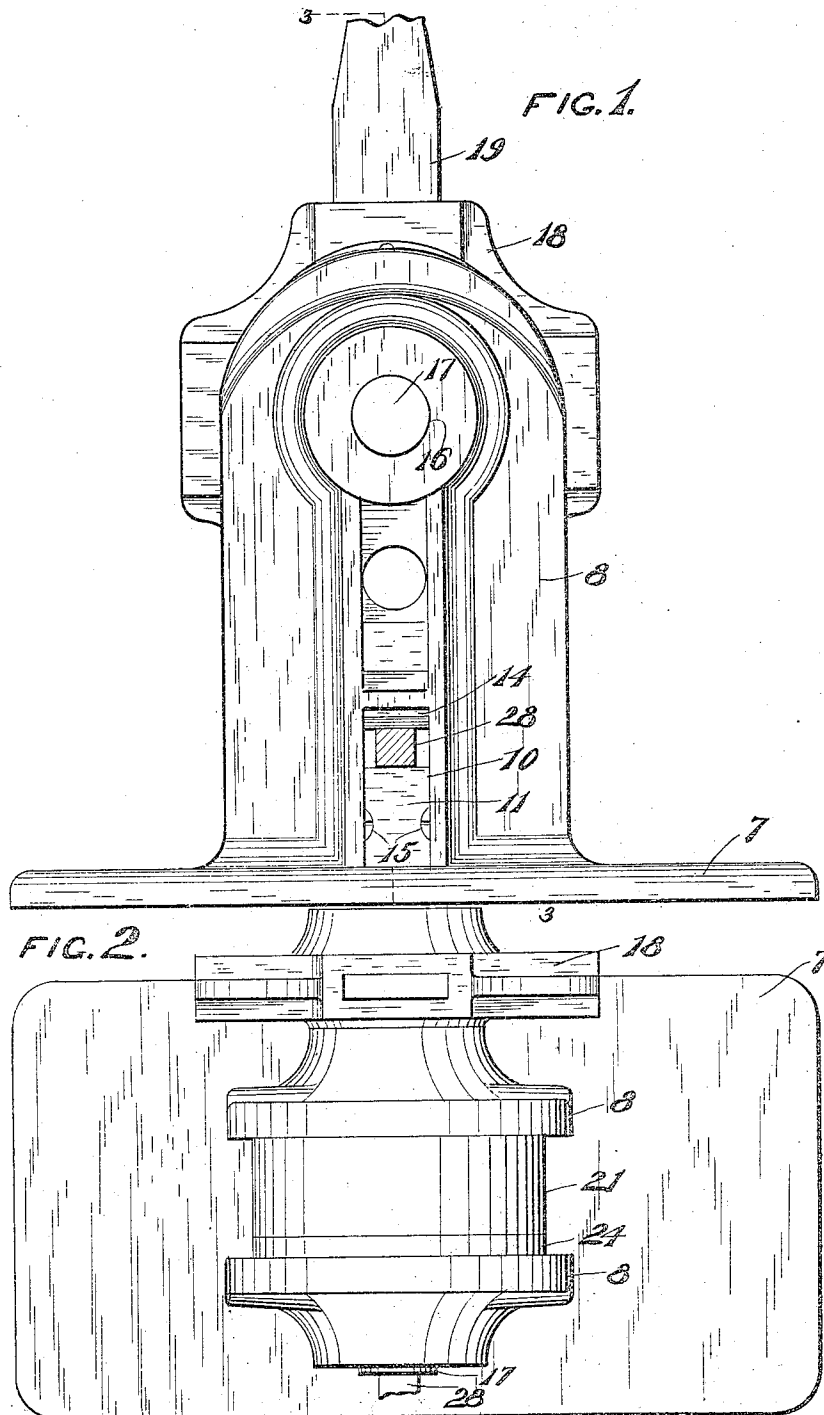


962,085.

H. H. JENSEN.
MACHINE FOR CUTTING METAL BARS.
APPLICATION FILED MAR. 22, 1909.

Patented June 21, 1910.

2 SHEETS—SHEET 1.



WITNESSES.

L. O. Theurer

Anna E. Schmidbauer

Hans H. Jensen INVENTOR.

