

949,248.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

WITNESSES

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FRICTION SPANNER, DIE AND PIPE STOCK.

949,248.

Specification of Letters Patent.

Patented Feb. 15, 1910.

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*To all whom it may concern:*

Be it known that I, EDGAR S. ROBINSON, a citizen of the United States, residing in Paterson, Passaic county, New Jersey, have invented a certain new and useful Improvement in Friction Spanners, Die and Pipe Stocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a simple and inexpensive implement whereby a perfect grip may be secured in turning various parts in the nature of nuts, dies, pipes, or the like, of circular or other form and which, either because of their round formation or because of their close relation to other parts, it is impossible to turn by means of an ordinary die-stock, or a wrench designed for use on nuts having faces, or the like.

The invention will be found fully illustrated in the accompanying drawing, wherein,

Figure 1 is a view in elevation illustrating the preferred form of the invention and showing it as holding a die; Fig. 2 is a side view thereof; Fig. 3 illustrates a modification; Fig. 4 is a detail of Fig. 3, being a section on the line *x-x* thereof.

*a* and *b* are two elongated straight members each affording a handle *c* at one end. The member *a* has a longitudinal elongated slot *d* in its other end portion and is formed, relatively beyond said slot, as a thin, substantially circular band *i* which terminates in a radial lug *j* having a transverse rib *k* on the relatively outer side thereof; the portion of member *a* having the slot and including the band and its lug is uniformly broadened throughout, as best seen in Fig. 1. The member *b* has its other end portion flattened, as at *e*, penetrating and fitting the slot *d*, and pivoted therein by means of the rivet *f*; said flattened portion *e* forms at its extremity a hook-shaped jaw *g* which projects toward the band, receiving the lug *j* between itself and the adjoining portion of member *a* and having a recess *h*, on the side thereof adjoining the lug, adapted to receive the rib on the latter. The portion of member *a* having the slot and including

band *i* and lug *j* and the tongue *l* being uniformly broad throughout, and the end-portion *e* of member *b* being uniformly flat throughout, I not only secure the advantages of durability and strength and economy of manufacture, but afford the band *i* a broad bearing surface for contact with a die, *i'*, or the like, and the lug *j* and its rib *k* a broad bearing surface for contact by the jaw *g*, although the members might initially have, or acquire, through wear, some lost motion where they are pivoted. Moreover, the band being thin, as shown, the implement may be employed, in many instances, where the proximity of the part to be turned to some other part would otherwise prevent the implement being applied.

In some instances, where the implement cannot be applied to the part to be turned over the end thereof, the band may be made in two portions, as in Fig. 3, the portion *l* projecting from the member *a* and the portion *m* being pivoted to the portion *l* at *n* and formed with a lug *o* having the tongue *p*, such parts *o* and *p* correspond to the parts *j* and *k* in Fig. 2. In this case, upon moving member *b* into the position shown in dotted line in Fig. 3, the portion *m* can be swung from the full line position to the dotted line position in said figure so that the implement can be applied to the part to be turned. In some cases, moreover, as when the part to be turned is a die or the like, and the implement is to be manipulated in a horizontal plane, it is desirable to provide means for preventing the implement from slipping downwardly on such part; I therefore provide a slide *q* having longitudinal slots *r* receiving screws *s* arranged in member *a*, the slots allowing the slide to be moved so that it projects over the die *i'* or the like or to be moved back out of the way.

In Figs. 3 and 4 is shown a lining pad *t*, of rubber, soft metal, or the like, which may be seated in a groove *u* on the inside of the embracing part of the device, its purpose being to permit the implement to be used on brass or other polished or soft metal parts without marring them.

In using the implement, having placed the embracing part thereof in encompassing relation to the part to be turned, such as a die, nut, pipe or the like, the handle of member *b* is moved toward the handle of member *a*, the effect of which is first to cause the embracing part to be drawn by the

jaw *g* into positive gripping relation to the part to be turned; since the member *a* is substantially straight and member *b* deflected where it crosses member *a*, the operator need not apply pressure to both members *a* and *b*, because pressure applied to member *b* alone serves both to contract the embracing part into gripping relation to the part to be turned and effect the turning of the latter.

It will be observed that the greater the pressure brought to bear on member *b*, the more positive and secure will be the grip on the part being turned. It will also be observed that inasmuch as it is practically possible to secure a perfect grip on the part to be turned without the implement slipping thereon, marring the said part is avoided. My improved implement is particularly useful, for instance, in the place of an ordinary die-stock, and it permits using the implement where other parts adjoining that to be turned would interfere with a die stock and make it necessary to disassemble the mechanism.

In parts to be turned of the nature of dies, nuts, or the like, the grip secured may be enhanced by providing the exterior of such parts and the interior of the embracing part of my improved implement with inter-engaging serrations 4, as shown in Fig. 2.

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

The combination of two substantially straight members each having a handle at one end, one of said members having a longitudinal elongated slot in its other end-portion and the extremity of said end-portion formed as a thin, substantially circular band, and the other member having its other end-portion formed as a hook-shaped jaw projecting toward the band, recessed on the side thereof adjoining the first member, uniformly flat throughout, and penetrating, fitting and pivotally arranged in the slot, said band having a radial lug forming its extremity and projecting between the jaw and the first member and having a transverse rib opposed to the recess of said jaw, and the portion of the first member having the slot and comprising the band and its lug being uniformly broadened, substantially as described.

In testimony, that I claim the foregoing, I have hereunto set my hand this 2nd day of December 1908.

EDGAR S. ROBINSON.

Witnesses:

WM. D. BELL,  
JOHN W. STEWARD.