

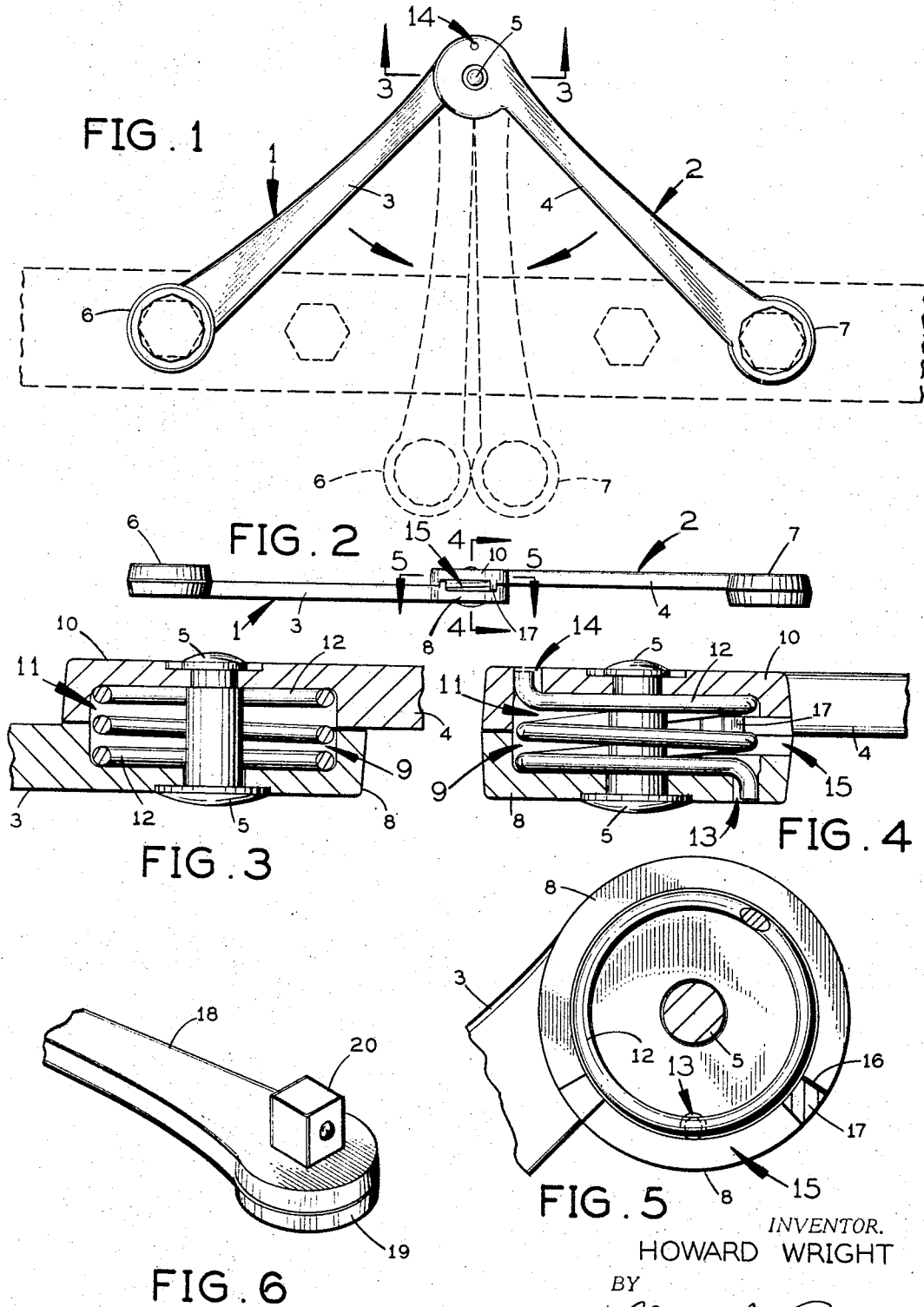
Oct. 31, 1967

H. WRIGHT

3,349,650

DUAL PIVOTAL WRENCH

Filed Aug. 16, 1966



1

3,349,650

DUAL PIVOTAL WRENCH

Howard Wright, 4249 SW. 62nd Ave.,

South Miami, Fla. 33143

Filed Aug. 16, 1966, Ser. No. 572,777

4 Claims. (Cl. 81-13)

ABSTRACT OF THE DISCLOSURE

A dual wrench for simultaneously spanning, engaging and holding a pair of spaced screw heads or nuts positioned between limits of the planar span of the wrench.

This invention relates in general to wrenches and more particularly to a dual wrench for engaging the heads of a selected pair of parallel spaced bolts or rotatable fasteners or the nuts thereof when opposite ends of the bolts or fasteners are not conveniently accessible.

Mechanics often are faced with the necessity of requiring a second party to apply a wrench to the opposite head of each of a plurality of fasteners or nuts for locking same against rotation while the first party removes or replaces the fasteners or nuts from the opposite side of an obstacle which prevents the first party from using a separate wrench on the opposite side of the vehicle.

This long existant problem is substantially solved by the present wrench which consists of a pair of like wrenches of well known type with the ends of the arms thereof pivotally secured together as a variable V, whereby any pair of selected nuts or fastener heads within the span of the dual wrenches may be engaged as a means for holding same for the desired removal of the opposite nuts or fasteners therefrom, as the case may be, which construction is a principal object of the invention.

A further object of the invention is the provision of a pair of dual wrenches for engaging like fastener heads or nuts having the outer ends of the arms thereof pivoted together for the movement of one wrench through a predetermined angle with respect to the other including spring means associated with the arms of said wrenches for urging the latter in opposite directions.

