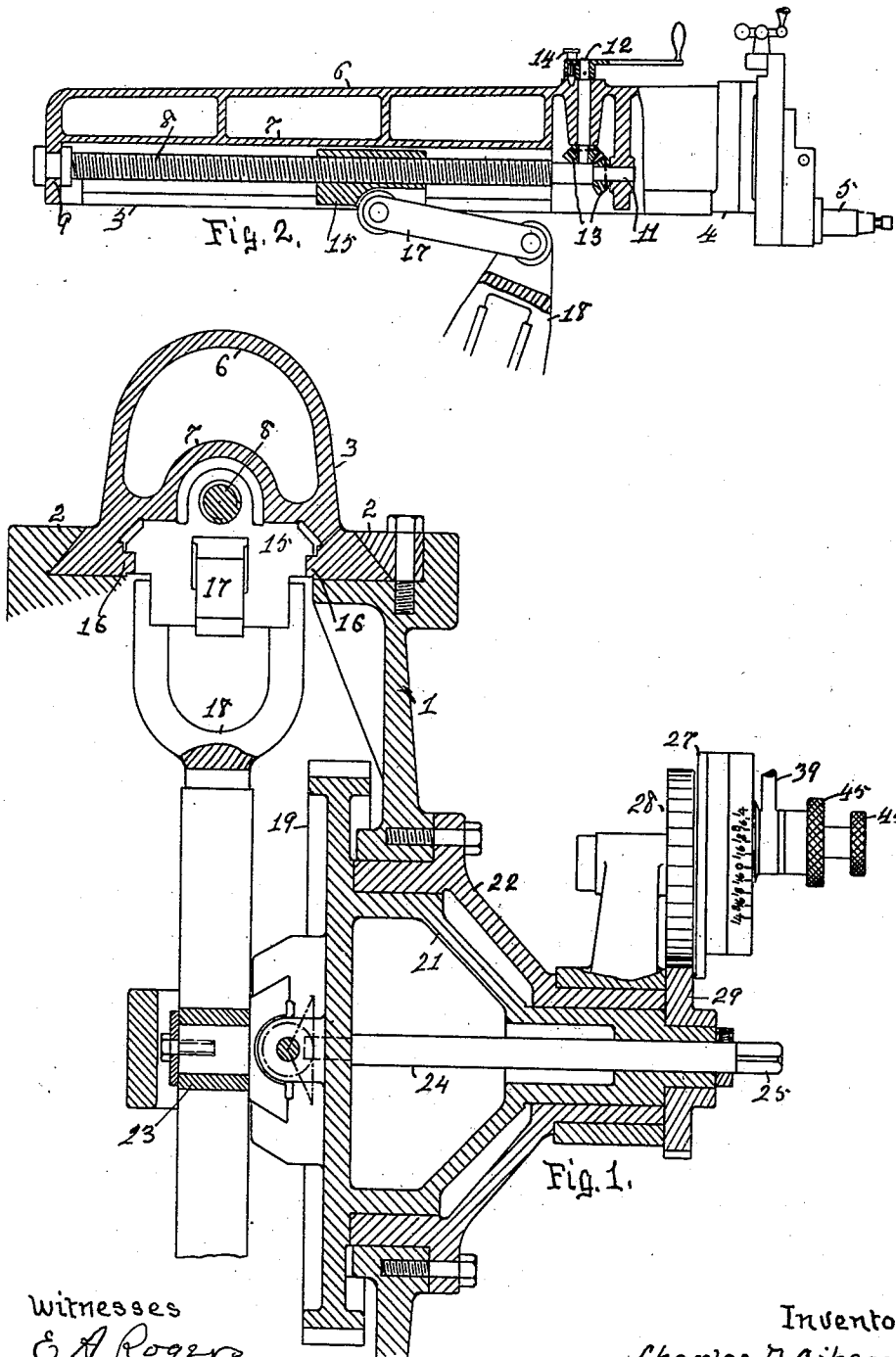


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SHAPER.

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988,292.

Patented Mar. 28, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

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OHIO.

SHAPER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, CHARLES D. GIBSON, a citizen of the United States, and HANS BAERBALCK, a citizen of Germany, both residing at Hamilton, Ohio, have invented a new and useful Improvement in Shapers, of which the following is a specification.

Our invention relates to shapers of the class used for paring metal, and the objects of our improvements are to form the ram with an imperforate or continuous arch and also an imperforate transverse wall for preventing it from springing laterally in the slide and thereby preventing the tool from chattering; for obtaining greater accuracy under extreme duty, and to provide simple and durable construction and assemblage of parts for securing increased facility of operation and efficiency of action. These objects are attained in the following described manner as illustrated in the accompanying drawings, in which:—

Figure 1 is a transverse vertical section with parts broken away of a shaper embodying our improvements; Fig. 2, a longitudinal section of the ram with means for adjusting it longitudinally during action.

In the drawings, 1 represents the frame of a shaper formed with guides 2 for the longitudinal movement therein of the ram 3 which is provided with the usual head 4 and tool holder 5 and formed with a solid arch 6 and an imperforate intermediate longitudinal arch or wall 7 to prevent its edges from springing toward each other in the guides. A screw 8 journaled at its ends in bearings 9 and 11 formed in the end walls of the ram may be rotated by means of the crank shaft 12 with the bevel gear connections 13 therewith. An ordinary stop pin 14 serves to lock the crank shaft with the screw in predetermined positions of rotative adjustment. A nut 15 threaded on the screw 8 is fitted to slide in the guide 16 formed within the lower portion of the side walls of the ram to prevent said walls from springing inwardly. A link 17 connects said nut with the top of the slotted oscillating arm 18 which arm is pivotally se-

cured at its opposite end to the frame in the usual manner (not shown).

The bull gear 19 is formed with a stepped hub 21 whereby it is journaled in the stepped bearing 22 which is removably secured to the frame. A crank pin 23 slidably mounted on the bull gear movably engages with the slot in arm 18 for oscillating said arm and reciprocating the ram in the usual manner. A rod 24 adapted to engage with a crank at 25 is journaled in the axial bore of the bull gear for adjusting the eccentricity of the crank pin in the ordinary manner.

A slotted guide plate 27 is secured on the end of gear 28 which is driven from a gear 29 secured on the hub of the bull gear. A screw 44 provided with a jam nut 45 serves to maintain the feed rod 39 in different positions of adjustment on the guide plate 27 in the usual manner.

From the foregoing description the operation is evident. The longitudinal position of the ram and also the throw of the feed shaft may be changed during the action of the machine.

Having fully described our improvement what we claim as our invention and desire to secure by Letters Patent of the United States is:—

1. As a new article of manufacture, a ram formed with an imperforate top wall, a horizontal partition thereunder, and with parallel edges adapted to movably engage externally with fixed guides and internally with a member longitudinally adjustable therein.

2. As a new article of manufacture a shaper ram formed with an imperforate top wall, an imperforate laterally arched longitudinal partition thereunder, and with its edges terminating in slides adapted to movably engage with suitable guides.

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Witnesses:

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