

Feb. 14, 1933.

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1,897,465

VIBRATION DAMPENER REMOVING TOOL

Filed Aug. 21, 1931

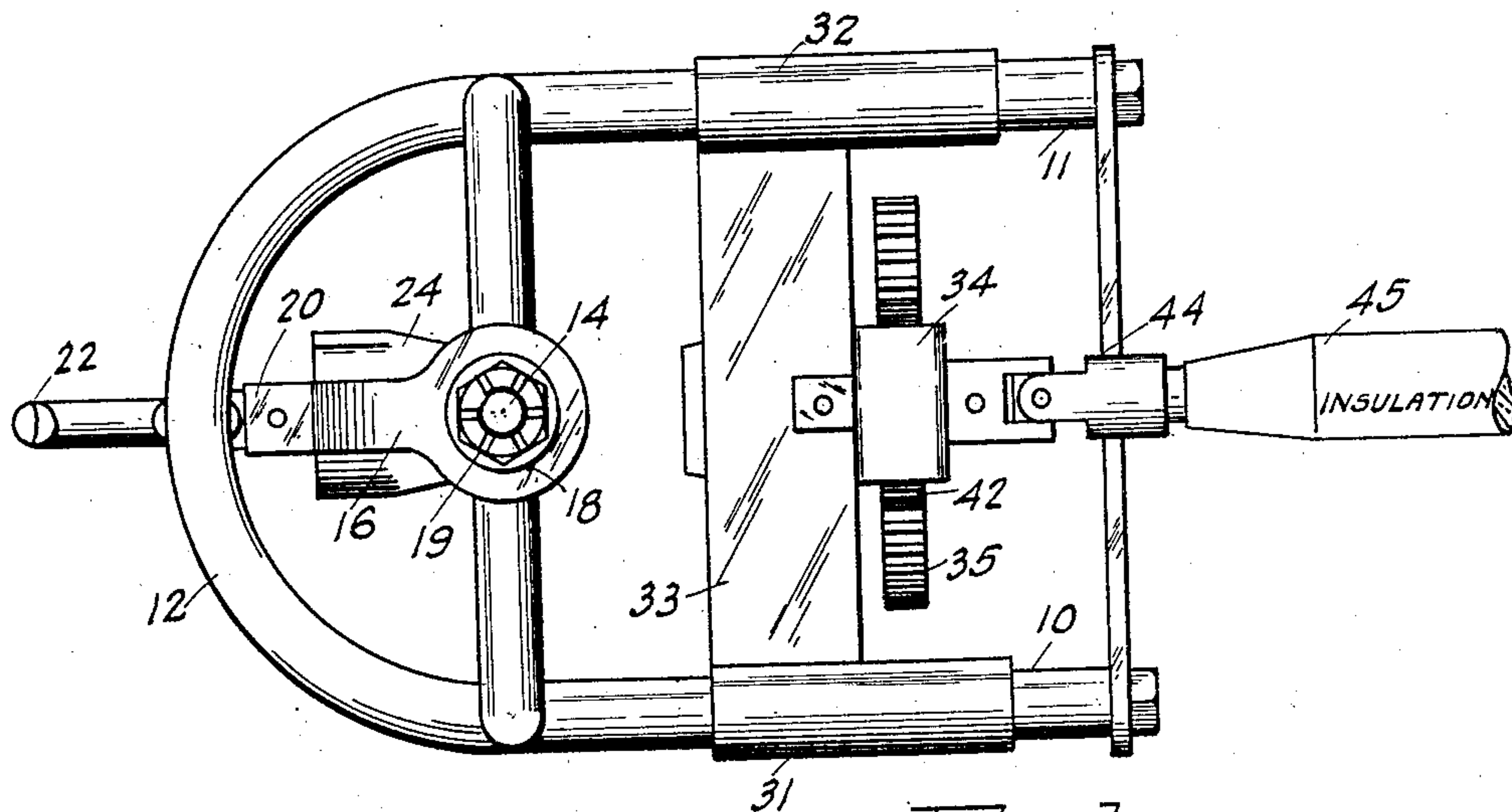


Fig. 1

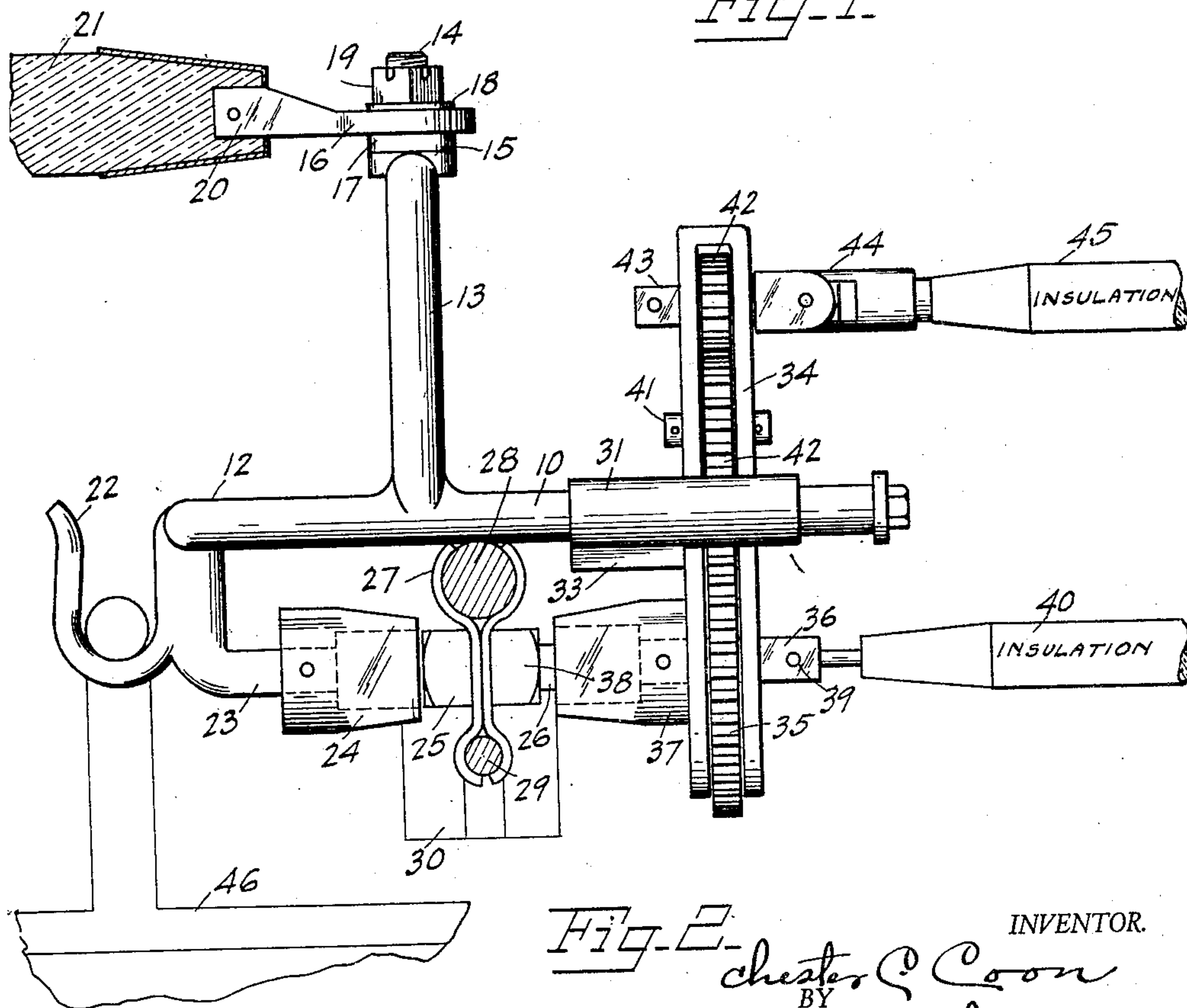


Fig. 2

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VIBRATION DAMPENER REMOVING TOOL

Application filed August 21, 1931. Serial No. 558,496.

This invention is a vibration dampener removing tool which is especially adapted to the removal of vibration dampeners from hot wires.

5 The main object of the invention is to provide a tool for removing the nut from the clamp bolt of vibration dampeners such as are used on high tension transmission lines, for the purpose of removing the dampener
10 from the line.

Another object of the invention is to provide a tool, as outlined with remote means of operation through members of insulating material, whereby the device may be safely
15 operated on high tension lines, irrespective of the voltage.

A further object of the invention is to provide a device as outlined with means for supporting a basket for catching the dampener
20 as it is released from the line, or for the purpose of applying the basket to the line.

