

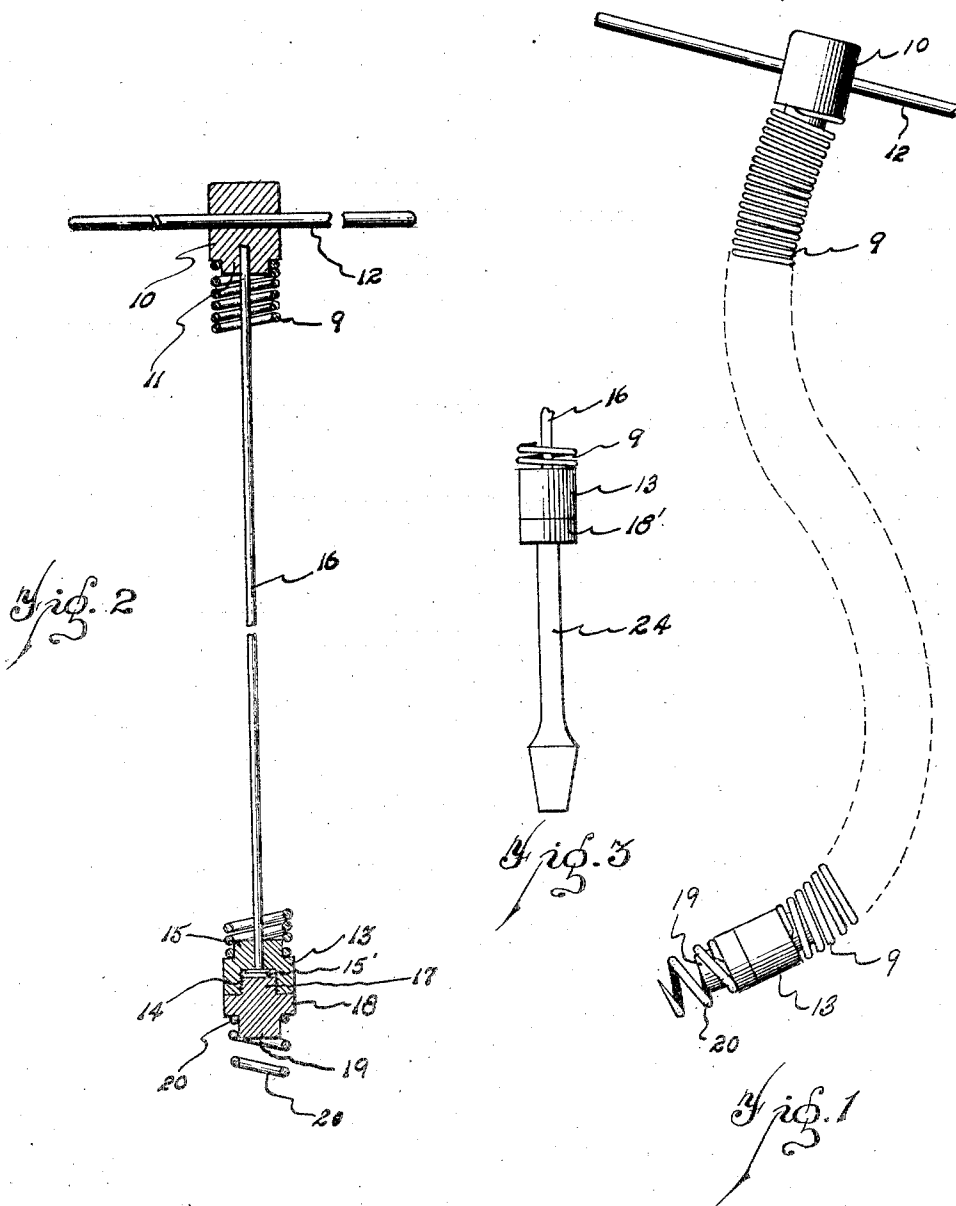
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F. ENGLISH

FLEXIBLE HANDLED TOOL

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FLEXIBLE HANDLED TOOL.

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My invention relates to a flexible handled tool, and in the drawings, I have shown the tool provided with a flexible handle made from a closely woven wire, as I deem this structure preferable, from a standpoint of durability and economy, although, from the description it will appear that the handle may be made from any material, arranged in such a way as to provide the desired flexibility.

One specific use of the invention is its use as a means of removing packing from stuffing boxes and the like, the entry into which is generally at an angle, and often quite hindered and impeded by the presence of the packing gland in close proximity to the opening of the stuffing box.

It is an object of the present invention, to provide a tool having a working portion at one end, and provided with a flexible handle connected thereto.

Another object of the invention is the provision of a tool having a flexible handle made from closely woven wire in the nature of a coil, and so arranged relatively to the working end, as to cause, upon use of the tool to perform the functions intended, a closer approach of the coils of the handle, so as to increase the strength of the handle and lend, to some extent, a partial rigidity to it.

