CLAIMS

1. Method for producing a cut trench in the ground by means of a trench cutting device (10) having a trench cutter (30) and a supporting means (20) which is designed for lifting and lowering the trench cutter (30),
wherein the trench cutter (30) is connected at its upper end to the supporting means (20) and at its lower end has at least one cutting wheel (34) which is rotatably supported and can be driven in a rotating manner via a rotary drive (36) in order to remove ground material,
wherein a target value for an advancing speed of the trench cutter (30) during removal of the ground material can be preset in a control unit, through which a lowering of the trench cutter (30) by the supporting means (20) into the ground is controlled,
~~characterized~~ characterized in that
the advancing speed is controlled by means of the control unit depending on a rotational speed and/or a torque of the at least one cutting wheel (34), wherein on reaching a preset limit value for the rotational speed and/or for the torque, the advancing speed of the trench cutter (30) is changed, in particular reduced, with respect to the target value for the advancing speed.

2. The ~~M~~method according to claim 1,
~~characterized~~ characterized in that
on reaching the limit value for the rotational speed or the torque, the advancing speed of the trench cutter (30) is reduced until the rotational speed is again above a preset rotational speed limit value or the torque is below a preset torque limit value.

3. The ~~M~~method according to claim 2,
~~characterized~~ characterized in that
the advancing speed of the trench cutter (30) is increased up to the target value for the advancing speed if the rotational speed is above the rotational speed limit value or the torque is below the torque limit value.

4. The ~~M~~method according to any one of claims 1 to 3,
~~c h a r a c t e r i z e d~~ characterized in that
the advancing speed is furthermore controlled depending on a load of the trench cutter (30).

5. The ~~M~~method according to any one of claims 1 to 4,
~~c h a r a c t e r i z e d~~ characterized in that
the rotational speed or the torque is detected in a direct manner and a related measured value is forwarded to the control unit.

6. The ~~M~~method according to claim 5,
~~c h a r a c t e r i z e d~~ characterized in that
the rotational speed is detected by means of a rotational speed pickup or the torque is detected by means of a torque pickup.

7. The ~~M~~method according to any one of claims 1 to 6,
~~c h a r a c t e r i z e d~~ characterized in that
the rotational speed and/or the torque are detected in an indirect manner.

8. The ~~M~~method according to claim 7,
~~c h a r a c t e r i z e d~~ characterized in that
to detect the rotational speed and/or the torque a power consumption of the rotary drive (36) is measured.

9. The ~~M~~method according to claim 8,
~~c h a r a c t e r i z e d~~ characterized in that
the rotary drive (36) is operated hydraulically with a hydraulic circuit, wherein a pressure or a pressure change is detected in the hydraulic circuit.

10. Trench cutting device, ~~in particular~~ for ~~carrying out a method according to any one of claims 1 to 9~~ producing a cut trench in the ground, having a trench cutter (30), ~~and~~ a supporting means (20) which is designed for lifting and lowering the trench cutter (30) ~~into the ground~~, and a control unit,
wherein the trench cutter (30) is connected at its upper end to ~~a~~ the supporting means (20) and at its lower end has at least one cutting wheel (34) which is

rotatably supported and can be driven in a rotating manner via a rotary drive (36) in order to remove ground material,

~~wherein a control unit is furthermore provided, through which a lowering of the trench cutter (30) by the supporting means (20) into the ground can be controlled,~~

wherein a target value for an advancing speed of the trench cutter (30) during removal of the ground material can be ~~entered~~ preset into the control unit, through which a lowering of the trench cutter (30) by the supporting means (20) into the ground is controlled,

~~c h a r a c t e r i z e d~~ characterized in that

~~the control unit is designed for controlling~~ the advancing speed is controlled by means of the control unit depending on a rotational speed and/or a torque of the at least one cutting wheel (34) ~~and for presetting a limit value for the rotational speed and/or the torque~~, wherein on reaching ~~the~~ a preset limit value for the rotational speed and/or for the torque, the advancing speed of the trench cutter (30) is changed, in particular ~~can be~~ reduced with respect to the target value for the advancing speed.

11. The ~~T~~trench cutting device according to claim 10,

~~c h a r a c t e r i z e d~~ characterized in that

the supporting means (20) is a carrier implement (22) with a supporting rope (26) or a supporting rod, wherein the trench cutter (30) is suspended in a vertically adjustable manner on the supporting rope (26) or the supporting rod.

12. The ~~T~~trench cutting device according to claim 10 or 11,

~~c h a r a c t e r i z e d~~ characterized in that

a total of four cutting wheels (34) are provided which are arranged in pairs next to each other.