N. C. SIMONSEN.

ROD CUTTER.

APPLICATION FILED APR. 7, 1914.

1,137,093. Patented Apr. 27, 1915.

Fig. 1.

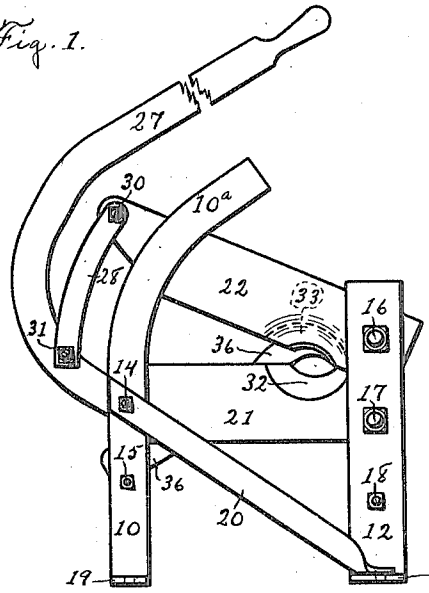


Fig. 2.

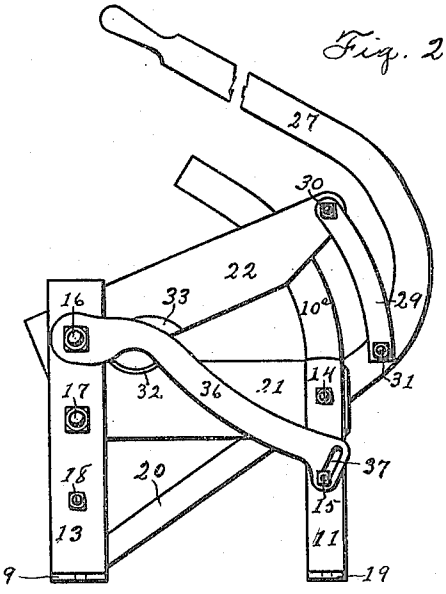


Fig. 3.

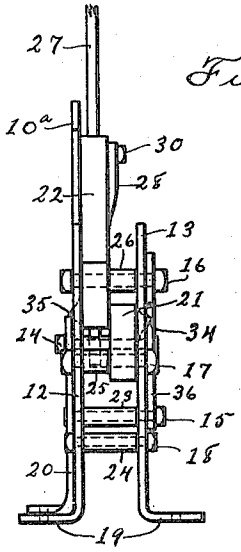


Fig. 4.



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UNITED STATES PATENT OFFICE.

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ROD-CUTTER.

1,137,093. Specification of Letters Patent. Patented Apr. 27, 1915.

Application filed April 7, 1914. Serial No. 830,808.

To all whom it may concern:

Be it known that I, NIELS C. SIMONSEN, a citizen of the United States of America, and resident of Sioux Rapids, Buena Vista county, Iowa, have invented a new and useful Rod-Cutter, of which the following is a specification.

The object of this invention is to provide an improved construction for a shear for cutting metal rods or bars.

A further object of this invention is to provide an improved construction of blades for a rod cutter.

A further object of this invention is to provide improved adjustable means to prevent tilting or sliding of the rods or bars in the cutting operation.

A further object of this invention is to provide an improved frame which shall combine strength and lightness of weight.

My invention consists in the construction, arrangement and combination of elements hereinafter set forth, pointed out in my claims and illustrated by the accompanying drawing, in which—

Figure 1 is a side elevation and Fig. 2 an opposite side elevation of my improved device, a portion of the handle being broken away to economize space. Fig. 3 is a rear end elevation of the same. Fig. 4 is a detail elevation of the swinging jaw member detached.

In the construction of the device as shown the numerals 10, 11 designate laterally spaced forward uprights, legs or standards, and the numerals 12, 13 laterally spaced rear uprights, legs or standards. The legs or standards 10—11, 12—13 are connected in pairs by bolts 14, 15 and 16, 17, 18 respectively. The legs or standards 10, 11, 12, 13 are turned outwardly at right angles at their lower ends to form feet 19, which feet are apertured to receive bolts or screws for securing the device to a suitable support such as a floor or portable platform (not shown). A brace 20 is secured at its upper end to the upper portion of the leg 10, on the bolt 14, passes rearwardly and downwardly, and has its lower end twisted a half turn, superposed on the foot 19 of the leg 12 and apertured to correspond to said foot. It is the function of the brace 20 to take the end strain during the cutting operation and prevent collapsing of the frame. A stationary jaw member 21 is provided and is mounted between the legs 10—11 and 12—13 and has its ends supported by the bolts 14 and 17. A swinging jaw member 22 is pivoted adjacent its rear end on the bolt 16 and passes forwardly above and at one side of the stationary jaw member 21. The legs 10—11 and 12—13 are spaced apart laterally sufficiently to receive between them the jaw members 21, 22 side by side, and such spacing is maintained by spacing members 23, 24 on the bolts 15, 18 respectively, and by short spacing members 25, 26 on the bolts 17, 16 respectively and at the sides of the respective jaw members. The spacing members 23, 24, 25, 26 are here shown as sections or pieces of pipe or tubing mounted on the bolts; but it is to be understood that any other suitable spacing devices, such as apertured spacing blocks, may be employed for the purpose.

