

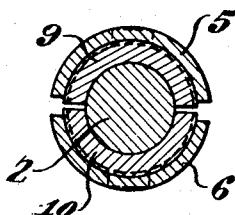
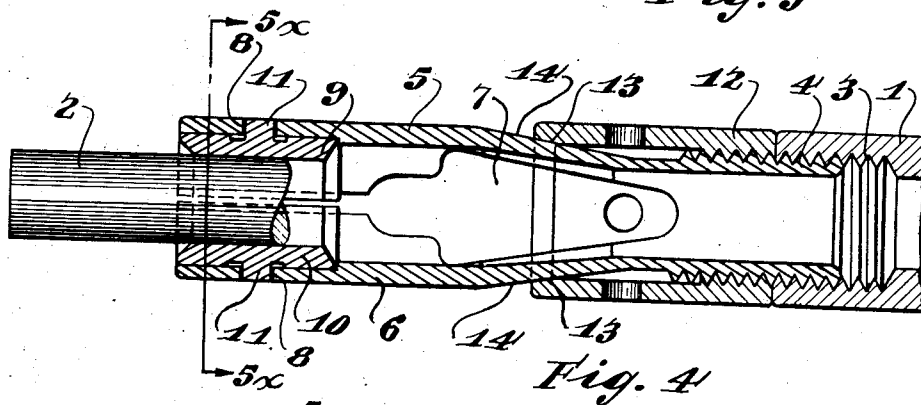
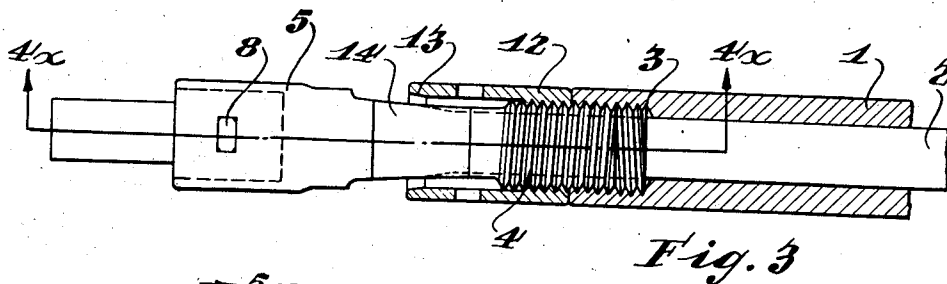
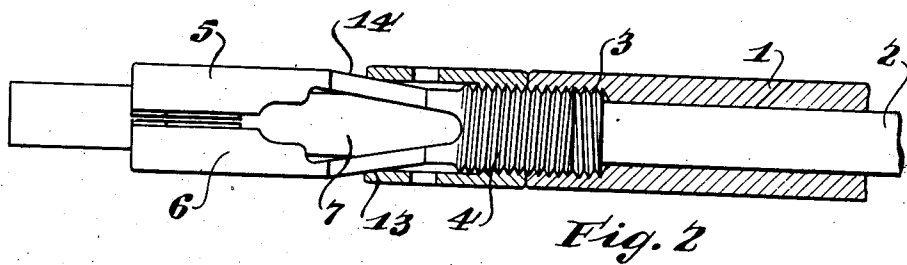
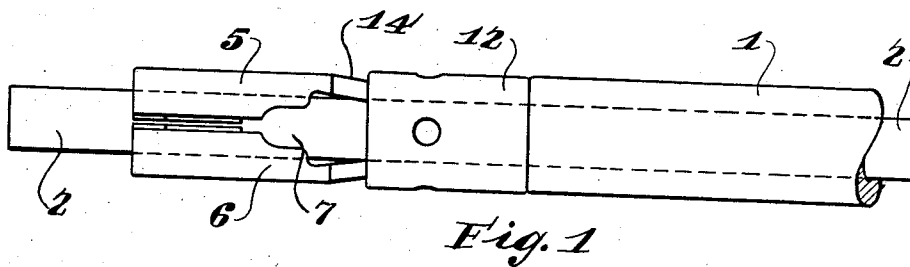
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2,159,388

FEED FINGER FOR SCREW MACHINES

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FEED FINGER FOR SCREW MACHINES

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2 Claims. (Cl. 29—62)

Screw machines are well known and in general use. These machines work on stock of standard sizes, which is fed to the machine at regular intervals and is turned by the machine into the shapes desired. It is also common practice for the stock to be fed to the screw machine through so-called feed fingers which clamp the stock between them more or less securely for the purpose of advancing it to the machine, turning it in connection therewith. It is also common practice to equip the feed fingers with so-called metal pads, which contact with the stock and which take the friction and wear between the pads and the stock.