Another object of the invention is the provision of a tool having a flexible handle made from coiled wire and provided with non-elastic means adapted for receiving any pull delivered to the handle after a stretching or yielding of the handle to the pull beyond a predetermined point.

Another object of the present invention is the provision of a tool handle having its end adjacent the working member so arranged as to permit detachment and replacement of various tools therefrom and thereon.

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 from a reference to the accompanying drawings which form a part of this specification and in which

Fig. 1 is a side elevational view of the invention, showing the handle flexed,

Fig. 2 is a longitudinal vertical central sectional view of the invention,

Fig. 3 is a fragmentary side elevational view showing a screw driver attachment secured to the handle.

As shown in the drawings, the main body of the handle comprises a flexible body made from a spring coil attached to a head 10, having a neck 11 projecting therefrom, adapted for insertion into the coil 9. A handhold 12 projects through the head 10 and serves as a means for the operator to effect a turning of the coil 9. Secured to the lower end of the coil 9 is a head 13 having a threaded recess 14 formed therein. Projecting inwardly of the coil 9 is a head 15. The opposite ends of the coil 9 are securely fastened to the heads 10 and 13 by welding, soldering or any other desirable means. Secured to the head 10 and projected through the head 15 is a non-elastic cable or cord 16, which is slightly longer than the coil 9 in its normal position, and adapted for receiving the thrust when the coil 9 is stretched to a certain degree. The purpose of this nonelastic cord 16 is to snub the spring coil 9 and prevent its distortion when subjected to a pull tending to separate the ends 10 and 13 beyond a predetermined point. Threaded into the recess 14 is a stud 17 having a flange 18 adapted to engage the head 13. The opposite end 19 of the stud is positioned within the coils 20 of a corkscrew attachment which is secured thereto by welding or other suitable means. When it is desired to use the tool for the purpose of removing the packing from stuffing boxes, the corkscrew 20 will be mounted thereon. If desired, this corkscrew attachment may be formed from a coil spring, similar to the coil spring forming the handle 9 and drawn out into the desired form to provide a corkscrew. The direction of winding of the coils of the corkscrew attachment, however, will be opposite to the direction of winding of the coils in the coil 9, so as to permit the entry of the corkscrew into the packing or other substance desired to be attached to the tool. When it is desired to remove packing from stuffing boxes, and the like, the handle may be flexed into any desired position, an example of the flexing being given in Fig. 1. A turning of the handle will then serve to wind more tightly the coils of the spring and to effect a turning of the corkscrew at the end. When the packing has been secured by the corkscrew,

it may be pulled out of the stuffing box, the non-elastic cable or cord 16 serving to pick up the pull, and receive the thrust.

In Fig. 2, this cord 16 is shown as slidably projected through the head 13 and provided with an enlargement 15' at its end. The cord 16, of course, may be fixedly attached to the head 13, if desired.

In the form as shown in Fig. 2, the cork-screw 20 may be removed from the head 13 and the screw driver 21, which is provided with a head 18', threaded into the recess 14.

It is thus seen that I have provided a tool which is particularly adaptable for removing packing from stuffing boxes and the like, and which may be used wherever it is desired to have the working end of the tool extending at an angle to the length of the handle. The structure is a simple one, particularly for the purposes pointed out, and one which is durable and highly efficient in use.

While I have illustrated and described the preferred form of structure, I do not wish to limit myself to the precise form of structure shown but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. A tool of the class described comprising a handle formed from a coiled spring; means mounted on said handle for carrying a work tool; a non-elastic member secured at one end adjacent one end of said handle and free at its other end; and abutment means on said free end for engaging said

tool carrying means for resisting the separation of the coils of said handle beyond a predetermined amount, said tool carrying means being rotatable about said free end.

2. A tool of the class described comprising a handle formed from a coil spring; means on one end of said handle for carrying a work tool; a non-elastic member secured at one end adjacent the other end of said handle and its opposite end projected into said head, said head being free for rotative movement relatively thereto and means on said member for engaging said head and limiting the longitudinal movement of said member relatively to said head for resisting separation of the coils of said handle beyond a predetermined amount.

3. A tool of the class described comprising a handle formed from a coil spring; a hand grip bearing head mounted on said handle adjacent one end thereof; a hand grip mounted on said head; a carrying head mounted on the other end of said handle for carrying a work tool, a non-elastic member projected through said tool carrying head and rotatable therein, one end of said member being secured to said hand grip bearing head and the other end being provided with a head for limiting longitudinal movement of said non-elastic member relatively to said tool bearing head, said non-elastic member resisting separation of the coils of said handle beyond a predetermined amount and rotating without twisting in unison with said hand grip bearing head.

In testimony whereof I have signed the foregoing specification.

FRANK ENGLISH.