J. BILCSIK.

SHEARS FOR CUTTING PROFILE AND BAR IRONS.

APPLICATION FILED NOV. 17, 1909.

975,112. **Patented Nov. 8, 1910.**

Fig 3

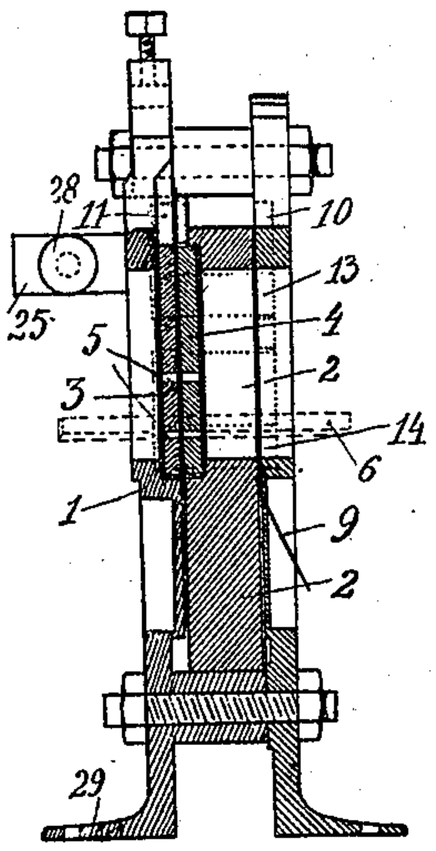


Fig. 1

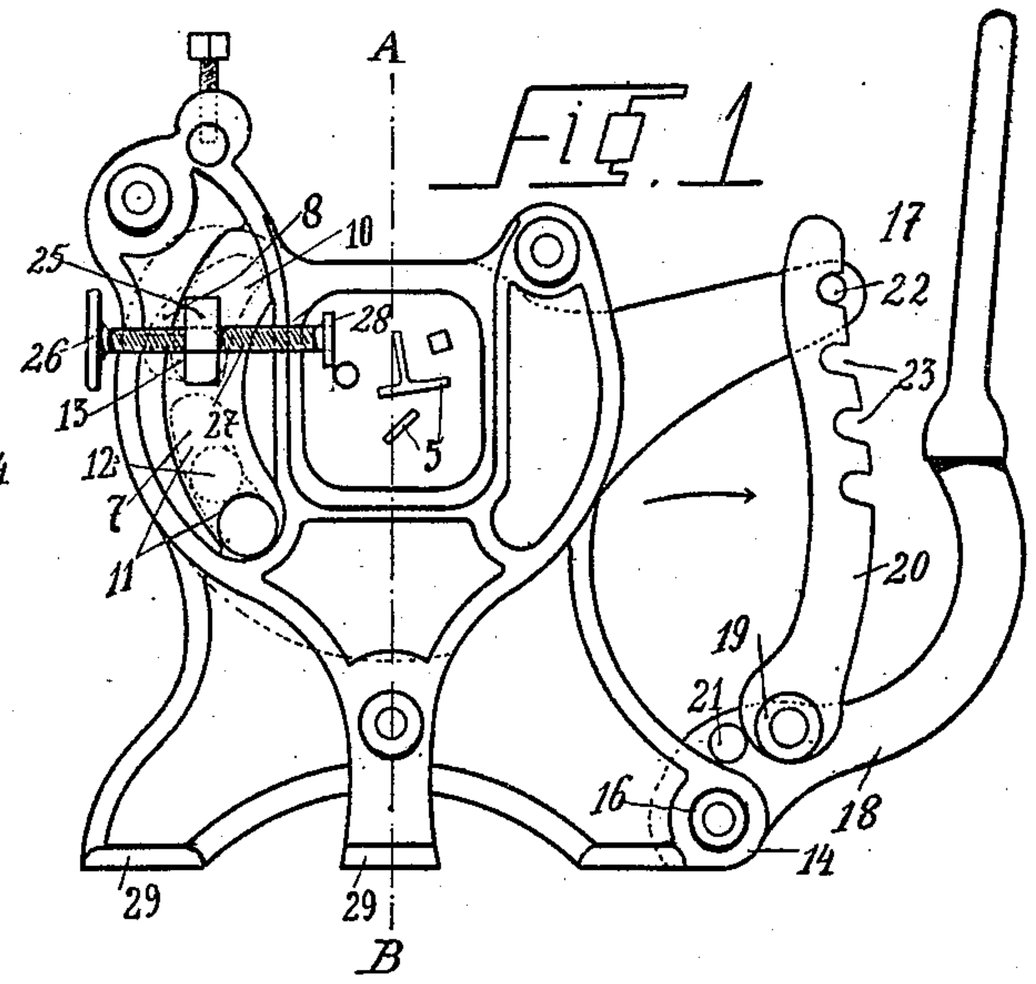
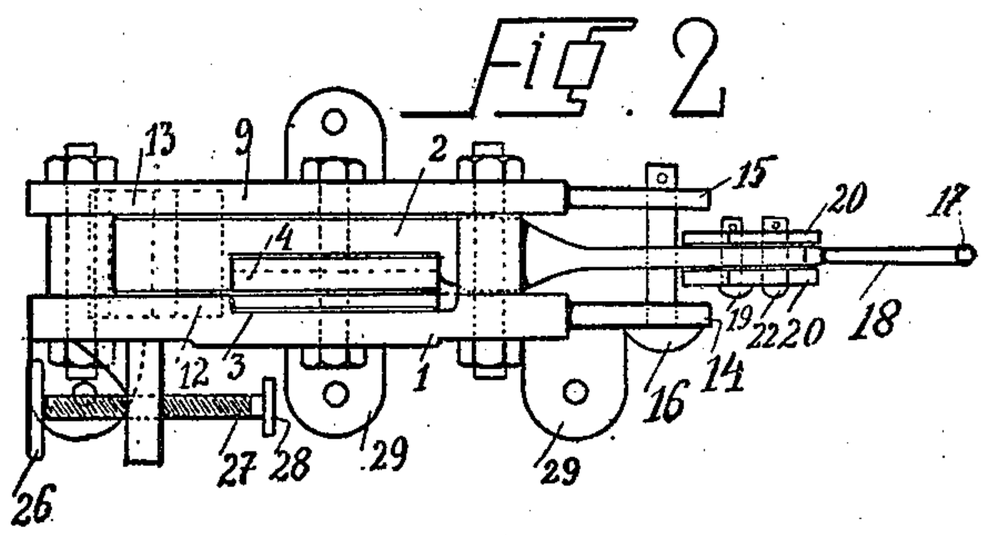


Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

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SHEARS FOR CUTTING PROFILE AND BAR IRONS.

975,112. Specification of Letters Patent. Patented Nov. 8, 1910.

Application filed November 17, 1909. Serial No. 528,599.

To all whom it may concern:

Be it known that I, JOSEF BILCSIK, a subject of the King of Hungary, Austro-Hungarian Emperor, and resident of Budapest, Austria-Hungary, have invented certain new and useful Improvements in Shears for Cutting Profile and Bar Irons, of which the following is a specification.

This invention relates to shears for cutting by hand profile and bar-irons which is constructed so that it requires very little space and can be advantageously used for fitting up machinery and other installations.

In the accompanying drawings the improved shears are shown by way of example in Figure 1 in front elevation without the casing. Fig. 2 represents the shears in ground plan view and Fig. 3 is a cross section of Fig. 1 on line A—B.

The shears are constructed as follows:— In the frame of the machine two supports are mounted of which the one, 1, is fixed and the other, 2, movable and which are destined to receive the cutter blades 3 and 4. The cutter blades 3 and 4 are simply inserted in the supports from above and they have suitable openings 5, which correspond in shape to the shape of the profile- or bar-irons 6 to be cut. The movable support 2 has curved slots 7 and 8. Grooves 10 and 11 are provided respectively in the fixed support 1 and in the cover plate 9. The movable support 2 is connected with the fixed support 1 by means of the cylindrical studs 12 and 13 for which balls could be substituted.

It is obvious that if the lower end of slot 7 were enlarged laterally, the movable support would execute an eccentric motion.

The movable support 2 is operated by means of a hand lever 17 whose lower end 18 which is arc shaped, is pivoted on an axle 16 mounted in the cheeks 14, 15 of the machine frame. In the part 18 of hand lever 17 a certain number of holes 21 (two in Fig. 1) are provided which are destined to receive a cross bolt 19 which serves as pivot for the lower ends of the two connecting rods 20, 20 which are arranged one at each side of the hand lever 17. These connecting rods 20 present on the outer edge near their upper ends notches 23 which are destined to grip over the studs 22 which laterally project from the sides of the extension of the movable support 2. The action of the hand lever can thus be easily regulated by varying the leverage according to whether the pivot of the connecting rods 20 is located in the one or the other of the holes 21 of the hand lever, and according to the notch 23 which grips over the studs 22.

The profile- or bar-irons 6 to be cut are inserted in the corresponding openings 5 of the cutter blades 3, 4 and in order to prevent an unintentional displacement of said bar a set screw 27 is provided which is guided in a threaded bearing 25 of the machine frame and terminates at the one end by a hand wheel 26 and at the other end by an abutment plate 28 which bears against said bar. The feet 29 of the machine frame are flat so that the shears are very stable and can be placed at any part of the workshop.

The improved shears for cutting profile- and bar-irons are very easy to manipulate and the cutter plates being simply inserted in the supporting frames without any special means for securing the same in position, can be easily removed.

I claim:—

Improved shears for cutting profile- and bar-irons comprising in combination with the usual frame of the machine a fixed supporting frame and a movable supporting frame the latter of which has curved slots at one end, an arm extending from the other end of said movable supporting frame, the cutter blades inserted in the supporting frames and having openings which are shaped according to the shape of the irons to be cut, cylindrical rollers which connect the movable supporting frame with the fixed frame and serve as pivots for said movable frame, a set screw guided in the machine frame and an abutment plate at the inner end of said screw for maintaining the iron bar in position, the hand-lever for operating the movable frame pivoted with its lower end to an extension of the machine frame, studs laterally projecting from the arm of the movable frame, and connecting rods having notches destined to grip over said studs and pivoted with the lower ends on said hand-lever, substantially as described and shown and for the purpose set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOSEF BILCSIK.

Witnesses:

MICHAEL TONNOR,

FRIEDRICH BLUM.