Nov. 3, 1931. C. T. BACH 1,830,688

MEANS FOR CUTTING BOND COUPONS AND THE LIKE

Filed Nov. 22, 1930

Fig. 1.

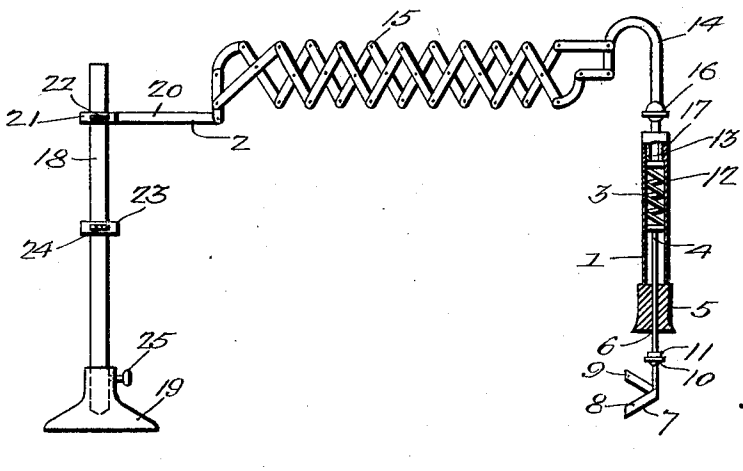


Fig. 2.

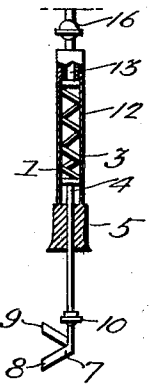


Fig. 3.

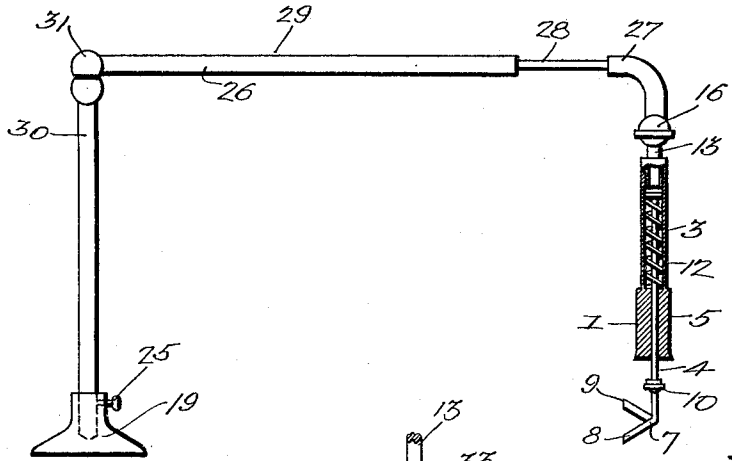


Fig. 4.

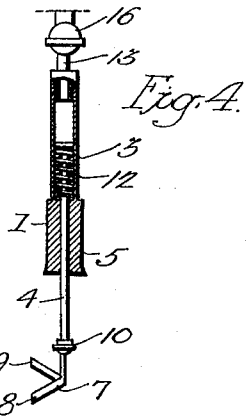
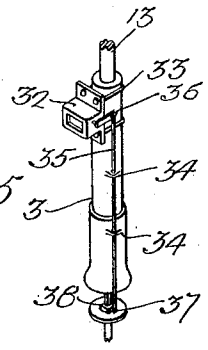


Fig. 5



Inventor:
Charles T. Bach
by his Attorneys
Howson & Howson

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UNITED STATES PATENT OFFICE

CHARLES T. BACH, OF PHILADELPHIA, PENNSYLVANIA

MEANS FOR CUTTING BOND COUPONS AND THE LIKE

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This invention relates to cutting devices in general, and particularly to devices which are adapted for cutting or severing coupons from bonds or like purposes.

The cutting of coupons from bonds has heretofore been a tedious, time consuming, and laborious task when great numbers of such bonds must be cut. Banks, trust companies, and like institutions, are confronted with the task of regularly cutting or severing interest coupons from great numbers of bonds. The task is usually accomplished by means of a simple device having a pair of sharp edges disposed at right angles to each other. This device is placed upon the particular bond with its sharp edges lying along the edges of the coupons to be severed, and the coupon is then torn or severed from the bond against the sharp edges of the device. The device is then lifted from the bond and the operation is repeated for each successive bond from which the coupons are cut. This is entirely a manual operation, and if a great number of bond coupons are to be cut, it is necessarily a tedious and time consuming task.

