

No. 732,110.

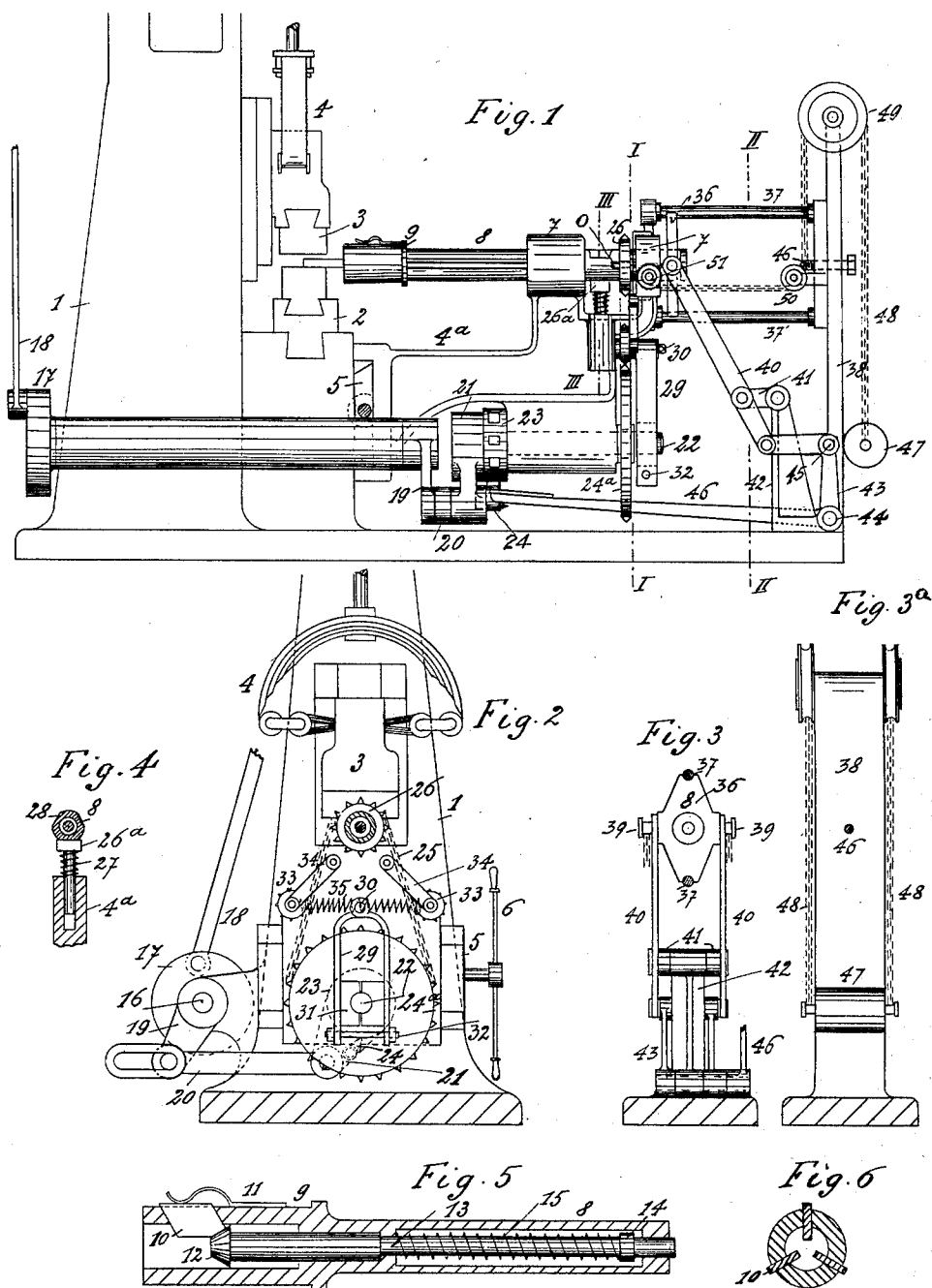
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P. R. PEISELER.

FEEDING DEVICE FOR FORGE HAMMERS.

APPLICATION FILED SEPT. 3, 1902.

NO MODEL.



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UNITED STATES PATENT OFFICE.

PETER RUDOLF PEISELER, OF REMSCHEID, GERMANY.

FEEDING DEVICE FOR FORGE-HAMMERS.

SPECIFICATION forming part of Letters Patent No. 732,110, dated June 30, 1903.

Application filed September 3, 1902. Serial No. 121,991. (No model.)

To all whom it may concern:

Be it known that I, PETER RUDOLF PEISELER, a subject of the Emperor of Germany, residing in the city of Remscheid, Empire of Germany, have invented a new and useful Feeding Device for Forge-Hammers to be Used in the Manufacture of Files, of which the following is a specification.

My invention relates to a new and useful mechanism which is combined with a forge-hammer of any known system and which is adapted to mechanically feed a piece of work—for instance, a file—and turn it on the anvil intermittently, so that the spike of a file is made automatically and the file is thrown out of the machine when being finished. As such work has been done hitherto mostly by hand, my machine has the great advantage to deliver such files cheaper, for persons not skilled in the art of forging may attend to my machine and a considerably larger amount of files may be produced than could be made by hand.