A still further object of the invention is to make the device in such manner as to be supported by the line from which the dampener is to be removed, and when so supported,
25 to have the wrench sockets align or be in registry with the head of the bolt and with the nut.

Other objects and advantages of the invention will become apparent as the following description is read on the drawing forming a part of this specification and in which similar reference characters are used to designate
30 similar parts throughout the several views and in which:

Fig. 1 is a top plan view of the invention.

Fig. 2 is a side elevation of the invention showing the device in position for removing a vibration dampener from a hot wire.

40 The frame consists of a pair of spaced, parallel guides 10 and 11, which form the legs of a U member 12, and an arch 13 which is integral with and perpendicularly disposed relative to members 10 and 11. A stud 14 is
45 formed vertically from the center of the arch 13 and has a shoulder 15 formed at the coincidence with the arch, although this stud may be a separate part if so desired.

50 The lifting and placing means consists of an arm 16 pivotally mounted on stud 14 and

frictionally retained by a fibre washer 17 and a washer 18, being adjustable as to friction by means of a castellated nut 19. The outer end 20 is formed to cooperate with a bar or pole 21 of insulating material, which may be
55 of kiln dried wood properly shellacked or of "bakelite" or other suitable material.

Integral with the U bend 12 is a hook 22 which is adapted to support a basket to catch the dampener as it is released from the wire,
60 or by means of which the basket may be hung on the wire for the same purpose.

Integral with this hook and extending backwardly therefrom is a tang 23 on which is secured a slotted member 24 constituting a
65 socket to receive the head 25 of a clamp bolt 26 which is used for clamping the clamp 27 to the high tension line 28 and dampener cable 29 to which the dampener weights 30 are se-
70 cured.

Slidably mounted on the guides 10 and 11 is a wrench carriage, which consists of a pair of sleeves 31 and 32 slidably fitting the guides 10 and 11 and having a spanning member 33
75 integral therewith, forming a support for the wrench proper, and wrench actuating mechanism.

Integral with or secured to the spanning member 33 is a gear bracket 34 of U form in which the gears are suitably supported for
80 operating the wrench socket.

The driven gear 35 is fixedly mounted on a shaft 36 on one end of which is fixedly secured, a socket 37 of proper size to cooperate with the clamp nut 38, and the other end of
85 the shaft is provided with an aperture to receive the hook 39 secured in the end of a bar or pole 40 of insulating material and which hook is removable from the aperture. Meshing with gear 35 and pivotally mounted on
90 the shaft 41 is an idler gear 42, the chief purpose of which is to provide unidirectional rotation between the drive pinion 42 and socket 37, this drive pinion being fixedly
95 secured on the shaft 43, on one end of which is fixedly secured a knuckle joint 44, which in turn has an insulating pole or handle 45 removably secured thereto.

The invention is used as follows:

A clamp is placed about the handle 21 at 100

the center of gravity of the device, to which block and tackle are attached and the device is hoisted over the line and dampener to be removed, then lowered to rest on the line 28 as shown in Fig. 2. The dampener having been attached by means of the vibration dampener applicator which forms the subject matter of my copending application Serial No. 558,497 filed August 21, 1931, the head 25 will always be square with the axis of the clamp, therefore the socket 24 will readily engage the head. The carriage is then pressed forward on the nut 38 by means of handle 40 or 45 and the socket 37 rotated until the nut 38 is engaged. The nut is then backed off by rotating the handle 45 counter clockwise or to the left for right hand threads. As the clamp is released from the line 28, the weights 30 together with the clamp and clamp bolt drop into a basket 46 supported on the hook 22 or on the line and which extends beneath the dampener, as indicated. As the dampener is released, the device is again hoisted sufficiently to pass the device over the line, and lowered to the ground, the basket 46 being picked up by the hooks previous to lowering.

Having described an operable method of constructing and using the invention, it will be understood that variations in construction and arrangement of parts which are consistent with the appended claims may be resorted to without detracting from the spirit or scope of the invention or sacrificing any of the advantages thereof.

I claim:

1. A vibration dampener removing tool comprising sockets adapted to cooperate with the head and nut of a clamp bolt, supporting means for said sockets adapted to be removably supported on the line from which the dampener is to be removed, means for operating one of said sockets from a remote point and a handle pivotally supporting said supporting means, and means for frictionally adjusting said pivotal support.