The invention has for its main purpose the provision of a device which eliminates entirely the necessity of constantly lifting the cutting device in moving the device from one bond to the next. A device constructed in accordance with the invention will greatly facilitate the cutting of coupon bonds, and will effect a great saving in time and energy which would otherwise be consumed by the above-discussed method or similar operation. As a refinement, I also propose to incorporate in the device a counting mechanism which is automatically actuated by the device during the operation of the same.

The structural details of a device constructed in accordance with the invention, as well as its manner of operation, will be clearly understood hereinafter.

In the drawings, Fig. 1 is an elevational view of a cutting device assembly provided with one form of support, the device being shown partly in section for clarity of illustration;

Fig. 2 is a sectional view of the cutting device assembly of Fig. 1 with the cutting edges lowered in operative position to cut the desired bond coupon;

Fig. 3 is an elevational view of a device similar to that of Fig. 1 having a modified form of support;

Fig. 4 is a view similar to Fig. 2 of the cutting device of Fig. 3; and

Fig. 5 is a perspective view of a part of the above devices having a counting mechanism operatively associated therewith.

Referring to Figs. 1 and 2 of the drawings, there is shown a bond-cutting device assembly designated generally by reference character 1, which is supported upon a structure designated generally by reference character 2. The cutting device assembly comprises a hollow cylinder 3 having a plunger or piston 4 adapted for reciprocal motion therein. At the lower end of the cylinder and integral therewith, is provided a guide block 5 having a square opening 6 extending therethrough. This opening serves as a guide for the stem of piston 4. The lower portion of the stem is square in shape to conform with the opening 6. The purpose of this construction is to prevent rotation of the piston and the device supported thereby to be described later. It will be apparent, of course, that the guide opening and piston stem may take the form other than circular to accomplish the desired purpose.

A cutting device 7, which comprises a pair of integral cutting blades 8 and 9 disposed at right angles to each other, is supported from the lower end of the piston stem by means of a universal joint 10. The universal joint is provided with a shoulder 11 which is adapted to engage the lower surface of guide block 5, which acts as a stop for the piston and cutting device in its upward motion. The head of piston 4 is suspended within cylinder 3 at the lower end of a coil spring 12. The upper end of this spring may be attached within the cylinder in any suitable manner. In the present instance, the upper end of the spring is attached to a supporting member 13 extending within the cylinder. The cutting device assembly may, of course, be suspended from the supporting structure

2 in any suitable manner. In the present instance, a U-shaped bracket 14 is provided at one end of the lazy tongs 15. One arm of the bracket 14 may be attached to the tongs, while the other end carries member 13 by means of a universal joint 16. The lower end of member 13 may be flanged or enlarged, and a suitable threaded bushing 17 may be adapted to be screwed into the end of cylinder 3 to thereby attach the cylinder to member 13, as clearly shown in Fig. 1. It will be apparent that the universal joints 10 and 16 provide any desired movement of the cutting device 7 and its supporting cylinder relative to support 2.

In the present instance, the lazy tongs 15 are supported on a suitable standard 18 which is removably attached to a base 19. One end of the lazy tongs may be attached to one end of a horizontal bracket 20, which has its other end formed to provide a clamp 21 adapted to encircle and engage standard 18. By providing clamp 21 in the form of an adjustable device having a suitable set screw 22, bracket 20 and the apparatus carried thereby may be attached to standard 18 at any desired height and may also be rotated about standard 18 if desired. A collar 23 having an adjustable set screw 24 may be provided upon standard 18 to act as an adjustable stop for limiting the downward movement of bracket 20. Standard 18 may be removably supported by base 19 by having its lower end extend into a recess in the base and providing a set screw 25 therefor.

The above-described device may be placed at any desired position upon the desk or table at which the user is positioned. By virtue of the lazy tongs, the cutting device assembly may be extended as desired, and by virtue of the various joints and adjustable features, the cutting device may be moved in any desired direction to carry out its purpose. In using the device, a number of bonds, placed one upon the other, would be positioned on the desk or table below the cutting device. In severing the coupon from each successive bond, it is merely necessary to lower the cutting device 7 against the action of spring 12 (see Fig. 2) until it rests in the desired position upon the bond. The coupon may then be severed or torn against the sharp edges of blades 8 and 9, after which the device is released and automatically rises due to the action of spring 12. The bond may then be removed and the operation repeated successively for each of the remaining bonds.

