No. 897,984. PATENTED SEPT. 8, 1908.

J. KRÜGER.

DEVICE FOR CUTTING FIGURED IRON.

APPLICATION FILED JAN. 2, 1908.

Fig. 1.

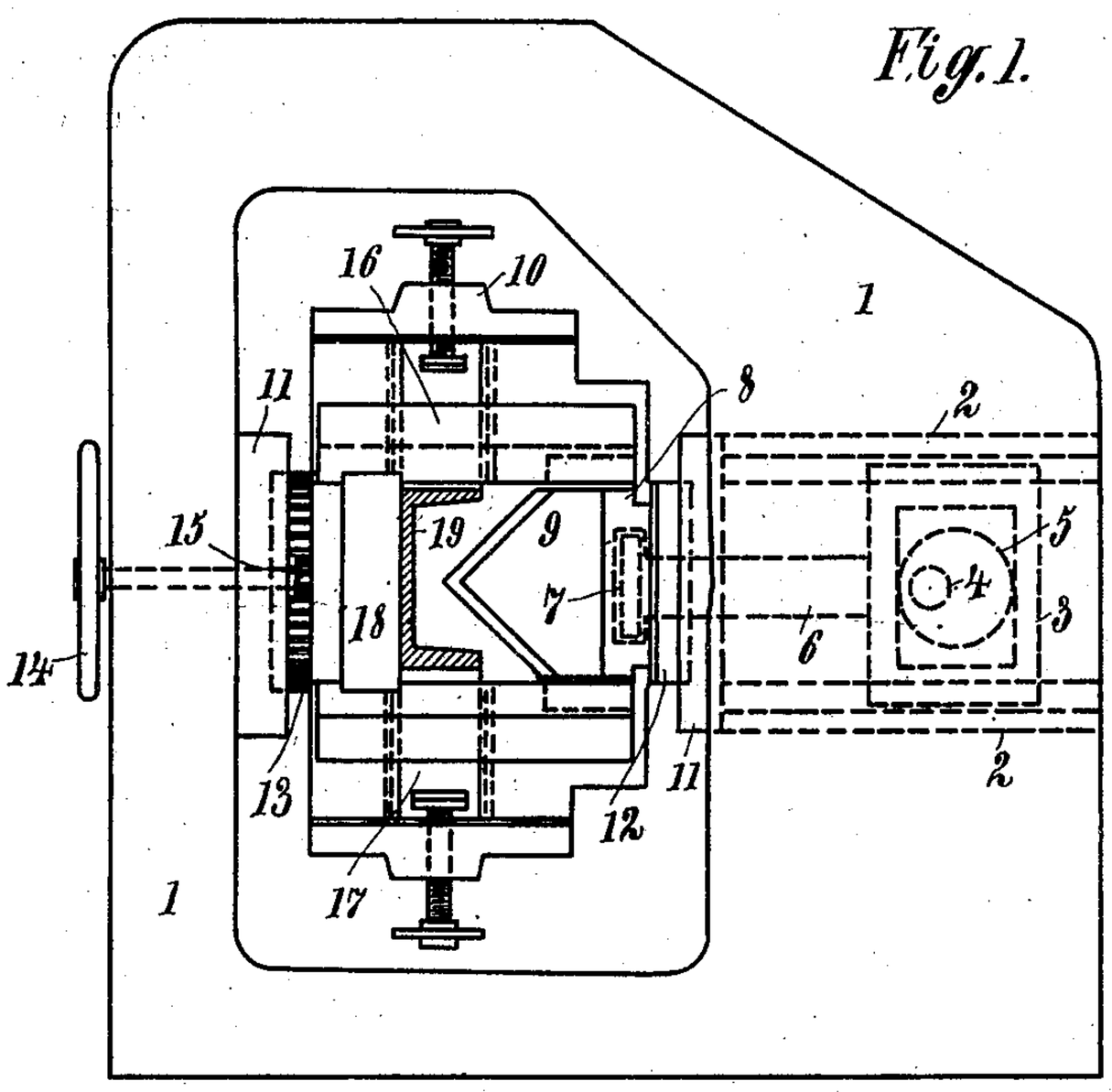
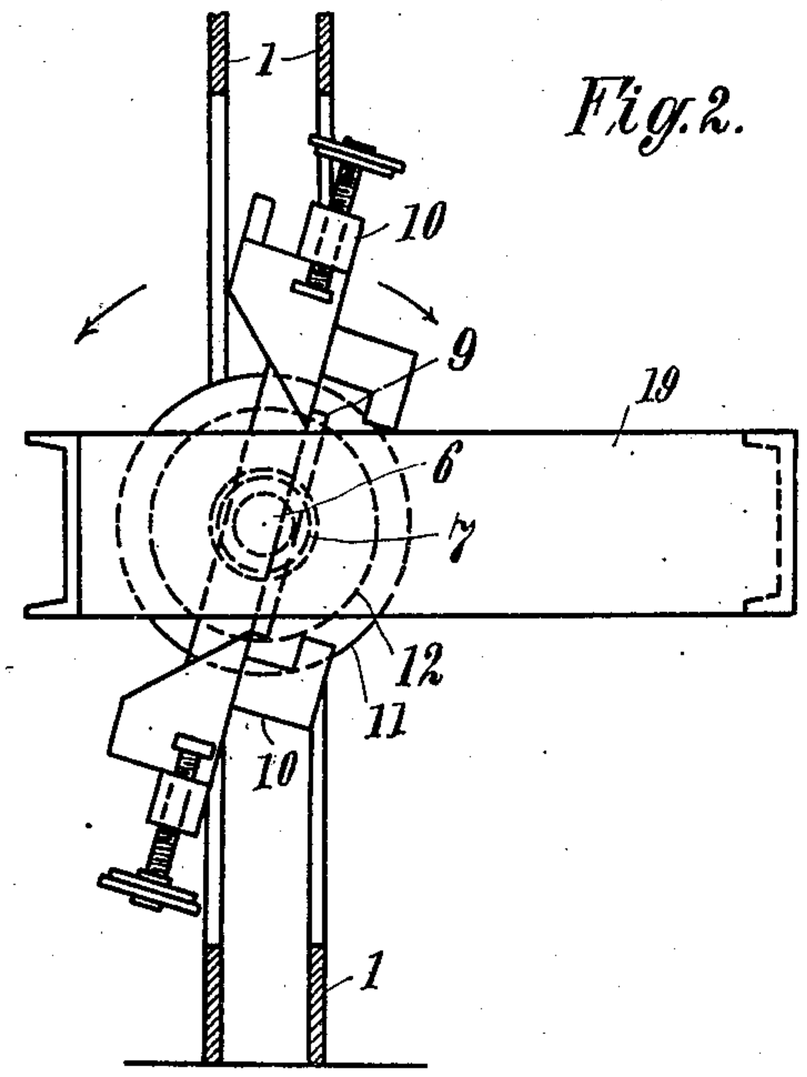


