May 19, 1925.

1,538,628

G. DINCOGNITO

WIRE SPLITTING TOOL

Filed Oct. 18, 1923

2 Sheets-Sheet 1

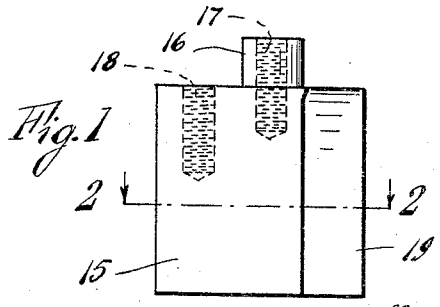


Fig. 1

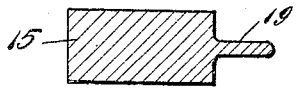


Fig. 2

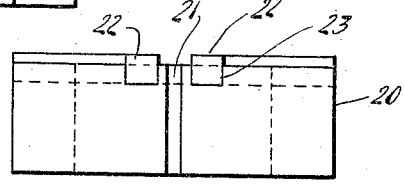


Fig. 4

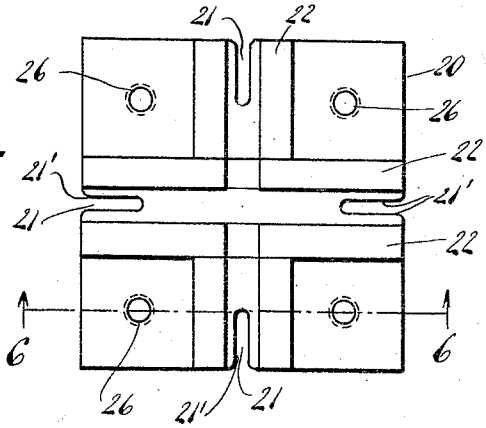


Fig. 5

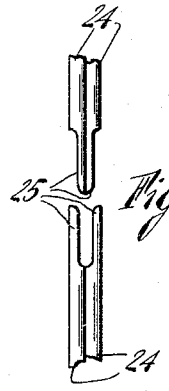


Fig. 7

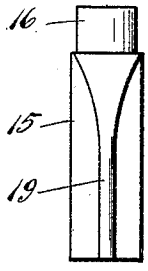


Fig. 3

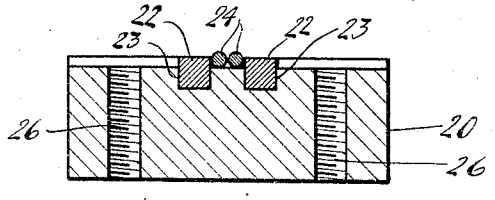


Fig. 6

Witnesses:
W. Schmidhardt
J. D. Stowe

Inventor
Guy Dincognito
By Joshua R. H. Potts
His Attorney

May 19, 1925.

