

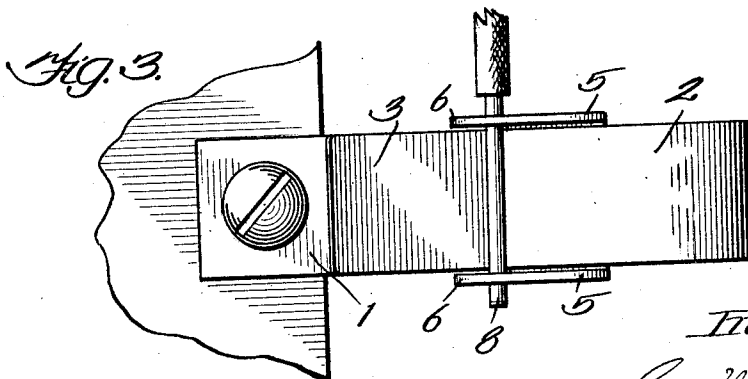
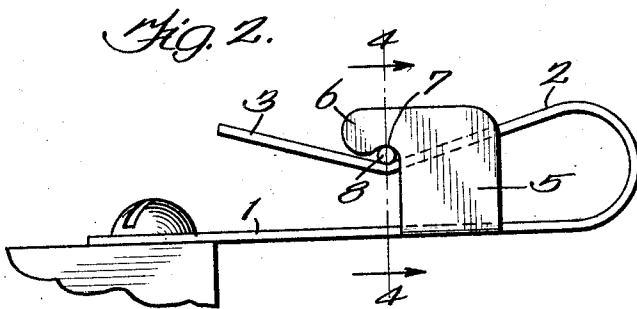
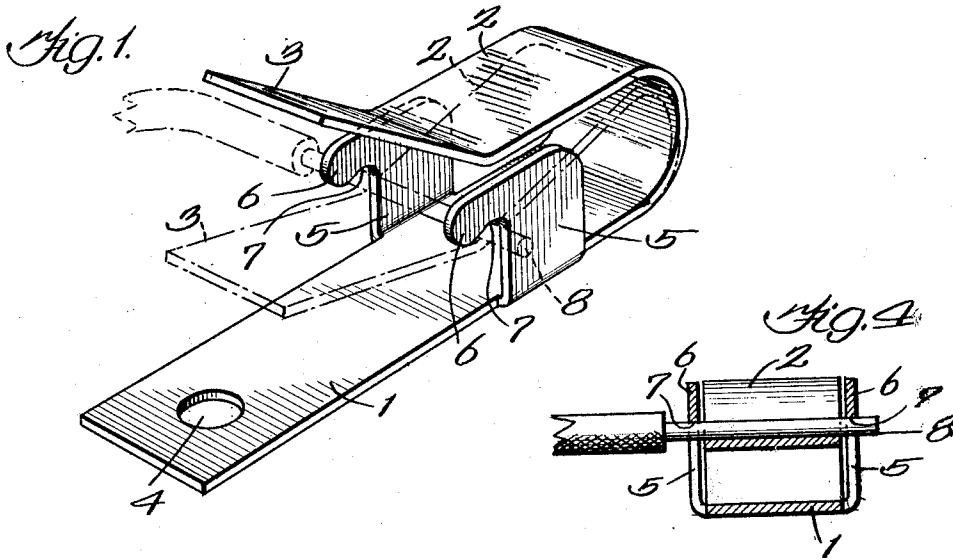
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TERMINAL CONNECTER

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UNITED STATES PATENT OFFICE.

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TERMINAL CONNECTER.

Application filed April 14, 1926. Serial No. 101,998.

My invention relates more particularly to those terminal connecters which are made of strips or ribbons of spring metal folded back upon themselves into loop form and
 5 having circuit wire or terminal engaging portions upon their loop sides adapted to be placed in such relation by manually bringing the connecter sides closer together as to afford circuit terminal receiving spaces between the terminal engaging portions. A
 10 wire end or circuit terminal inserted into a receiving space thus provided in a connecter of this type serves to maintain the connecter sides in contracted relation against the natural spreading action that is due to
 15 the resilience of the strip metal of which the connecter is formed, with the result that the circuit terminal is held in mechanical and electrical assembly with the connecter.

20 In the device of the prior art, one circuit terminal engaging portion is in the form of a kinked tongue inwardly struck from one side of the connecter that constitutes the mounting base of the connecter. This tongue
 25 is located in register with an opening formed in the remaining side of the connecter which side is free to be depressed into a position in which the tongue will have its kinked portion projected sufficiently through said opening to
 30 provide the desired terminal receiving space between the kinked portion of the tongue and the depressed connecter side. The connecter is not only formed with an opening in its depressible side to receive the tongue, but is
 35 also formed with an opening where the tongue is struck from the base side, these openings weakening the connecter. The tongue is so positioned that the flat side thereof, as distinguished from an edge, is
 40 engaged by the circuit terminal, the strain due to the resilient action of the connecter being exerted upon the tongue in the same direction with the strain that was exerted in striking the tongue from the strip metal.
 45 As a consequence the tongue is apt to be broken away at its base.