Fig. 2.



Witnesses:

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JOHANNES KRÜGER, OF BERLIN, GERMANY.

DEVICE FOR CUTTING FIGURED IRON.

No. 897,984. Specification of Letters Patent. Patented Sept. 8, 1908.

Application filed January 2, 1908. Serial No. 408,992.

To all whom it may concern:

Be it known that I, JOHANNES KRÜGER, a subject of the King of Prussia, and residing at Berlin, Germany, have invented a certain new and useful Improved Device for Cutting Figured Iron, of which the following is a specification.

This invention is designed to so construct and arrange the work or beam holding frame and the movable-knife operating device that all lengths of iron may be readily cut slantwise in the plane of the web as well as in the plane of the flanges or at an inclination to both planes, at the will of the operator; and it consists of certain novel features of construction hereinafter set forth and particularly pointed out in the claims.

In order that the invention may be clearly understood reference is made to the accompanying drawing in which one embodiment is represented by way of example, and in which:—

Figure 1 is a side elevation and Fig. 2 a front sectional elevation of the machine showing the cutting device with the figured iron placed in front of the same.

In the principal frame 1 there is situated a cylinder 2 having a hollow piston 3. In the latter on a shaft 4 there is attached an eccentric 5; the latter moves the knife 9 by means of rod 6.

The knife-holder 8 is arranged revoluble on a forcing plate 7 of the rod 6, in order that it can rotate independently round the horizontal axis of the machine. The frame 10 of the cutting device is provided on both sides with toothed rims 12 and 13 which can be rotated in bearings 11 of the principal frame 1. The toothed rim 13 engages with a small toothed wheel 15 so that the entire cutting device can be rotated conveniently by means of a hand-wheel 14 round the horizontal axis of the machine.

The U-shaped iron 19 lies on its edge between a side knife 18, a top knife 16, and a bottom knife 17, all these bed-plate knives being stationarily mounted on the rotatable work-carrying frame 10.

The machine may, of course, be constructed quite optionally in its details; also it is non-essential whether the cutting device only or the entire machine is rotated round its horizontal axis.

The new machine cuts slantwise both in the plane of the web and also in the plane of the flanges; moreover, it makes cuts which are simultaneously inclined to both planes. If it is desired to cut slantwise of the plane of the web, the cutting device is rotated, whereas for the slanting cut in the plane of the flanges the frame carrying the figured iron is rotated and then held fast with the iron in the horizontal plane. If both cuts are to be made at once, for example, if a U-shaped iron girder is to be cut in the plane of the web and in the plane of the flanges simultaneously, namely, both mitered and beveled, the cutting device will be rotated and the iron girder will be adjusted in the horizontal plane to the desired angle.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a machine for severing iron beams or bars, a stationary frame, a work-holding frame mounted to rotate on a horizontal axis in said frame and carrying stationary knives, the planes of which when the said rotatable frame is adjusted to the desired bevel are inclined to the usual plane, a knife and means for reciprocating it toward and from the stationary knives, and means whereby said knife is rendered rotatable on the same horizontal axis as the rotatable work-holding frame.

2. In a machine of the class described, a stationary frame, a member rotatable upon a horizontal axis and carrying means for holding the work together with stationary knives, and another member comprising a knife and means for reciprocating it to and from the stationary knives, said knife being rotatably connected to its reciprocating means, the axis of rotation being coincident with that of the work-holding frame.

3. In a machine of the class described, a stationary frame, a work-holding member carrying stationary knives, the planes of which when the said rotatable frame is adjusted to the desired bevel are inclined to the usual plane, a knife member and means for reciprocating it, and means whereby one of said members is rendered rotatable on a horizontal axis, for the purpose set forth.

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

JOHANNES KRÜGER.

Witnesses:
HENRY HASPER,
WOLDEMAR HAUPT.