

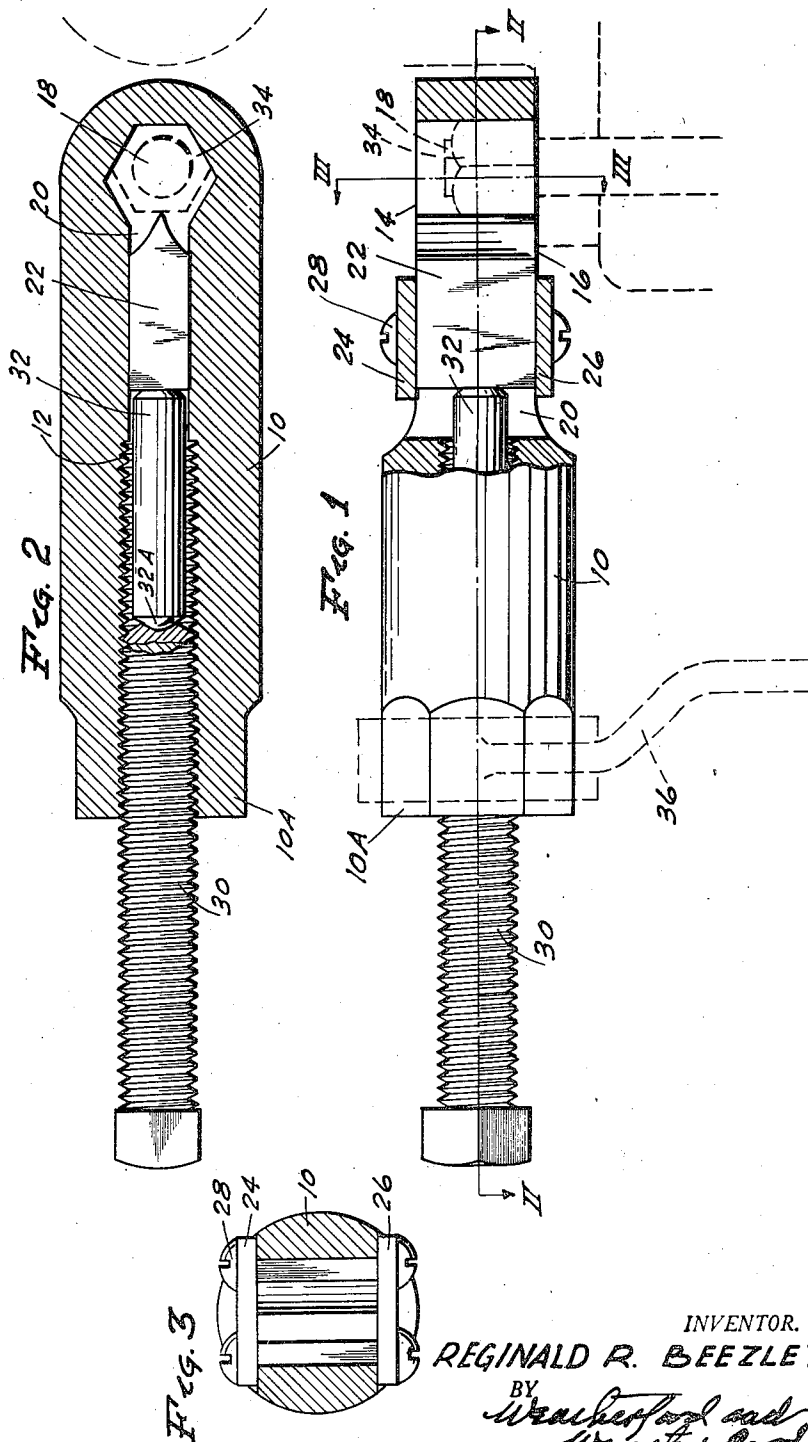
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TOOL FOR SPLITTING METAL NUTS

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TOOL FOR SPLITTING METAL NUTS

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1 Claim. (Cl. 30—272)

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This invention relates to devices for splitting nuts which have jammed on the bolt or stud and may not readily be removed therefrom in ordinary manner, so that their removal may be easily accomplished.

