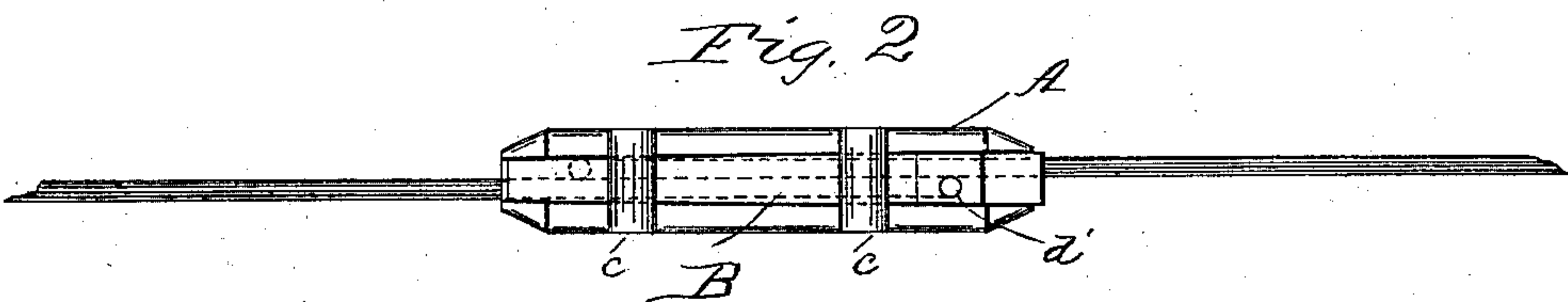
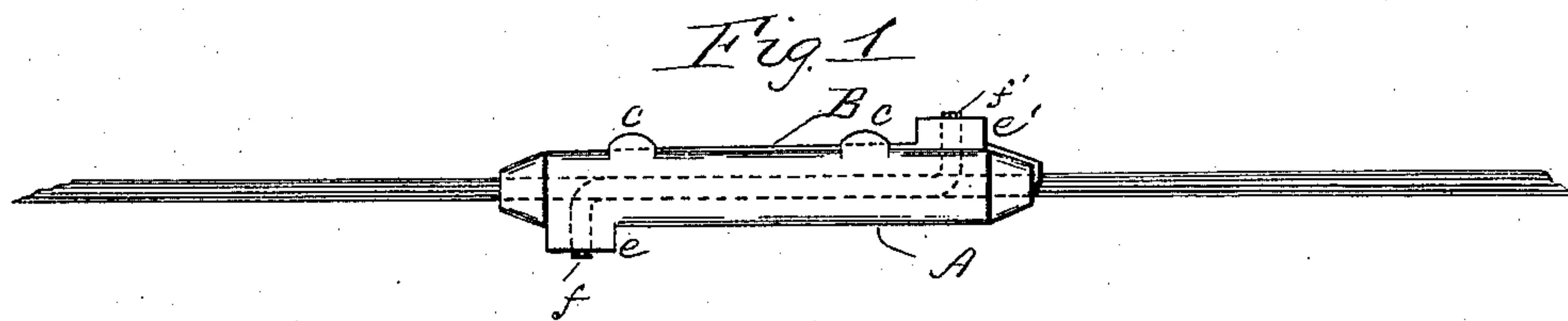


(No Model.)

D. P. EMMINGER.
JOINT FOR TELEGRAPHIC WIRES.

No. 369,238.

Patented Aug. 30, 1887.



Witnesses.
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UNITED STATES PATENT OFFICE.

DAVID P. EMMINGER, OF PHILADELPHIA, PENNSYLVANIA.

JOINT FOR TELEGRAPHIC WIRES.

SPECIFICATION forming part of Letters Patent No. 369,238, dated August 30, 1887.

Application filed May 26, 1887. Serial No. 239,428. (No model.)

To all whom it may concern:

Be it known that I, DAVID P. EMMINGER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Joints for Telegraphic Wires, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification.

This invention has relation to joint-connections for telegraphic and other electric conducting wires, and has for its object the provision of a novel form of clamp of a comparatively inexpensive character, which may be easily and quickly applied to the joint, and which shall constitute a strong, durable, and efficient coupling, requiring neither solder nor brazing and possessing all the necessary conducting properties.

The joints or joint-couplings now in use for telegraphic lines are generally formed by twisting the wires upon each other and applying solder to the connection. It is found that such a joint is not only weak and incapable of withstanding strain, but that corrosion of the metal quickly ensues the formation of the joint, thus impairing the conductivity of the wires either by interposition of resistance or the generation of local currents.

