Nov. 6, 1923. 1,473,188

A. M. KRAMP ET AL

FEED COLLET

Filed March 28, 1922

FIG_1_

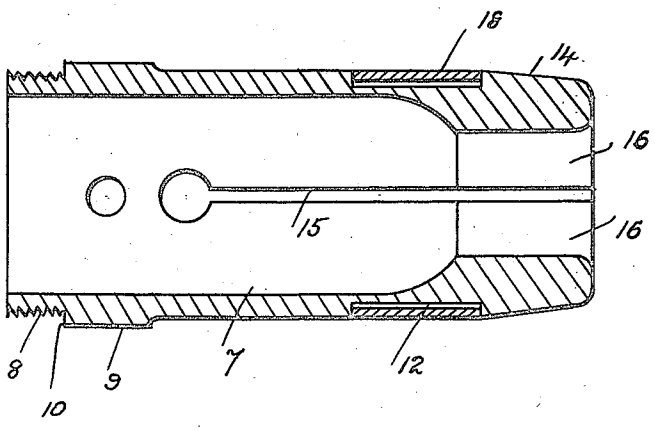


FIG_2_

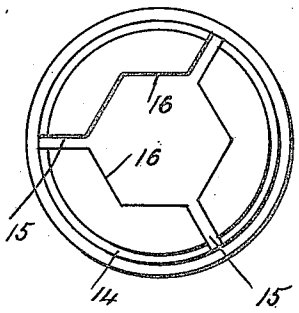


FIG_3_

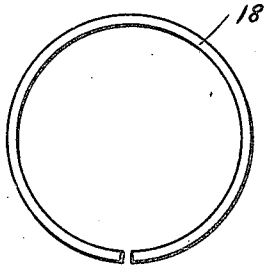


FIG_4_

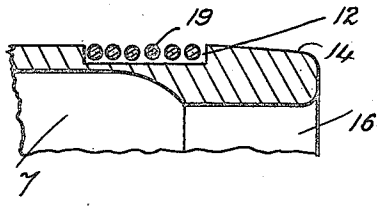
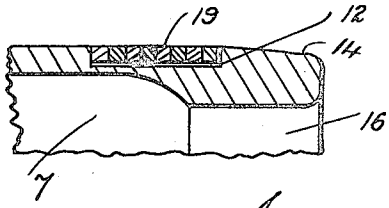


FIG_5_



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UNITED STATES PATENT OFFICE.

ARTHUR M. KRAMP, LUDWIG F. PETERS, AND EDWARD J. RATHSACK, OF MILWAUKEE, WISCONSIN.

FEED COLLET.

Application filed March 28, 1922. Serial No. 547,465.

To all whom it may concern:

Be it known that we, ARTHUR M. KRAMP, LUDWIG F. PETERS, and EDWARD J. RATHSACK, citizens of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Feed Collets, of which the following is a specification.

This invention relates to feed collets or feed shells used for feeding bar stock in automatic or hand screw-machines; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed whereby the bar stock is tightly and uniformly gripped irrespective of the shape of the bar in cross-section, and which is readily adjusted to grip the stock with different degrees of tightness.

In the drawings, Figure 1 is a longitudinal section through a feed collet constructed according to this invention. Fig. 2 is an end view of the same. Fig. 3 is a detail view of the preferred form of spring. Figs. 4 and 5 are sections showing modifications in the forms of the springs.

The collet or shell has a cylindrical body portion 7 of spring metal, having a screw-threaded portion 8 at one end, and an enlargement 9 adjacent to the screwthreaded portion which forms a shoulder 10 where it joins on to it. The body portion 7 has a circumferential groove 12 in its other end portion, and it has a tapering end portion 14 in front of the groove. Longitudinal slots 15 are formed in the front and middle parts of the body portion in front of the enlargement 9. These slots divide the main part of the body portion into three spring arms, and these spring arms have similar angle-shaped jaws 16 which project inwardly and grip the work. More than three spring arms may be provided, if desired, and the jaws 16 may be of any other approved form.

A spring ring 18 is forced over the tapering parts 14, into the groove 12, and reinforces the spring arms. A single broad and flat spring ring 18 is used, but a series of similar narrow rings 19 may be used if desired, and they can be circular in cross-section as shown in Fig. 4, or square in cross-section as shown in Fig. 5. When a series of springs is used, one or more of the springs can be omitted to adjust the pressure.

The feed collet is screwed into one end of the feed tube of the machine, and the bar of stock is fed through the feed tube, and is gripped by the jaws of the spring arms which are re-inforced by the spring ring or rings.

What we claim is:

1. A feed collet, comprising a tubular body having a screw-threaded portion at one end for securing it in place, said body having longitudinal slits in its other end portion which divide it into spring arms having tapering portions and jaws at their free ends, said arms having also an external circumferential groove intermediate of their ends and behind their tapering portions, and a reinforcing spring for the said spring arms sprung over their said tapering portions into engagement with the said circumferential groove.

2. A feed collet as set forth in claim 1 and provided with a series of separately removable spring rings for engaging with the said circumferential groove.

In testimony whereof we affix our signatures.

ARTHUR M. KRAMP.
LUDWIG F. PETERS.
EDWARD J. RATHSACK.