

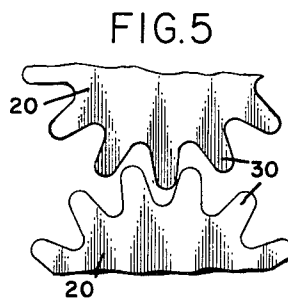
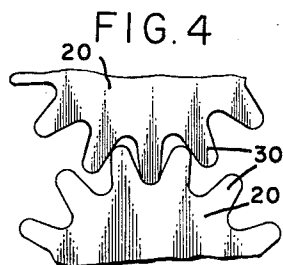
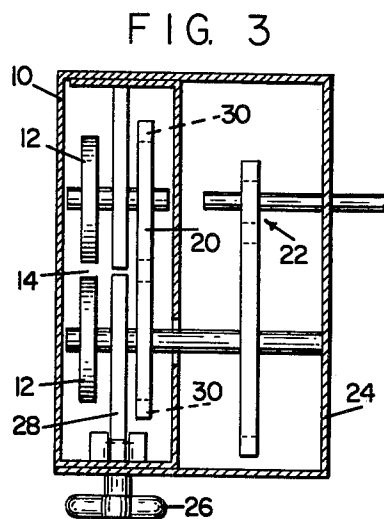
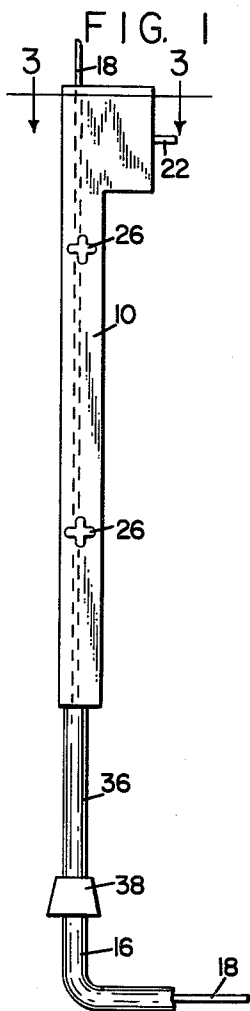
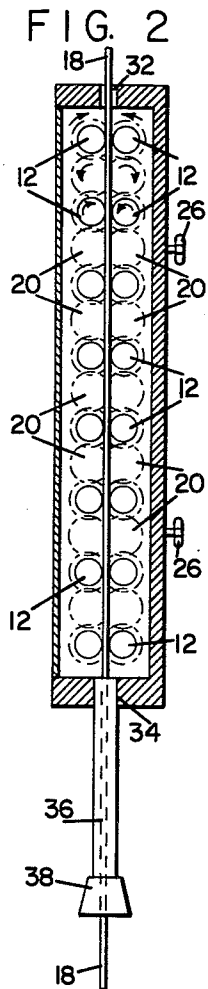
Nov. 30, 1965

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3,220,700

POWER DRIVE FOR ELECTRICIAN'S SNAKE

Filed Dec. 11, 1963



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POWER DRIVE FOR ELECTRICIAN'S SNAKE

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Filed Dec. 11, 1963, Ser. No. 329,834

1 Claim. (Cl. 254—134.3)

In providing for electric power lines particularly in new buildings, metal conduits are bent as required prior to casting concrete permanently embedding them in position and then the well known electrician's snake must be utilized to pass through the conduits for attachment to the flexible electric cables to draw the same through the curved conduits. Somewhat the same problems occur also in other types of buildings and also in old buildings in which the electric system is being improved, extended or renewed.

As is well known in the art it is difficult to move this snake through the conduits inasmuch as the snake has to be flexible in order to pass the corners which are provided in the conduit which is to contain the electric cable, and this invention provides a solution for the problem which is relatively inexpensive, extremely easy to operate, and can be done on the job at any time through the use of a small electric motor such as a conventional power drill unit having a chuck.

