

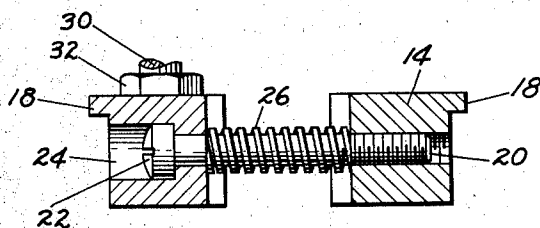
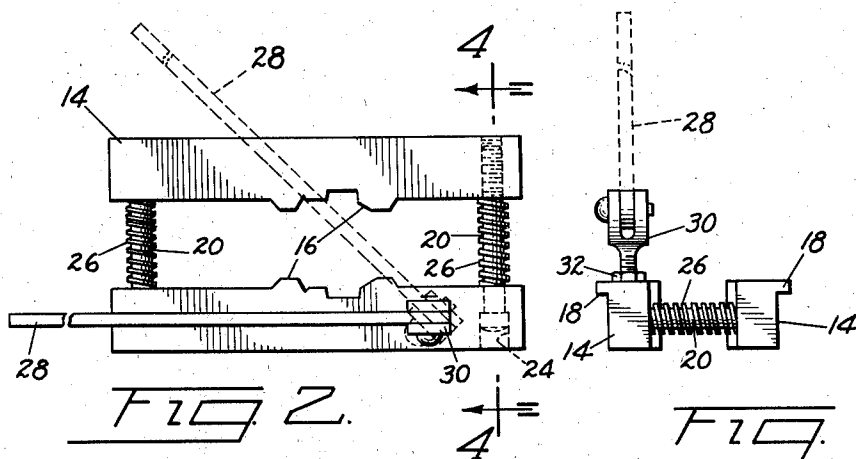
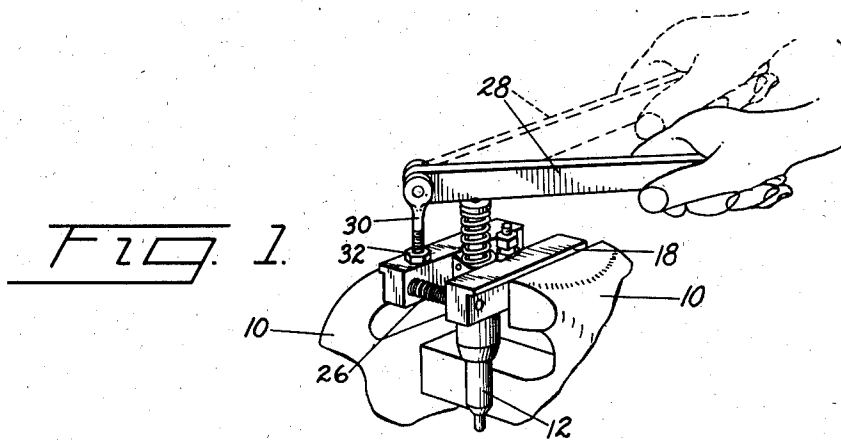
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DIESEL INJECTOR POPPING TOOL

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DIESEL INJECTOR POPPING TOOL

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2 Claims. (Cl. 73—51)

This invention relates to an improved Diesel engine injector popping tool which is adapted to be used in combination with a conventional vise to securely grip the body of a Diesel engine injector and safely hold the injector and which tool is provided with mechanism whereby the plunger of the injector held by the tool may be projected or "popped" to test the same.

Whenever the injector of a Diesel engine has been rebuilt it should be tested before it is installed for use. Such test is commonly known as "popping" the injector. The injector is filled with oil and the plunger which is provided with a plurality of fuel discharge orifices at its tip is popped to determine if oil discharges evenly from each of the several orifices. My tool is designed to be used in making this test.

Other objects, advantages, and meritorious features of the invention will more fully appear from the following description, appended claims, and accompanying drawing:

Figure 1 is a perspective showing my injector popping tool clamped between the jaws of the vise ready for use,

Fig. 2 is a plan of the tool shown in Fig. 1,

Fig. 3 is an end view of the construction shown in Fig. 2,

Fig. 4 is a cross-sectional view on line 4—4 of Fig. 2.

The device here shown is adapted to be employed with a vise and in Fig. 1 the jaws of a conventional vise are indicated as 10 showing this improved device clamped therebetween and with the device itself clamping a Diesel engine injector 12 for popping. The injector popping tool comprises a pair of cooperating clamping jaws 14 having their inner faces shaped as at 16 to grip the particular shape of body of the injector. Each jaw has a flange 18 extending along its upper edge and adapted to overhang the jaw of the vise as illustrated in Fig. 1 to properly support the tool.

The two jaws 14 are supported or connected together by pins 20. Each pin has a head 22 which is seated within a recess 24 in one jaw as shown in Figs. 2 and 4. Each pin is threaded at its opposite end to engage the other jaw as illustrated in Fig. 4 whereby the outer faces of the jaws are free of obstructions and flush throughout.

Each guide pin 20 carries a spiral expansion spring 26 which acts to hold the two jaws apart but permits the movable body to be moved over the pins toward the other jaw upon tightening of the jaws of the vise 10.

One clamping jaw 14 carries a handle 28. This

handle is pivoted upon a support 30, which support is threadedly socketed within the clamping jaw 14 and a nut 32 is provided to adjust the height of the same and to hold it in place. The engagement of the support 30 with the jaw 14 is such that the support may swivel to permit the handle to be swung over the space between the two jaws so as to superpose an injector or it may be swung to a position uncovering such space as shown in Fig. 3 and in dotted lines in Fig. 1.

What I claim is:

1. A Diesel injector popping tool comprising a pair of complementary clamping jaws having opposed portions of their inner faces intermediate the ends of the jaws shaped to grip a Diesel injector body therebetween, a pair of guide pins fixed to opposite ends of one jaw and extending through pin apertures in the complementary jaw connecting said jaws together, said complementary jaw being slidable toward and away from the fixed jaw, said complementary jaw being recessed about each pin to a distance substantially greater than the thickness of the head of the pin, each pin having a head seated within said recess, an expansion spring encircling each pin between said jaws resistingly holding the jaws apart, handle mechanism swivelled to one jaw between its pin connection and its shaped face portion to be swung to a position overlying the opening between the shaped face portions of said jaws or to a position not overlying said opening, said handle pivotally supported to be raised above or lowered toward said opening.

2. A Diesel injector popping tool comprising a pair of complementary clamping jaws having opposed portions of their inner faces intermediate the ends of the jaws shaped to grip a Diesel injector body therebetween and having outer faces provided along their upper edges with complementary outwardly projecting flanges, a pair of guide pins extending between opposite end portions of said jaws connecting the jaws together and upon which one of the jaws is fixed and the other jaw is slidable toward and away from the fixed jaw, expansion springs encircling said pins between the jaws resistingly holding said jaws apart, an upright standard mounted upon one jaw to rotate about a vertical axis and adjustable as to height of projection above the jaw, a handle pivoted upon said standard for raising or lowering, said handle adapted to be swung with the standard to a position over the shaped complementary face portions of the opening between the jaws or to a position not over and in alignment with the handle supporting jaw.

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