In a connecter of my invention, the circuit terminal engaging portions are so constructed and located that no openings are
 50 required in the sides of the connecter. Instead of a single circuit terminal engaging tongue requiring the formation of a weakening opening in its construction, I employ two tongues at opposite longitudinal edges
 55 of one connecter side, which may be a mount-

ing side, of the connecter, these tongues being located abreast and constituting integral and angular lateral continuations of this connecter side. The remaining side of the connecter is disposed in register with
 60 and is movable in the space between said tongues, circuit terminal receiving spaces being formed between this remaining connecter side and said tongues when the connecter sides have been pressed sufficiently
 65 together.

In addition to the elimination of the weakening openings in the sides of the connecter, which I thus effect, edge portions of the tongues are desirably presented to the
 70 inserted circuit terminal, these edge portions having a scraping or cutting action to remove current obstructing foreign matter from the terminal undergoing insertion. The spring pressure is also desirably exerted
 75 in the planes of the tongues rather than transversely to the plane of a single tongue, whereby danger of rupture at the junction of the tongues and the connecter side carrying the same is overcome. A connecter thus
 80 constructed may be made of lighter stock and of smaller dimensions than a connecter of the prior art of similar strength.

The invention will be more fully explained in connection with the accompanying drawing
 85 in which Fig. 1 is a perspective view of the preferred embodiment of the invention in which a connecter is shown in full lines in open or non-clamping adjustment, the terminal clamping adjustment of the connecter being illustrated by the dotted lines
 90 as is also a wire or circuit terminal clamped thereby; Fig. 2 is a side view of the connecter adjusted to clamp a terminal; Fig. 3 is a plan view of the connecter as shown
 95 in Fig. 2; and Fig. 4 is a sectional view on line 4-4 of Fig. 3.

The connecter illustrated is formed of a strip or ribbon of spring metal folded into the form of a loop having a base or mounting
 100 side 1 and an opposite free or depressible side 2 terminating in a finger hold 3 in the form of an outwardly deflected continuation of the connecter side 2. The base side 1 of the connecter may be formed with
 105 an opening 4 for the reception of the shank of a mounting screw. Tongues 5 are located abreast at opposite longitudinal edges of the base side of the connecter and are integral and angular, or perpendicular, lateral
 110

continuations of this connector side. The
 tongues project toward the manually ad-
 justed connector side 2 and are spaced apart
 to permit this connector side to be depressed
 5 into a position therebetween, as illustrated
 in Fig. 1 by dotted lines. The tongues are
 preferably in the shape of hooks in which
 case they have forward continuations 6 at
 their top sides that are so shaped as to af-
 10 ford hooking recesses 7. These hooking re-
 cesses and the juncture of the finger hold 3
 with the balance of the depressible side 2,
 are so relatively located that circuit terminal
 receiving spaces are afforded between the
 15 tongues and the depressible side of the con-
 nector, when this depressible side is suffi-
 ciently depressed. The circuit terminal 8,
 when caught between the tongues 5 and the
 sufficiently depressed connector side 2, serves
 20 to hold this connector side in approached re-
 lation to the base side of the connector
 against the resilience of the connector where-
 by firm mechanical and electrical assembly
 of the connector and circuit terminal is as-
 25 sured. The spring pressure exerted by the
 depressed connector side against the circuit
 terminal is resisted by the tongues in the
 planes thereof whereby any tendency to rup-
 ture the tongues where joined with the base
 30 side of the connector is overcome. In other
 words, the strain on the tongues exerted by
 the depressed connector side 2 when the cir-
 cuit terminal is in place is not in the same
 direction as the strain upon the metal oc-
 35 ccurring in the formation of the tongues, with
 the advantage stated. In addition to this
 advantage, the edges of the tongues, rather
 than the broad sides thereof, preferably have
 engagement with the inserted terminal, the
 40 contacting edges of the tongues having
 scraping or cutting action upon any current
 obstructing foreign matter upon the terminal
 thereby further improving the electrical as-
 sembly of the connector and terminal. By

employing two tongues the conductivity be- 45
 tween the same and the terminal is doubled.

Where imperforate tongues having hook-
 ing recesses 7 are employed, the finger hold 3
 may serve as a guide along which to slide the
 terminal into such hooking recesses, a fea- 50
 ture of advantage where circuit connection is
 made in the dark. From the description
 and illustration of the invention, it will be
 observed that the tongues 5 are formed of
 lateral extensions of the loop side 1, said 55
 tongues and loop side being formed of strip
 spring metal, whereby edge portions of the
 tongues are presented for engagement with
 the conductor applied thereto, the tongues
 being rigid in their relation to such conduc- 60
 tor by virtue of their formation.

Having thus described my invention, I
 claim:

A connector formed of a strip of spring
 metal formed into a loop, one loop side of 65
 the connector having two tongues formed of
 lateral extensions of this loop side which are
 bent to project from opposite edge portions
 of this loop side toward the other loop side
 and spaced apart to permit this other loop 70
 side to be moved therebetween toward and
 from the first loop side, each of said tongues
 having a hook continuation at its upper por-
 tion extending along the connector and be- 75
 low which said other loop side may be de-
 pressed into a position to permit a wire cross-
 ing and moved along said other loop side to
 be held between this other loop side and the
 lower edges of said hook continuations, edge 80
 portions of the tongues being presented for
 engagement with the conductor applied
 thereto and the tongues being rigid in their
 relation to such conductor by virtue of their
 formation.

In witness whereof, I hereunto subscribe 85
 my name.

GUY W. FITZGERALD.