2. For operation with a transmission line and upon a vibration dampener secured thereto by means of a clamp and clamp bolt; removal means adapted to be supported by said line comprising a supporting frame, a handle pivotally secured thereto, a stationary socket supported by said frame adapted to cooperate with the head of said bolt, a retractable socket adapted to cooperate with the nut of said bolt, means for rotating said retractable socket said means consisting of a handle of insulating material and means on said frame for supporting a basket to catch said dampener.

3. For operation with a transmission line and upon a vibration dampener secured thereto by means of a clamp and clamp bolt; removal means adapted to be removably supported on said line comprising a frame, a supporting handle pivotally secured thereto,

a stationary socket on said frame adapted to cooperate with the head of said clamp bolt, a rotatable socket adapted to cooperate with the nut of said bolt, said rotatable socket being slidably supported on said frame, means for rotating said socket from a remote point, and means for catching said dampener when released from said line.

4. A vibration dampener removing tool comprising a U shaped frame having an intermediately disposed upwardly extending transverse arch, a handle pivotally secured to the top of said arch in parallel relation to said U shaped frame, a transverse member slidably mounted on said frame, a socket rotatably mounted and carried by said transverse member in axial relation to said frame and a fixed socket in alignment with said socket.

5. A vibration dampener removing tool comprising a U shaped frame and an upwardly extending transverse member connecting the legs thereof, a handle pivotally mounted and frictionally secured to said transverse member, a carrier slidable on the legs of said frame, a socket disposed beneath said frame and rotatably mounted in said carrier and axially related to said frame and a fixed socket secured to said frame in alignment with said rotatable socket.

6. A vibration dampener removing tool comprising a U shaped frame and an upwardly extending transverse member connecting the legs thereof, a handle pivotally mounted and frictionally secured to said transverse member, a carrier slidable on the legs of said frame, a socket disposed beneath said frame and rotatably mounted in said carrier and axially related to said frame, a fixed socket secured to said frame in alignment with said rotatable socket and a hook integral with said frame adapted to removably support a catching member for said vibration dampeners when released from the line.

7. A vibration dampener removing tool comprising a U shaped frame and an upwardly extending transverse member connecting the legs thereof, a handle pivotally mounted and frictionally secured to said transverse member, a carrier slidable on the legs of said frame, a socket disposed beneath said frame and rotatably mounted in said carrier and axially related to said frame, a fixed socket secured to said frame in alignment with said rotatable socket, a hook integral with said frame adapted to removably support a catching member for said vibration dampeners when released from the line and reduction gearing mounted in said carrier and cooperating with said rotatable sprocket.

8. A vibration dampener removing tool comprising a U shaped frame and an upwardly extending transverse member con-

necting the legs thereof, a handle pivotally
mounted and frictionally secured to said
transverse member, a carrier slidable on the
legs of said frame, a socket disposed beneath
5 said frame and rotatably mounted in said
carrier and axially related to said frame, a
fixed socket secured to said frame in align-
ment with said rotatable socket, a hook in-
tegral with said frame adapted to removably
10 support a catching member for said vibra-
tion dampeners when released from the line,
reduction gearing mounted in said carrier
and cooperating with said rotatable sprocket,
said reduction gearing comprising a main
15 gear secured to said rotatable socket, an idler
gear and a pinion meshing with said idler
gear whereby said pinion is rotated in the
same direction as said socket.

9. A vibration dampener removing tool
20 comprising a U shaped frame and an up-
wardly extending transverse member con-
necting the legs thereof, a handle pivotally
mounted and frictionally secured to said
transverse member, a carrier slidable on the
25 legs of said frame, a socket disposed beneath
said frame and rotatably mounted in said
carrier and axially related to said frame, a
fixed socket secured to said frame in align-
ment with said rotatable socket, a hook in-
30 tegral with said frame adapted to removably
support a catching member for said vibration
dampeners when released from the line, re-
duction gearing mounted in said carrier and
cooperating with said rotatable sprocket,
35 said reduction gearing comprising a main
gear secured to said rotatable socket, an idler
gear, a pinion meshing with said idler gear
whereby said pinion is rotated in the same
direction as said socket, a shank on said sock-
40 et and a shank on said pinion adapted to se-
lectively operate said socket directly or
through reduction gearing.

In testimony whereof I affix my signature.

CHESTER C. COON.

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