Another object of the invention is the provision of a pair of pivotal dual wrenches with the outer ends thereof adapted to receive conventional sockets of predetermined different sizes for engaging pairs of like or unlike bolt or fastener heads or nuts having the outer ends of the arms thereof pivoted for movement whereby one of the wrenches will move through a predetermined angle with respect to the other wrench for engaging pairs of selected fastener heads having parallel axes.

These and other objects and advantages in one embodiment of the invention are described and shown in the following specification and drawing, in which:

FIG. 1 is a front elevation of the dual wrench.

FIG. 2 is a top plan view thereof.

FIG. 3 is a fragmentary enlarged cross sectional view taken through section line 3-3, of FIG. 1.

FIG. 4 is a fragmentary enlarged cross sectional view taken through section line 4-4, FIG. 2.

FIG. 5 is a fragmentary enlarged view taken through section line 5-5, FIG. 2.

FIG. 6 is a perspective view of alternate outer ends for the wrench shown in FIG. 1 for receiving sockets of different size.

Referring to FIG. 1, the dual wrench consists of a wrench 1 and a wrench 2 of predetermined size with their respective ends of arms 3 and 4 pivotally secured together by a rivet or shoulder stud 5. It is apparent that a shoulder

2

screw can be journaled through one arm and threaded into the other with like operative results.

Wrench 1 terminates at its outer end in a box form head 6 of predetermined size for engaging both hexagonal and square head nuts and fasteners of a corresponding size. The outer end of wrench 2 terminates in a like box form head 7.

Referring to FIGS. 3 and 4, the arm 3 terminates at the upper end in a generally cylindrical portion 8 having a coaxial cylindrical counter bore 9 therein and the upper end of arm 4 terminates in a like cylindrical portion 10 having a like coaxial counter bore 11 therein. The inner ends of arms 3 and 4 are retained together by riveted stud 5 for oscillating movement about the axis of the latter, illustrated by dotted lines in FIG. 1.

A torsion spring 12 is coaxially retained within the adjacent counter bores 9 and 11 with the opposite ends of the spring formed to engage holes 13 and 14 in the arm portions 8 and 10, respectively.

Referring to FIGS. 4 and 5, the rim of portion 8 has a radial sector 15 of uniform depth cut therefrom forming a stop surface 16 against which a projection 17 extending from portion 10, forms a stop means which will abut when the arms 3 and 4 are in their extreme open positions, as shown in FIG. 1, under the influence of the pre-tensioned torsion of spring 12.

Referring to FIG. 6, an alternate construction provides for the arms 3 and 4 terminating at both their outer ends in a cylindrical portion 19 having a central square shank 20 projecting from one side thereof parallel the axis of stud 5. Thus, any selected pair of conventional sockets may be slidably secured on each shank 20, as desired.

In operation, the dual wrench normally is in an extended position, as shown in FIG. 1, by the action of spring 11 and may be manually contracted to the position illustrated by dotted lines in FIG. 1 by one hand of the operator grasping arms 3 and 4. When the operator desires to remove one or more nuts from "in place" bolts in which the heads are not readily accessible, then each of the dual wrench heads is applied to each of the heads of the pair of selected bolts, which are substantially in the same plane, for locking same against rotation. The dual wrench will maintain its bolt holding position by virtue of the tension of spring 11 urging each wrench arm in opposite direction. Under these circumstances, the nuts may be readily removed from the opposite side of an obstruction in a normal manner without an additional person holding a wrench on the bolt heads. It is apparent that the dual wrench will hold either the fastener heads or nuts thereon which are isolated by an obstruction.

It is understood that certain modifications in the construction, utilizing the features above described, are intended to come within the scope of the appended claims.

Having described by invention, I claim:

1. A dual pivotal wrench for locking a pair of parallel co-planar spaced fastener heads or nuts comprising a pair of arms of predetermined length with each one thereof terminating in a like wrench means,
a cylindrical stud means secured through each of said arms at the end opposite each said wrench means for retaining each of said arms in adjacent relation and permitting relative oscillation of one of said arms with respect to the other about the axis of said stud means within a predetermined angle,
each of said arms formed to terminate in an open cylindrical cavity coaxial with said axis and each said cavity in an opposite side of each said arm in facing relation with each other,
each said wrench means positioned on each of said arms for substantially co-planar movement normal said axis when said arms are oscillated whereby the engagement of each said wrench means with each of said

3

pair of fastener heads or nuts respectively will prevent the rotation thereof, a torsion spring positioned around said stud and extending into each said cavity with said spring biased between said arms for urging one of said arms in opposite direction with respect to the other said arm.

2. The construction recited in claim 1 wherein each said wrench means comprises an open end wrench of like predetermined size.

3. The construction recited in claim 1 wherein each said wrench means comprises a projection for detachably retaining a socket of selected size.

4. A dual pivotal wrench for locking a pair of parallel co-planar spaced fastener heads or nuts comprising a pair of arms of predetermined length,

a stud means secured through one end portion of each of said arms for pivotal adjacent engagement and permitting relative oscillation of one of said arms with respect to the other about the axis of said stud means,

4

each of said arms formed to terminate in an open cylindrical cavity coaxial with said axis and each said cavity in an opposite side of each said arm in facing relation with each other,

the outer end portion of each said arms terminating in an integral box form wrench of predetermined like size,

each said wrench positioned for substantially co-planar movement normal said axis when each of said arms is oscillated with respect to each other,

a coiled torsion spring means extending into each said cavity and biased between each of said arms for urging each of said arms in opposite direction about said axis.

References Cited

UNITED STATES PATENTS

2,202,895	6/1940	Brinton	81—13
3,039,339	6/1962	Hanson	81—177

MILTON S. MEHR, *Primary Examiner.*