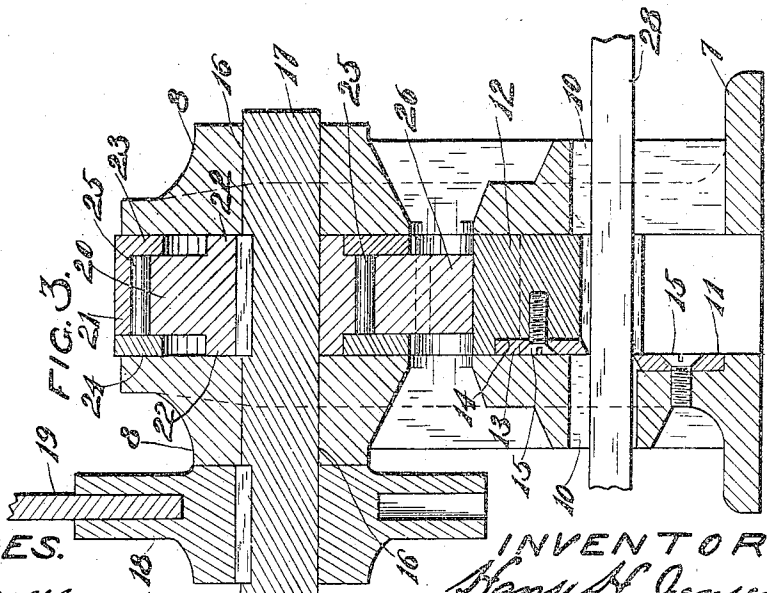
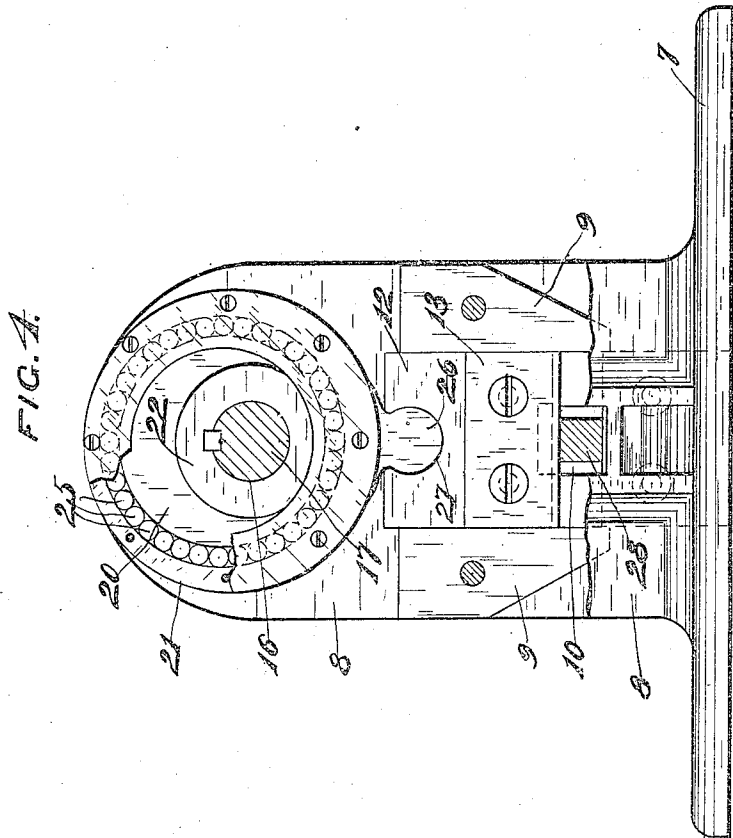
By Benedict, Mossell & Caldwell
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WITNESSES.

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UNITED STATES PATENT OFFICE.

HANS H. JENSEN, OF MILWAUKEE, WISCONSIN.

MACHINE FOR CUTTING METAL BARS.

962,085.

Specification of Letters Patent. Patented June 21, 1910.

Application filed March 22, 1909. Serial No. 484,855.

To all whom it may concern:

Be it known that I, HANS H. JENSEN, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Machines for Cutting Metal Bars, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in machines for cutting metal bars.

The invention relates particularly to the mechanism for reciprocating the movable knife-carrying block, said mechanism being of simple character, and of such construction as to be readily operated, and provide for a most effective cutting of the metal bars.

With the above primary object, and other incidental objects, in view, the invention consists of the devices and parts, or the equivalents thereof, as hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is a side elevation of the device, parts broken away, and showing the bar to be cut in cross section; Fig. 2 is a plan view; Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 1; and Fig. 4 is an elevation of that side of the machine opposite to the side shown in Fig. 1, and with the major portion of the standard which is on this side of the machine broken away, and a part of the cam ring also broken away, the bar to be cut being shown in section.