1,538,628

G. DINCOGNITO

WIRE SPLITTING TOOL

Filed Oct. 18, 1923

2 Sheets-Sheet 2

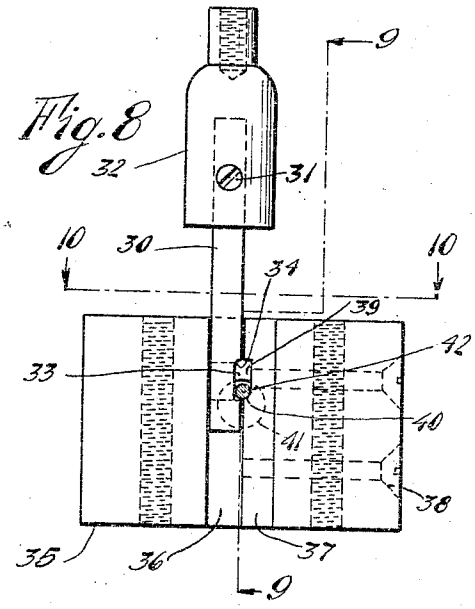


Fig. 8

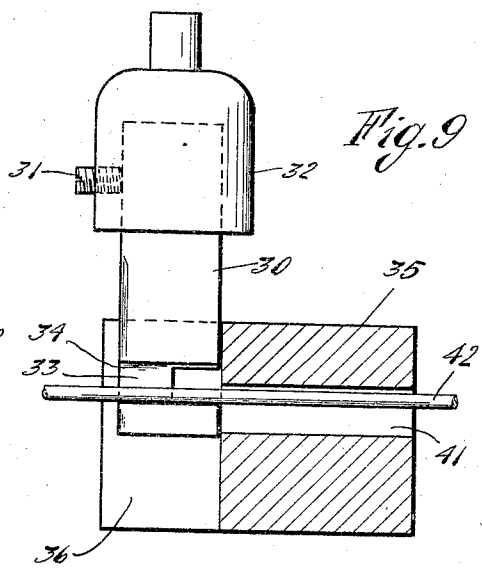


Fig. 9

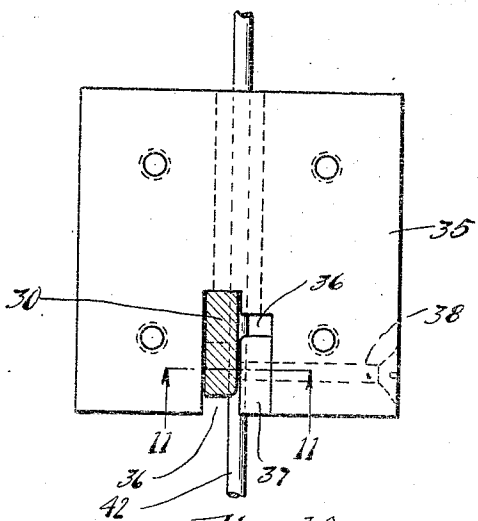


Fig. 10

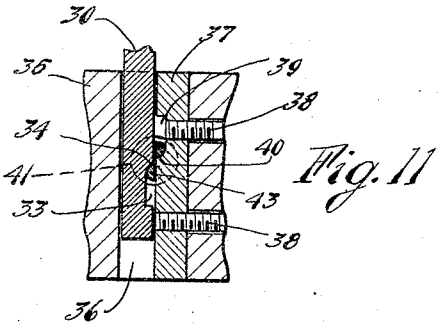


Fig. 11

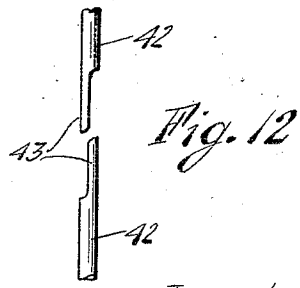


Fig. 12

Witnesses:

W. Hamilkath

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Inventor:

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By Joshua R. H. Potts

His Attorney.

Patented May 19, 1925. 1,538,628

UNITED STATES PATENT OFFICE.

GUY DINCOGNITO, OF CHICAGO, ILLINOIS.

WIRE-SPLITTING TOOL.

Application filed October 18, 1923. Serial No. 669,258.

To all whom it may concern:

Be it known that I, GUY DINCOGNITO, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Wire-Splitting Tools, of which the following is a specification.

My invention relates to new and useful improvements in wire splitting tools, and has for an object to provide such tools in the form of dies which are used with punch presses, for splitting wire and providing a plurality of finished ends or points with a single punching operation.

Another object is to provide such a wire splitting tool which will split a plurality of wires and provide a plurality of finished ends or points on each one of said wires, all with one punch press operation, and which can be adapted for any length or gauge of wire.

A further object is to proivde a die block with a plurality of cutting slots, preferably one on each side thereof and arranged in corresponding positions to make said block reversible or adjustable on the die shoe to prolong the life of said block.

A further object is to provide guide grooves with guide members on said block and properly spaced for retaining the plurality of wires in proper position during the cutting operation.

And another object is to provide such a device in the form of a shearing die for cutting a wire to form two finished ends or points with one shearing operation.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which

Fig. 1 is a side elevation of the male member or punch of my preferred form of invention;

Fig. 2 is a cross section thereof on line 2—2 of Fig. 1;

Fig. 3 is an end elevation of said punch;

Fig. 4 is an elevation of the female member or block;

Fig. 5 is a plane view thereof;

Fig. 6 is a vertical section on line 6—6 of Fig. 5;

Fig. 7 is a view of two wires split by means of the aforesaid form of my invention and forming four finished points or ends;

Fig. 8 is an end elevation of a modified form of my invention, including both members;

Fig. 9 is a vertical section thereof on line 9—9 of Fig. 8;

Fig. 10 is a horizontal section on line 10—10 of Fig. 8;

Fig. 11 is a vertical section on line 11—11 of Fig. 10; and

Fig. 12 is a view of a wire split with this modified form and providing two finished points or ends.

The preferred form of my invention, as illustrated in Figs. 1 to 6, comprises a male member or punch 15 provided with a stem 16, preferably having a threaded opening 17, for fastening the punch to the movable arm of a punch press, said punch member also being provided with a threaded opening 18 for firmly securing and retaining it in operative position. A punching web or rib 19 is provided on the forward edge of said punch and is preferably formed integral therewith.

The device further comprises a die block or female block 20 which is provided with a plurality of cutting slots 21 arranged around its sides, each of said slots having a pair of cutting edges 21′ and being formed to fit and receive the rib or web 19 of the punch. Four sides are shown on the block illustrated, and a slot 21 on each side of said block, but the number of sides and the number of slots on each side may be varied, as desired. The slots with cutting edges are preferably placed opposite each other at the opposite sides of said block, and a guide bar or member 22 is secured in a groove 23 at each side of the opening 21, and arranged to provide a required space for receiving a pair of wires 24 and retain them with their longitudinal centers over the cutting edges of one of said openings 21. These grooves and guide bars are spaced and arranged to suit the particular gauge of wire intended to be cut with the particular intervening slot, the different slots 21 and their companion spaces between bars 22 being made of various sizes, or of equal size, whichever is desired. The width of the rib 19 of the punch and its companion slot 21 will be made to suit the particular gauge of wire to be cut thereby, and the length of said rib and slot will be made to

suit the length and shape of the particular point or end 25 of the wire, as desired. Threaded openings 26 are provided in the die block and are arranged for reversibly securing the block on the usual die shoe, so that any one of the slots 21 may be placed in position for co-operating with the punching rib 19 of the punch 15.