In many places nuts remain on the bolts or studs for quite sometime and become so rusted, or otherwise so tightly adhered that an endeavor to remove them by a normal method of unscrewing results in twisting off the bolt or stud, making it necessary in the case of studs to drill out the broken stud and retap the hole and replace the stud before the parts can again be put together. This being not only normally troublesome and expensive but often in automobile construction because of cramped conditions, being almost impossible.

The primary object of this invention is to provide a tool for the purpose of longitudinally splitting nuts whereby their removal from a bolt or stud may be readily and easily accomplished.

To provide means which may be operated from a position laterally disposed from the nut whereby access may be had to nuts in cramped positions.

To provide a simple, rugged and easily operable tool for splitting nuts.

The means by which the foregoing and other objects are accomplished and the method of their accomplishment will readily be understood from the following specification on reference to the accompanying drawings in which:

Fig. 1 is a side elevation of the tool partially in section along the longitudinal center line thereof.

Fig. 2 is a corresponding sectional plan taken on the line II—II of Fig. 1, with the nut and stud from which the nut is to be removed shown in dash lines.

Fig. 3 is a transverse elevational view taken on the line III—III of Fig. 1.

Referring now to the drawings in which the various parts are indicated by numerals:

The tool comprises an elongated body 10, provided with internal threads 12 extending from one end along the longitudinal center line of the body for substantially one-half its length. Beyond the center the body is cut away to form parallel, flat upper and lower surfaces 14 and 16, which extend to the opposite end. Adjacent that end this flattened portion is chambered out to form a socket 18 for the reception of the nut which is to be split. Extending longitudinally from this socket along the center line of the body toward the threaded end the flattened por-

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tion of the body is cut out to form a slot 20, adapted to slidably receive a rectangular chisel 22 which is of equal depth with the flattened portion of the body. The chisel 22 is slidably confined within the slot by upper and lower plates 24 and 26, at least one of the plates being removably held in place by cap screws 28.

Disposed in the threaded end of the body 10, is a set screw 30 for accomplishing cutting thrust on the chisel 22. A plunger 32 loosely centered by the threads 12 may be interposed between the set screw 30 and the chisel 22, the plunger preferably having a pointed and rounded end 32A and the set screw end being correspondingly cupped to effect centering contact therebetween.

The body 10 may be cylindrical, or of hexagonal or other cross section, but if cylindrical, is preferably shaped adjacent its threaded end 10A for wrench engagement.

In assembling the tool the plate 22 is removed, the chisel 12 is placed in the slot 20 and the plate secured in place, to slidably hold the chisel in the slot, the plunger 32 is inserted through the threaded end of the body and the screw 30 engaged and screwed into place.

In using the tool the socket 18 is engaged over the nut 34 to be split, and the screw 30 run down to engage the plunger 32 against the chisel 22 and force the point of the chisel into cutting and splitting engagement with the nut. This thrusting movement being obviously continued until splitting of the nut is accomplished. The set screw 30 is turned by the use of a suitable wrench and if necessary the body 10 is held against turning as by a wrench 36 engaging the end 10A of the body. Obviously a permanently attached handle corresponding to the wrench 36 may be attached to the body but such construction is not preferred.

It will be distinctly understood that the interposed plunger 32 may be omitted and the end of the screw directly contact the chisel without parting from the spirit of my invention.

It will be further understood that the nut receiving socket is transverse to the axis of the body and the screw and not only holds the nut which is to be split but forms an anvil against which the cutting action of the chisel takes place.

I claim:

A tool for splitting metal nuts; said tool comprising an elongated tubular body having one end portion shaped to polygonal cross-section for engagement and holding against turning as by a wrench, and its opposite end portion flattened by cutting away opposite side portions,

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said flattened end portion being chambered transversely to said sides to form a polygonal nut receiving socket and being slotted symmetrically with respect to the longitudinal axis of said body away from said socket, said body being internally threaded along said longitudinal axis from said slot through said polygonal end, a chisel of uniform rectangular cross-section slidably disposed in said slot, said chisel having a centrally disposed cutting edge at one of its ends and being transversely flattened at its opposite end, means at least one of which is removably secured respectively to opposite sides of said flattened end portion of said body adjacent said socket and slidably confining said chisel in said slot, and a thrust screw in the

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threaded end of said body cooperating with said chisel to effect cutting thrust of said chisel against said nut.

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