These pads become worn and fail to grip the stock of a given diameter sufficiently to cause accurate feeding, which in turn causes inaccuracies in the parts that are made by the screw machine.

To overcome these difficulties or objections I have invented a feed finger with jaws that can be adjusted, so that the clamping effect between the fingers and the stock, or between the pads and the stock, can be varied at will and adjusted to a nicety and fixed in the desired position.

Another object of the invention is to make this adjustment with but few parts, and provide for locking the jaws of the feed finger in their adjusted position so that they will retain the desired adjustment.

These and other objects of the invention will be illustrated in the drawing, described in the specification, and pointed out in the claims at the end thereof.

In the drawing:

Figure 1 is a side elevation of the tube through which the stock is fed and the feed finger mounted thereon.

Figure 2 is a vertical longitudinal section through the tube and the adjusting sleeve of the feed finger, the feed finger being shown in side elevation.

Figure 3 is a vertical section through the tube and the adjusting sleeve, the section being taken at right angles to the section shown in Figure 2.

Figure 4 is an enlarged sectional view of the feed finger and pads, and the feed tube, and the adjusting sleeve, the section being taken on the line 4x—4x of Figure 3.

Figure 5 is a vertical section on the line 5x—5x of Figure 4.

In the drawing like reference numerals indicate like parts.

In the drawing reference numeral 1 indicates the tube through which the stock is fed to the

screw machine. This tube revolves at high speed. Inside of this tube is the stock 2, which is fed to the screw machine. This tube is threaded at the forward end with a female thread as indicated at 3. In this female thread engages the shank 4 of the feed finger which is threaded with a male thread. This feed finger has two jaws 5 and 6 of the standard type, which are formed by cutting away the metal between them as indicated in the opening 7 formed thereby, thus giving more or less spring or resiliency to the two jaws of the feed finger. This part of the feed finger is of a standard type and constitutes no part of my invention.

The sides of the feed finger at the forward end are provided with rectangular openings 8. In the feed fingers are inserted metal pads 9 and 10, which have lugs or extensions 11, 11 which engage in the openings 8 and by which they are positively rotated by the feed finger. Between these pads the stock 2 is held, and is rotated and fed forward from time to time as is needed.

The shank of the feed finger is threaded with a long male thread, as indicated at 4. The rear part of this thread engages with the female thread in the feed tube 1. The forward part of the thread 4 engages with the adjusting sleeve 12, which sleeve is cut away at the forward part to form a cone-shaped surface as shown at 13. This cone-shaped surface engages with corresponding tapered or inclined surfaces 14 on opposite sides of the feed finger. As the sleeve 12 is turned forward the two jaws 5 and 6 of the feed finger are drawn together to any desired extent by the pressure of the cone-shaped surface 13 on the inclined surfaces 14 on the finger, causing the pads 9 and 10 to clamp the stock accurately and feed or turn it, or both feed and turn it.

When the sleeve 12 has been positioned correctly on the tapered portion 14 of the feed finger, then the assembly of the feed finger and the sleeve 12 is turned back and the shank 4 is screwed into the feed tube until the end of the sleeve 12 abuts against the end of the tube 1. This locks the sleeve 12 and the feed finger correctly in position on the sleeve 1, so that the adjustment of the two jaws of the feed finger will be correctly maintained thereafter and the finger will feed correctly until another adjustment is needed.

I claim:

1. A feed finger for a screw machine having two resilient jaws on one end and a male screw thread on the other end, a sleeve threaded on said male thread of the finger, said sleeve being

tapered internally on one end and being adapted to engage the jaws of the feed finger with that end to draw them together, a feed tube having a female screw thread therein in which the male thread of the feed finger engages, the threaded end of the feed finger being adapted to be screwed into the threaded end of the feed tube until the end of the sleeve and the end of the feed tube are brought firmly together, by which the sleeve and jaws of the feed finger are locked in position.

2. A feed finger for a screw machine having two resilient jaws on one end and a long male screw thread on the other end, a sleeve having a short female thread at the rear end, said sleeve being threaded on the male thread of the finger, said sleeve being tapered internally at the forward

end and being adapted to engage the jaws of the feed finger with the forward tapered end to draw them together, a feed tube having a female screw thread therein in which a part of the long male thread of the feed finger engages, the sleeve being adapted to be adjusted independently on the feed finger, and the assembly of the feed finger and sleeve being then adapted to be turned so that the threaded end of the feed finger is screwed into the threaded end of the feed tube until the end of the sleeve and the end of the feed tube are brought firmly together so that the feed tube acts as a lock nut to the sleeve on the feed finger.

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