A hand lever 27 is fulcrumed at one end on the bolt 14 and extends forwardly and upwardly, preferably on a suitable curve. Links 28, 29 are pivotally connected at one end by a bolt 30 to the forward end of the swinging jaw member 22 and are pivotally connected at their opposite ends by a bolt 31 to the hand lever 27, at an approved distance from the fulcrum thereof. Thus is provision made for oscillating the swinging jaw member and for causing it to approach the stationary jaw member for the cutting operation.

The leg 10 extends upwardly above the stationary jaw member in the form of a guide 10^a, which guide preferably is curved rearwardly and extends above the uppermost limit of movement of the swinging jaw member 22. It is the function of the guide 10^a to prevent lateral motion of the swinging jaw member 22 away from the stationary jaw member in the strain of the cutting operation.

The members so far described preferably are all of mild steel, thus combining superior strength with lightness of weight, which is especially desirable in a portable machine. The cutting blades, designated by the numerals 32, 33, are of high grade tool steel, and are welded to the jaw members 21, 22 respectively. In the welding operation the material of the cutting blades 32, 33 is pressed into the mild steel of the jaw members so as to be flush with the inner or adjacent faces of said jaw members, which contact in the cutting operation. This pressure causes a bulge on the outer sides of the

jaw members, indicated by the numerals 34, 35 (Fig. 3), which acts as a reinforcement to the said jaw members behind the cutting blades 32, 33. The cutting blades 32, 33 preferably are notched or cut away at the point of contact with the substance to be cut, and are beveled oppositely to form sharp cutting edges.

A keeper 36 is pivoted at one end on the bolt 16, outside the leg 13, and extends alongside the stationary jaw member and downwardly to the bolt 15. The lower end of the keeper 36 is formed with a transverse slot 37 by which it is adjustably secured to the leg 11 by the bolt 15. The keeper 36 is employed to hold down a rod to be cut when pressure is applied on the opposite side, beyond the stationary jaw member 21, by the swinging jaw member 22, the rod or bar to be cut being inserted between said keeper and the stationary jaw member. The keeper 36 preferably is notched, bent or curved upwardly to correspond to the notching of the cutting blade 32, and to provide a seat for the rod or bar to be cut. This also prevents slipping of the rod or bar longitudinally of the cutting blades. The keeper 36 is adjustable, through the bolt 15 and slot 37, to rods or bars of different sizes.

This device is especially convenient for use by contractors to be moved from place to place as needed for the cutting of rods for reinforcing concrete work.

I claim as my invention—

1. A rod cutter, comprising spaced forward legs, spaced rear legs, a stationary jaw member mounted between said legs, a swinging jaw member pivoted between the rear legs and extending above and at one side of the stationary jaw member, an operating lever fulcrumed between the forward legs, links pivotally connecting said lever and the forward end of the swinging jaw member, cutting devices on said jaw members, and a keeper pivoted on one of said rear legs and extending alongside the stationary jaw member, the opposite end of said keeper being adjustably secured to one forward leg.

2. A rod cutter, comprising spaced legs, a stationary jaw member carried by said legs, a swinging jaw member pivoted at one end to certain of said legs, means for oscillating the forward end of said swinging jaw member, notched cutting devices on said jaw members, and a keeper pivoted on that side of the frame opposite to the swinging jaw member and extending forwardly and downwardly adjacent the stationary jaw member, said keeper being notched to correspond to the notching of said cutting devices.

3. A rod cutter, comprising legs, a stationary jaw member carried thereby, a swinging jaw member pivoted at one end to certain of said legs, means for oscillating the forward end of the swinging jaw member, notched cutting devices on said jaw members, and a keeper pivoted at one end on that side of the frame opposite to the swinging jaw member and extending forwardly and downwardly adjacent said stationary jaw member, said keeper being formed with a slot at its opposite end adjustably secured to the opposite end of the frame.

Signed by me at Sioux Rapids, Iowa, this twenty-fifth day of March, 1914.

NIELS C. SIMONSEN.

Witnesses:
W. F. SMITH,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."