In Figs. 3 and 4, I have shown a cutting device assembly 1 which is similar to that shown in Figs. 1 and 2, but in which spring 12 is arranged for compression. A modified form of supporting structure, designated generally by reference character 26, is also used. The stem of plunger 4 extends through spring 12, and in operation the head of the plunger compresses the spring, as shown in Fig. 4. In this instance also, the universal joint 16 is carried upon an L-shaped bracket 27. This bracket is provided with an integral horizontally-extending rod 28, which is adapted to slide in an opening in the end of bracket 29. The rod and opening are preferably square or non-circular to prevent rotation of the rod with respect to bracket 29. The other end of bracket 29 is attached to the upper end of standard 30 by means of a friction swivel joint 31. By means of this construction, bracket 29, and the device supported thereby, may be rotated with respect to standard 30. The lower end of standard 30 is adapted to be removably attached to base 19 in the same manner as described above with respect to the device of Figs. 1 and 2.

The operation of this modified form of device is, of course, the same as has been already described. The modified supporting structure affords similar flexible manipulation of the cutting device assembly by virtue of the slidability of rod 29, swivel joint 31 and the universal joints.

If desired, an automatic counting mechanism may be associated with either of the devices previously described. In Fig. 5, I have shown such a counting mechanism 32, which may be removably supported upon cylinder 3 by means of suitable U-shaped brackets 33. Cylinder 3 and block 5 may be provided with integral or separate perforated ears 34 through which a rod 35 is adapted to pass. The upper end of this rod may be attached to the shaft of the counter by means of a suitable lever 36. A ring or collar 37 may be provided upon the lower end of the piston stem just above universal joint 10. In the present instance, I have shown this collar as mounted upon the universal joint by means of a nut 38 which may threadedly engage the piston stem. Obviously, the lower end of the stem may be formed to threadedly engage the universal joint structure. In such case, nut 38 may threadedly engage the stem to firmly hold collar 37 in place above the joint. The lower end of rod 35 may rest upon collar 37, but need not be attached thereto.

In associating the counting mechanism with the device in the manner described, such device is adapted for actuation through the medium of rod 35 upon upward movement of the cutting device. After the particular bond coupon has been severed in the manner previously described, and the device has been released, thereby allowing it to rise, such upward motion of collar 37 causes rod 35 to slide upward and rotate the shaft of the counter through the medium of lever 36. In this manner, it will be obvious that each successive upward movement of the cutting device, after each bond coupon has been sev-

ered, will cause the counting device to tally the number of coupons that have been cut. This mechanism may, of course, be permanently attached to the device, or may be removably associated therewith, as disclosed in the present instance. The counter enhances greatly the functioning of the device and in no way interferes with the operation thereof.

While I have disclosed herein several embodiments of my invention, it will be understood that the disclosure is for the purpose of illustration, only and that the various structural details may be changed or modified without departing from the spirit of the invention. It is, therefore, to be understood that the invention is to be limited only as indicated by the scope of the appended claims.

I claim:

1. A device for cutting bond coupons or the like comprising supporting means, a cutting device carried by said supporting means and arranged for reciprocating movement relative to said means, whereby said cutting device may be moved into cooperative relation with a bond, means for preventing turning of said cutting device, and means urging said cutting device into a predetermined position.

2. A device for cutting bond coupons or the like comprising supporting means, a cutting device suspended from said supporting means and arranged for reciprocating movement relative thereto, whereby said cutting device may be moved into cooperative relation with a bond, means for preventing turning of said cutting device, and means urging said cutting device into its normal suspended position.

3. A device for cutting bond coupons or the like comprising universal supporting means, a cutting device suspended from said supporting means and arranged for reciprocating movement relative thereto, whereby said cutting device may be moved into cooperative relation with a bond, means for preventing turning of said cutting device, and spring means urging said cutting device into its normal suspended position.

4. A device for cutting bond coupons or the like comprising universal supporting means, a cylinder carried by said supporting means, a piston within said cylinder having its stem extending outside said cylinder, means for preventing rotary movement of said piston and stem, means urging said piston toward one end of said cylinder, and a cutting device carried by said stem.

5. A device for cutting bond coupons or the like comprising universal supporting means, a cylinder carried by said supporting means, guide means having a non-circular opening therethrough at one end of said cylinder, a piston within said cylinder having its stem slidably extending through said opening, the portion of said stem slidable within said opening being shaped in cross section to fit said opening whereby rotary movement of said piston and stem is prevented, means urging said piston toward one end of said cylinder, and a cutting device carried by said stem.

CHARLES T. BACH.