My invention is designed to obviate the principal defects in the so-called "Western Union" joint, above referred to, as well as in other joints and connections which have been suggested and experimentally tried.

My invention consists in the novel construction of clamp, hereinafter described, and in the combination of the same with the wires to which it is applicable.

In the drawings illustrating my invention, Figure 1 is a side elevation of the clamp applied to a joint. Fig. 2 is a plan view of the same. Fig. 3 is a vertical longitudinal section of joint and clamp. Fig. 4 is an end view of my invention, and Fig. 5 is a side elevation of a modified form of joint.

A designates the body of the clamp, and B a fastening wedge or key. These are made of any suitable metal, and for actual use of various metals—such as copper for copper wires, iron for iron wires, &c.—and are to be manu-

factured in different sizes to suit the standard sizes of the different wires. The part A consists of a longitudinally channeled, grooved, or recessed block or bar, open at the ends and constituting a trough to receive the ends of the wires, which are laid therein side by side, so as to lap each other. The base of the channel *a* is preferably rounded, so that the wires will be brought into close contact through the full extent of their lapping portions. The sides or walls of the channel *a* are made converging lengthwise, and are dovetailed in cross-section for the reception and retention of the wedge or key B. On the upper side of the part or box A the sides are connected by transverse bars *c c*, located at any desired distance apart or relation to each other and to the ends of the box, and the key or wedge passes under them, being inserted from or through the wide end of the channel.

If desired, the part A may be in the form of a tube—that is, with the top of the channel entirely covered, instead of being merely crossed at intervals by the bars *c c*; or, instead of having the top of the trough covered or crossed by braces, the top may be left entirely open; but I prefer to have braces or a cover, as they lend strength and security to the device and prevent the walls of the part A from being spread apart.

The box A and the key-section B have each a hole pierced through them, as shown at *d d'*, and, if desired, are re-enforced or thickened at the points through which the holes extend, the thickened portions forming bosses *e e'*. These holes are located, respectively, on opposite sides of a central longitudinal line, and are intended for the reception of the bent extremities of the wires.

In coupling two wires their ends are first bent respectively at right angles to the body of the wires, after which one wire is laid in the channeled portion of the box A and the bent portion *f* passed through the hole *d*, while the bent end *f'* of the other wire is passed through the hole *d'* of the key B, the parts A and B being disconnected. The key B is now inserted in the box A and driven tightly home, thus securing the two wires in place and providing a rigid and perfectly-conducting connection, which will withstand the utmost strain which the wires themselves will bear.

I use no solder, brazing, or other supplementary means for producing a close and unyielding joint, as the clamp is sufficient in itself and is not subject to corrosion. When
5 desired, the clamp may be galvanized, plated, or otherwise provided with a protecting-coating.

While I have shown the wires having their bent ends inserted through holes, I do not
10 limit myself to this arrangement, as the bent portions may be left outside at either end of the clamp, simply abutting against the ends, as shown in Fig. 5, and in some cases the wires will not need to be bent at all, but will be
15 simply laid in the channel or part A and fastened by the pressure of the key B.

To afford the wires an additional hold the base of the channel should be roughened, toothed, or milled.

20 To disconnect the wires all that is required is to simply withdraw the wedge, which can be loosened by a blow from a hammer, and take out the wires.

Having described my invention, what I
25 claim, and desire to secure by Letters Patent, is—

1. A connecting-clamp for telegraphic wires or other electrical conductors, consisting of the trough-shaped or channeled box A, with

longitudinally-open top having converging 30 walls, and the wedge-shaped key B, substantially as described.

2. In a clamp for connecting telegraph-wires, the combination of the longitudinally-channeled box or trough A, having longitudinally-
35 tapering opening with dovetailed surfaces, and the tapering dovetailed key B, substantially as set forth.

3. In a connecting-clamp for telegraphic wires or electrical conductors, the combination
40 of the longitudinally-channeled section A, having longitudinally-tapering opening, and the key B, said section and key being pierced transversely for the passage of the bent ends of the wire, substantially as shown and de-
45 scribed.

4. A clamp for connecting telegraphic wires or electrical conductors, consisting of the section A and key B, the section A having a longitudinal channel roughened, milled, or toothed
50 at its base, as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of May, 1887.

DAVID P. EMMINGER.

Witnesses:

THOS. A. CONNOLLY,
R. DALE SPARHAWK.