May 22, 1956 K. R. RUNDE 2,746,327

CRIMPING TOOLS WITH REPLACEABLE DIES

Filed May 17, 1952

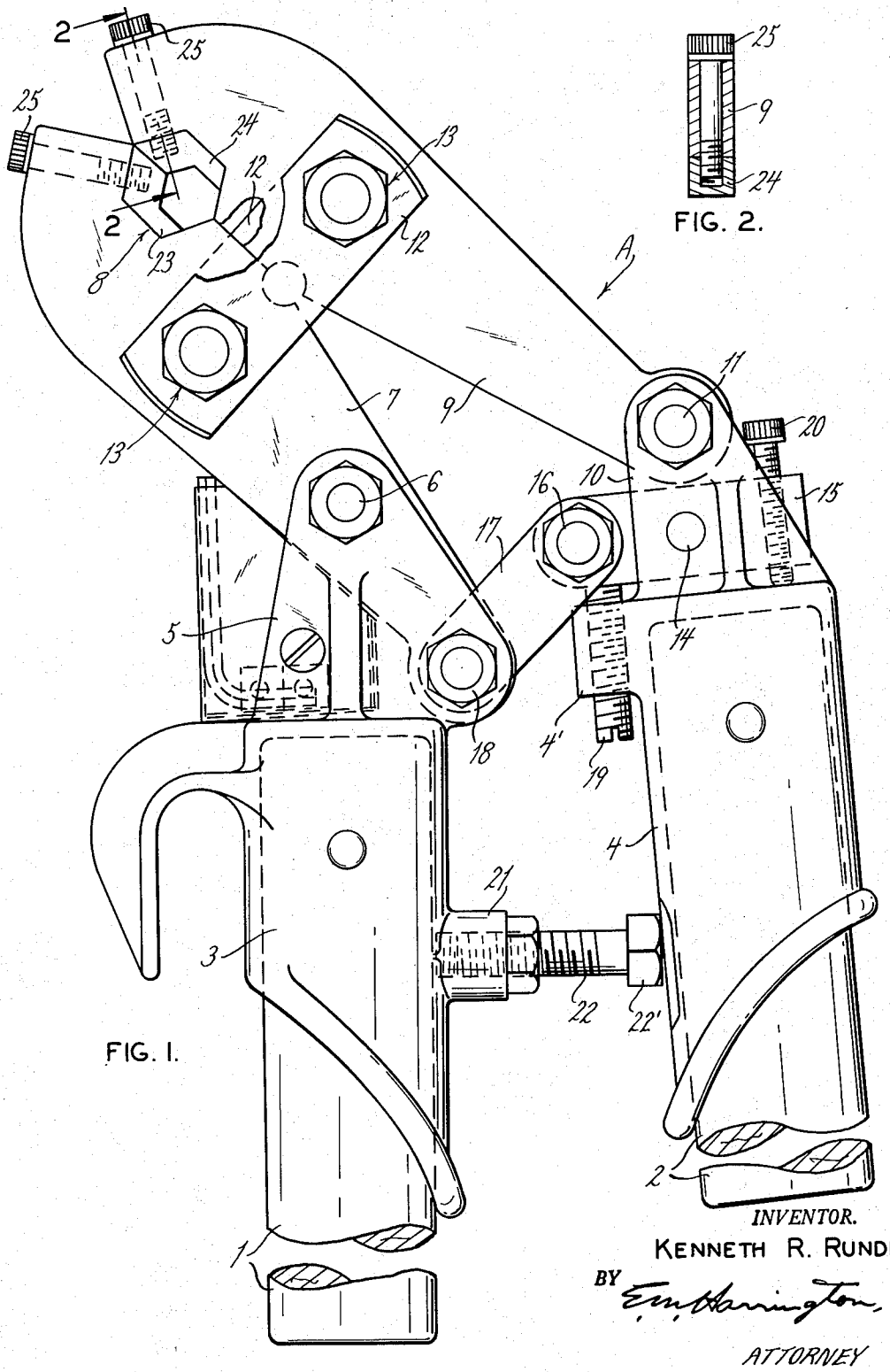


FIG. 1.

FIG. 2.

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United States Patent Office 2,746,327
Patented May 22, 1956

2,746,327

CRIMPING TOOLS WITH REPLACEABLE DIES

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Application May 17, 1952, Serial No. 288,395

2 Claims. (Cl. 81—15)

This invention relates generally to tools and more specifically to crimping tools adapted particularly, though not exclusively, for performing the operation of crimping electrical connectors to electrical conductors for mechanically and electrically connecting said electrical conductors together, the predominant object of the invention being to provide such a tool which is provided with dies, or other jaw portions, that are secured in place with respect the jaws of the tool in such manner that they may be quickly and conveniently removed in order that they may be replaced without waste of time by other dies or jaw portions of different design or size.

