

WHAT IS CLAIMED IS:

1. A crimping device comprising:
 - a plurality of crimping jaws in meshing engagement and circumferentially arranged around a crimping orifice having a central crimping axis, each having inner crimping wedges;
 - a rotating cam wheel adapted to act on the crimping jaws and displace them generally radially inward;
 - a stationary outer housing containing the cam wheel and crimping jaws;
 - and
 - a plurality of guide elements which are each constrained by fixed grooves in the outer housing for movement between first and second positions along lines that are tangential to a circle around the central axis, the guide elements moving at least some of the crimping jaws along the lines such that all of the crimping wedges of the crimping jaws translate inward along radial lines toward the crimping axis.
2. The device of claim 1, wherein the crimping wedges are made of a different material than the rest of the crimping jaws.
3. The device of claim 1, wherein the guide elements are separate elements from the crimping jaws.
4. The device of claim 1, wherein the guide elements are rigidly coupled to the at least some of the crimping jaws.
5. The device of claim 4, wherein the guide elements are integrally formed with the at least some of the crimping jaws.

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6. The device of claim 4, wherein the guide elements are fastened to the at least some of the crimping jaws.

7. The device of claim 1, wherein the crimping jaws each comprise an assembly of a pair of traveling blocks flanking the cam wheel and one of the crimping wedges that extends across a central orifice in the cam wheel.

8. The device of claim 7, wherein the cam wheel includes two disks having spiral cam slots that act on cams secured to each of the flanking traveling and that extend axially inward into the cam slots.

9. The device of claim 8, wherein the cam wheel disks each have a cam lever projecting radially outward therefrom that is driven by a carriage assembly on a lead screw.

10. The device of claim 9, further including a linkage between the cam levers and the carriage assembly that increases a torque applied to the cam wheel when the carriage assembly reaches opposite ends of the lead screw.

11. A crimping device comprising:

a plurality of crimping jaws in meshing engagement and circumferentially arranged around a crimping orifice having a central crimping axis, wherein the crimping jaws each comprise an assembly of a pair of spaced apart traveling blocks and a radially inner crimping wedge that extends therebetween;

a rotating cam wheel adapted to act on the crimping jaws and displace them generally radially inward, the cam wheel including two disks having spiral cam slots that act on cams secured to each of the flanking traveling blocks and that extend axially inward into the cam slots;

a stationary outer housing containing the cam wheel and crimping jaws;
and

a lower actuation mechanism including a lead screw and carriage assembly coupled to rotate the cam wheel;

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wherein the pair of traveling blocks of at least some of the crimping jaws are constrained by fixed grooves in the outer housing for movement along lines that are tangential to a circle around the central axis such that all of the crimping wedges of the crimping jaws translate inward along radial lines toward the crimping axis.

12. The device of claim 11, wherein the cam wheel disks each have a cam lever projecting radially outward therefrom that is driven by the carriage assembly on the lead screw via a linkage between the cam levers and the carriage assembly that increases a torque applied to the cam wheel when the carriage assembly reaches opposite ends of the lead screw.

13. The device of claim 11, further including a drive motor for actuating the lead screw.

14. The device of claim 11, wherein the crimping wedges are made of a different material than the rest of the crimping jaws.

15. The device of claim 11, wherein further including a plurality of guide elements which are each constrained by fixed grooves in the outer housing for movement between first and second positions along lines that are tangential to a circle around the central axis, the guide elements moving at least some of the crimping jaws along the lines such that all of the crimping wedges of the crimping jaws translate inward along radial lines toward the crimping axis.

16. The device of claim 15, wherein there are half the number of guide elements as crimping jaws, such that some of the crimping jaws are driven and some are followers.

17. The device of claim 15, wherein the guide elements are rigidly connected to the traveling blocks of half of the crimping jaws.

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18. The device of claim 17, wherein the guide elements are integrally formed with the traveling blocks of half of the crimping jaws.

19. The device of claim 17, wherein the guide elements are fastened to the traveling blocks of half of the crimping jaws.

20. The device of claim 15, wherein each of the guide elements comprises a rectilinear plate in an irregular diamond shape with four vertices and straight sides therebetween with an indentation on one side adjacent one of the vertices, and when the guide elements are displaced to the second positions along the lines, one of the vertices of each fits closely within the indentation on the adjacent guide member, and a nested contact between all of the guide elements in this manner provides a positive stop on further inward movement of the crimping mechanism.