The invention includes the provision of a casing in which are supported on parallel axes a series of pairs of driven rolls all being driven in the same direction which either frictionally or through the use of small teeth are adapted to grasp therebetween the flexible electrician's snake, in combination with a flexible tube through which the snake is passed by said wheels or gears, said flexible tube being provided with a conduit adapter so as to provide for the treatment of conduits of any size such as for instance the conventionally used sizes of one-half inch to two inches in diameter. The power for driving the wheels may be simply a spindle driving a reduction gear at one end of the casing, said spindle being adapted to be connected to the chuck of any kind of portable drill, flexible shaft, etc. which may be utilized to drive the same and thereby to drive the wheels for driving the snake.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which

FIG. 1 is a view in side elevation showing the invention;

FIG. 2 is a longitudinal section through the casing showing the drive gear,

FIG. 3 is a section on line 3—3 of FIG. 1 on an enlarged scale, and FIGS. 4 and 5 illustrate the gearing in different degrees of adjustment.

In carrying out the invention it is desirable to employ an elongated casing such as that at 10 which may be of any construction. It is elongated for the purpose of mounting a series of wheels on parallel axes, the wheels being indicated by the reference numeral 12. The wheels 12 are arranged in pairs and are mounted in any kind of suitable bearings which may be found to be desirable and as shown in FIG. 3 they are slightly spaced as indicated at 14 as to the pairs, to form a nip.

The wheels 12 can be of rubber, plastic or any suitable material which will grasp and feed the conventional elec-

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trician's snake or other flexible member which is desired to be moved through the conduit which is indicated generally in FIG. 1 by the reference numeral 16, the snake being indicated at 18. However if desired or found necessary the wheels can be provided with small spikes for positively gripping and driving the snake.

The wheels 12 are all rotated in a direction such as to cause forward progress of the snake by a series of drive gears which are meshed and are indicated by the reference numeral 20 mounted to drive the wheels 12 as indicated in FIG. 3. Appropriate idle wheels, etc. are utilized in order to provide that all the shafts or all the wheels drive in the required direction.

The gears 20 are driven from a spindle 22 by any desired means such as the chuck of an electric hand drill or the like through a reduction gearing which is only conventionally shown and indicated at 22 in a box 24 forming part of the elongated housing 10.

Also if desired adjustment screws 26 can be utilized to cause a support at 28 for the wheels 12, or one-half of each pair, to be moved in or out with relation to the other wheels of the pairs, which can be made stationary, and this is done in order to accommodate snakes or cables of different sizes. At the same time however the meshed gears 20 will stay in mesh, see FIGS. 4 and 5, due to the fact that their teeth are relatively long as indicated in dotted lines at 30, FIG. 3, so that an adjustment between the wheels at gap 14 is made possible. It is to be understood that bearings, supporting members, etc. as desired or required may be utilized.

However, the casing 10 is provided with the inlet openings for instance at 32 and the outlet 34 at the other end thereof which leads to a flexible tube 36. This flexible tube 36 is mounted at one end of the casing and is relatively short and carries at its other end an adapter 38 of conventional and well known design to which the conduits 16 of different sizes as mentioned above may be attached.

It will be seen that this invention therefore provides for a means which will drive a flexible snake of appropriate size through the conduit 16, which is already in place, and the snake is of a size to pass easily through the conduit but cannot become buckled or ruffled therein because it may be of a size to merely comfortably fill the section of the conduit it is intended for.

When the snake reaches the opposite end of the conduit, the cable is attached to it by conventional means and it can be withdrawn again by power simply by reversing the rotation of the spindles 22 or by providing a well known conventional reversing gear in the portion of the housing at 24.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claim, but what I claim is:

In combination with an electric cable conduit, an electric cable to be provided therein, and a conventional electrician's snake; an elongated housing, a series of paired rotatable driving wheels in said housing, meshed gears to rotate all of said wheels uni-directionally, an orifice admitting the snake to the housing at one end thereof to be fed between the respective pairs of driving wheels therein to the opposite end thereof, an exit orifice, a free-ended flexible tube attached to said housing at the opposite end and surrounding the exit orifice, and a conduit adapter on the free end of said tube for application

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to an exposed end of said conduit, the pairs of wheels in the casing driving the snake through the housing, through the tube, and through the conduit to a point where the snake may be attached to the cable, which upon reversal of the direction of rotation of said snake driving wheels 5 will draw the snake in a reverse direction and draw the electric cable through the conduit, means adjustably mounting one series of gears and their wheels with relation to the other series of wheels to vary the gap therebetween, the gears remaining interengaged and driving 10 the wheels regardless of the adjustment.

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