Fig. 1 is a side elevation of the improved tool of this invention, parts of the handles and other portions of the tool being broken away.

Fig. 2 is a section taken on line 2—2 of Fig. 1.

The particular tool shown in the drawing which is designated generally in Fig. 1 by the reference character A, includes a pair of elongated handles 1 and 2, the handle 1 being provided with a head 3 secured thereto while the handle 2 has fixed thereto a head 4. The head 3 of the handle 1 is provided with upwardly projected means 5 to which is pivotally connected by a pivot element 6 a jaw 7. The jaw 7 is shaped as is shown to good advantage in Fig. 1, said jaw having a multifaced recess 8 formed in the nose portion thereof. The tool A includes a second jaw 9 which is pivoted at an end thereof to upwardly projected means 10 forming part of the head 4 of the handle 2 by means of a pivot element 11. The jaw 9 is a substantial duplicate of the jaw 7 and said jaws 7 and 9 are connected by a pair of spaced plates 12, portions of the jaws 7 and 9 being interposed between said plates, and said plates and said jaws being connected together, the jaw 9 for pivotal movement, by bolt and nut assemblies 13. The upwardly projected means 10 of the head 4 of the handle 2 has pivotally supported thereby through the instrumentality of a pivot element 14, a lever 15, this lever having pivotally connected thereto at an end thereof, by means of a pivot bolt 16, a link 17 which is pivotally connected at its opposite end to an end portion of the jaw 7 by means of a pivot assembly 18. The head 4 of the handle 2 is provided with a boss 4' which is provided with a screwthreaded opening through which an adjusting screw 19 is extended, said adjusting screw contacting with a portion of the under face of the lever 15. Also, the lever 15 is provided with a screwthreaded opening through which a second adjusting screw 20 is extended, the lower portion of said screw 20 contacting with a top face of the head 4 of the handle 1. The head 3 of the handle 1 is provided with a boss 21 that supports a bolt 22

having a head portion 22' that serves as an abutment for limiting inward movement of the handle 2 relative to the handle 1.

The particular tool A described above forms no part of the present invention, said tool being described in the present specification for convenience in disclosing the invention which concerns the ready and convenient application to the jaws 7 and 9 and removal of said dies from said jaws 7 and 9 of a pair of dies 23 and 24. The dies are shaped as is shown in Fig. 1; that is to say, each die has a plurality of faces which are inclined with respect to each other, and said dies are disposed in similarly shaped recesses formed in portions of the jaws to which said dies are related. Also, said dies are maintained in position with respect to the jaws 7 and 9 each by a bolt 25 which is provided with a head having a knurled circumferential face. Each bolt 25 passes through a screwthreaded opening formed through one of the jaws 7 or 9 and the lower end portion of each bolt 25 is screwed into a screwthreaded opening formed in the related die 23 or 24. Thus, the dies 23 and 24 may be very quickly applied to the tool and removed therefrom when it is desired to replace dies for any reason, and because of the inclined positions of the bolts the dies are held in a very secure manner, each die being held by only one bolt which facilitates application or removal of the dies relative to the jaws.

I claim:

1. A tool having a pair of jaws movable one with respect to the other and provided with multiface recesses, cooperating multiface dies supported within said recesses, and means comprising screws for securing said dies to said jaws in a manner to provide for quick and convenient application of the dies to said jaws or quick and convenient removal of said dies from said jaws, there being a single inclined screw for securing each of said dies in place in its recess, and each of said single inclined screws being inclined with respect to an imaginary line drawn longitudinally of and between said jaws.

2. A tool having a pair of jaws movable one with respect to the other and provided with multiface recesses, cooperating multiface dies supported within said recesses, and means for securing said dies to said jaws in a manner to provide for quick and convenient application of the dies to said jaws or quick and convenient removal of said dies from said jaws, said means for securing said dies to said jaws comprising a single inclined screw associated with each jaw which extends through an opening formed through a portion of said jaws and screwthreadedly engages the related die, each of said single inclined screws being inclined with respect to an imaginary line drawn longitudinally of and between said jaws.

References Cited in the file of this patent

UNITED STATES PATENTS

1,105,191	Flora et al.	July 28, 1914
1,328,508	Fried	Jan. 20, 1920
1,730,669	MacChesney et al.	Oct. 8, 1929
1,858,418	Rowley	May 17, 1932
2,017,039	Carlson	Oct. 15, 1935
2,086,400	Brenizer	July 6, 1937
2,283,933	Jones et al.	May 26, 1942
2,555,591	Kane	June 5, 1951