It is apparent that with this particular form of punch and block, a plurality of wires can be cut with a single punch press operation, and that there will be provided two finished points or ends 25 for each wire cut; and furthermore that the life of the block is prolonged by the provision of a plurality of cutting slots with cutting edges instead of having a single cutting slot in said block as in the usual form.

The modified form illustrated in Figs. 8 to 11 is in the shape of a shearing block and comprises a male member or punch 30 which is detachably mounted with a screw 31 or the like in a die shoe 32 of the punch press. A groove 33 is formed across said punch and is provided with an upper cutting edge 34.

This form further comprises a female block or member 35 having a vertical slot 36 for slidably receiving the punch 30, and in which slot is detachably mounted a cutting member 37 by means of screws 38 or the like, for convenient renewal of the cutting member when worn. Said member is provided with a cross groove 39 having a lower cutting edge 40 and co-operating with groove 33 and cutting edge 34 of the punch. A horizontal bore or opening 41 is formed in the block and communicates with slot 36 and grooves 33 and 39 for receiving a wire 42.

In operating this form of my invention the part of the wire to be split is placed in the grooves 33 and 34, with its axial center over cutting edge 40 of member 37, as best shown in Fig. 8, and since cutting edge 34 of the punch is formed and arranged with regard to edge 39 to suit the length of slit and finished end desired (see Fig. 10), the downward thrust of the punch will split the wire thereby producing the two finished ends or points 43, as shown in Figs. 11 and 12.

It is apparent that this form will also provide two finished ends or points on the wire with a single cutting operation, and that by advancing the wire through the device for the desired distance, and then again operating the device, the particular length of wire is produced with each of its ends cut as desired. These split ends are substantially semi-circular in cross section and are particularly adapted to be coiled or wound around a transverse rod or wire to form a T-joint therewith.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A punch press tool, comprising a block with a slot with cutting edges, a bar mounted in a groove at each side of said slot, for holding a plurality of wires over said slot and longitudinally over said cutting edges, and a punch with means for splitting all of said wires with one punch press operation.

2. Mechanism for simultaneously splitting a plurality of circular wires to provide them with semi-circular ends, said mechanism comprising a die block with a groove and cutting edges at the end of said groove, guide bars mounted at the sides of said grooves to hold a plurality of wires in position over said cutting edges, and a punch with means for cutting all of said wires with one operation.

3. Wire splitting mechanism comprising a block with a plurality of similar slots with cutting edges, and a punch with cutting means to cooperate with the cutting edges of either one of said slots, said block and punch being arranged to have either one of said slots mounted in alinement with said punch so as to split a plurality of wires with one operation.

4. Wire splitting mechanism, comprising a block with a plurality of slots with cutting edges, guide means on said block for holding a plurality of wires over said cutting edges, and means for reversibly mounting said block in fixed position.

5. A punch press tool, comprising a block having a plurality of cutting edges arranged symmetrically around its sides, said block being arranged to be mounted adjustably in fixed position, and a punch with cutting means to co-operate with said cutting edges and adapted to split several wires with one operation.

6. A punch press tool, comprising a multi-sided block having cutting edges arranged symmetrically on its opposite sides, and a punch with cutting means to co-operate with said cutting edges and split several wires with one operation.

7. A punch press tool, comprising a die block with slots symmetrically arranged on its sides adapting said block to be reversibly mounted on the die shoe, bars mounted in grooves at the sides of said slots for retaining a plurality of wires in position over said slots, and a punch with cutting means

to co-operate with said slots for splitting all of said wires and provide a plurality of finished points on each with one punch press operation.

8. A punch press tool, comprising a punch and a block with a horizontal opening for receiving a wire, and a vertical slot for receiving the punch, said slot intersecting said opening, and co-operating grooves with cutting edges on said block and on said punch arranged for splitting the wire longitudinally and providing a plurality of finished ends with one punch press operation.

9. A punch press tool, comprising a block with an opening and a slot intersecting the same, a member removably mounted in said slot and having a groove and cutting edge in line with said opening, and a punch movable in said slot and having a groove and cutting edge co-operating with the groove and edge in said member and arranged for splitting a wire and cutting it into separate parts to provide a plurality of finished ends with one punch press operation.

10. A punch press tool, comprising a block with a horizontal bore and a vertical slot communicating therewith, a cutting member detachably mounted in said slot and having a horizontal groove with a lower cutting edge in line with said bore, and a punch slidable in said slot and having a groove and cutting edge co-operating with the groove and edge in said member for splitting a wire and cutting it into separate parts to provide two finished ends.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GUY DINCOGNITO.

Witnesses:
FREDA C. APPLETON,
LOUISE SYNWOLT.