Referring to the drawings, the numeral 7 indicates the base of the frame of the mechanism, said base provided with upwardly extending standards 8, 8 which are spaced a desired distance apart by means of spacing lugs 9, 9, bolts (see Fig. 3) being preferably passed through the standards and through said lugs.

Through the lower ends of the standards are alined openings 10, 10. Bolted, or otherwise suitably secured, to the inside of one of the standards and having its upper cutting edge extending slightly above the lower bordering edge of the opening 10 of said standard is a stationary knife jaw 11. Above this stationary knife jaw, and adapted to be reciprocated between the opposed inner faces of the two standards, is a knife-carrying block 12. A knife jaw 13 is set into a recess 14 in one face of this block and secured in place therein by any desired means, as, for instance, by a screw 15. The

lower cutting edge of this knife projects downwardly slightly below the lower edge of the block.

I prefer to employ the specific means illustrated in the drawings for reciprocating the block 12, a description of which will now be given. The upper ends of the two standards are provided with alined openings 16, 16 which form bearings for a shaft 17. On the outer end of this shaft is a suitable handle for operating the shaft, preferably in the form of a socketed disk-like device 18 keyed to the shaft, and having handles or arms 19 inserted in the sockets and radiating therefrom.

Mounted on the shaft, and disposed loosely between the two opposed inner faces of the standards, is an eccentrically operating mechanism for imparting to the block 12 its up and down reciprocating movement. This mechanism consists of an eccentric cam 20 rigidly mounted on the shaft 17 by means of a key, or otherwise, and a ring 21 surrounding the cam. The cam is preferably provided with an enlarged central portion or hub which forms two shoulders 22, 22, said shoulders contacting with the inner faces of the standards 8, and thereby increasing the bearing surfaces. One edge of the ring 21 is provided with an inwardly extending rim or annulus 23, while against the opposite edge of the ring is adjusted another rim or annulus 24, which is separate from the ring. Disposed in the space between the periphery of the cam 20 and the inner side of the ring 21, and of a length to extend from one annulus (23) to the other (24), are a series of elongated anti-friction rollers 25.

The lower portion of the ring is provided centrally with a depending rounded lug 26 which fits in a correspondingly shaped recess 27 provided in the upper edge of the knife block. The engagement of this lug with the recess forms a pivotal connection between the ring and the block. It will be obvious that when the shaft 17 is turned in either direction by operating the wheel or disk 18 on the outer end of said shaft, the cam 20 will be caused to rotate within the ring 21. As the portion of the cam which is the greatest distance from the shaft is carried around toward and to a lower position, the ring 21 is necessarily lowered, and consequently the knife block 12 carried by said ring. As the cam, with the continued

rotation of the shaft, travels toward and to the higher position, the ring 21 and block 12 are necessarily raised. In this manner, the knife block with its knife 13 is reciprocated up and down.

5 In the operation of the invention a bar 28 of metal is passed through the alined openings 10, 10 of the standards, as shown clearly in Figs. 3 and 4. The wheel 18 is now
10 turned by the operator grasping and applying force to the handles or arms 19, and in this manner the shaft 17 is rotated. The rotation of the shaft causes a reciprocation of the knife block 12 in the manner herein-
15 before fully pointed out. On the down movement of the knife block, the knife 13 carried thereby is brought into engagement with the bar 28, and forced therethrough, the lower stationary knife 11, of course, co-
20 operating in the cutting.

What I claim as my invention is:

A machine for cutting metal bars, comprising a frame having upwardly extending standards spaced apart and provided with
25 alined openings and with a knife recess, spacing and guide lugs positioned between

the two standards, a stationary knife positioned in the recess and fastened to one of the standards and having its upper cutting edge extending slightly above the lower
30 edge of the opening, a reciprocating block carrying a knife and positioned between the standards and the guide lugs and guided thereby, said block provided with an upper circular recess extending through the block,
35 a shaft extending through and having bearings in both standards and provided with an eccentric positioned between the standards and rigidly fastened to said shaft, a ring surrounding said eccentric and having a de-
40 pending rounded lug shaped to closely and pivotally fit within the circular recess of the block and to support and reciprocate said block, and a disk-like member fastened to
45 the shaft and having an operating handle extending therefrom.

In testimony whereof, I affix my signature, in presence of two witnesses.

HANS H. JENSEN.

Witnesses:

ANNA F. SCHMIDTBAUER,
ALMA A. KLUG.