My invention consists in the novel combination and arrangement of parts that will be hereinafter described, and particularly pointed out in the claim appended.

In the drawings, Figure 1 is a side view of the device in combination with a forge-hammer. Fig. 2 is a vertical section along line I I of Fig. 1. Fig. 3 is a similar section along line II II of Fig. 1. Fig. 3^a is a front view of the machine. Fig. 4 is a section taken at III III. Figs. 5 and 6 show the chuck for holding the work.

Referring to the drawings, the reference-numeral 1 indicates a hammer-frame, having an anvil 2 and a ram 3, the latter being raised and lowered in any known manner—for instance, by a spring-acted device 4, which is set in motion by the main shaft of the hammer. (Not shown in the drawings.)

4^a is a frame which is mounted on a bed 5, so that it can be adjusted sidewise to and fro by means of the hand-wheel 6 for the purpose described hereinafter.

In the bearings 7 of frame 4^a is journaled a spindle 8, which is provided in front with a chuck 9, that is adapted to receive and hold the work. For this purpose the chuck, Figs. 5 and 6, is made hollow and provided with slots in which are located the

dies 10, having slanted sides, as shown, and pressed against the work by springs 11. The dies are opened by a wedge 12, forming part of a rod 13, which is guided in the hollow spindle 8 and provided with a ring 14, against which bears a spring 15, holding the wedge 12 out of reach with the dies 10, but opening them when being pushed forward. The manner in which this is effected will be described hereinafter.

The spindle 13 is arranged to turn intermittently, or to be interrupted during one revolution two, three, or more times in order to forge a tongue of triangular or rectangular shape, according to the shape and purpose of the file.

In a bearing projecting from the frame 1 a shaft 16 is guided, which by means of a disk 17 and a rod 18 is oscillated from the main shaft of the machine. To the shaft 16 is keyed an arm 19, which is connected by a rod 20 to an arm 21, which is loosely arranged on a shaft 22, that is journaled in frame 4^a. On said shaft is keyed a ratchet 23, and arm 21 is fitted with a pawl 24, so that by this means shaft 22 is turned. To said shaft is also fixed a chain-wheel 24^a, having connection by means of a chain 25 with a chain-wheel 26, fitted to spindle 8, so that the latter is turned.

As described before, the work must be retained from turning during a revolution two or more times in order to allow the ram to give a blow. In the present example, showing the manufacture of a triangular saw-file, the interruption is three times, and therefore the spindle should be held fast so many times. This is done by means of a bolt 26^a, guided in the frame 4^a and having a head which bears, by means of a spring 27, against the spindle 8, which for this purpose has three flattened portions 28, Fig. 4. By such means the spindle is held a moment, and in order to facilitate its holding a brake 29 is provided, which is suspended from a bolt 30 and consists of two arms, each having a block 31. A screw 32 serves for pressing both blocks together and brake the shaft 22.

For the purpose described another device is arranged. This consists of two small chain-wheels 33, which are bolted to arms 34, pivotally secured to frame 4^a and drawn together by a spring 35. The wheels 33 engage the

chain 25 in order to regulate its strain and allow the proper transmission of movement to spindle 8.

In order that the retarding device is capable to effect the interruption in the rotation of the chain and spindle 8, the following co-operating parts are arranged: first, the brake 29, which regulates the speed of shaft 22, and accordingly also that of the spindle 8; 10 secondly, the chain 25, which does not rigidly connect both sprocket-wheels, but fits loosely thereon. The strain for the chain enabling it to turn the sprocket-wheels is imparted thereto by the spring 35, which compresses the rollers 33 against the chain. If, 15 however, the retarding spring-bolt 26^a engages the flattened portions of spindle 8, as seen in Fig. 4, the spring 35 yields, so that the chain for a moment is set out of action 20 and the spindle accordingly held fast until the blow of the hammer is applied to the blank.

The work after being pointed out or provided automatically, as described, with a 25 three-cornered tongue should be removed from the chuck. For effecting this the spindle 8 is withdrawn, which is accomplished by the following: On the rear of spindle 8 is fixed a cross-like piece 36, which is held and 30 guided by rods 37, rigidly secured to frame 4^a and to a standard 38. The cross-piece 36 is fitted with pins 39, on which engage levers 40, fulcrumed to arms 41, that are pivoted to a bearing 42. Angle-levers 43, fixed to a bolt 35 44 and being connected by a rod 45, seize the levers 40. To shaft 44 is keyed a lever 46, which when moved down will cause the spin-

dle 8 to be shifted backward. Now in the standard 38 is arranged a screw 46, against which rod 13 bears when the spindle is quickly 40 drawn back, and by this means rod 13 is driven forward, the dies opened, and the work kicked out and a new blank inserted, which is held fast in the chuck as soon as rod 13 is released from the screw 46. The chuck 45 is moved toward the anvil by a weight 47, suspended to cords or chains 48, which are guided over rollers 49 50 51 to the bolts 39 of the cross-piece 36, so that by action of the weight the spindle 8 will be drawn quickly 50 in its normal place.

When ram and anvil are worn on one part by the continuous forging, the frame 4^a and parts 42 and 46 are adjusted, as described before. 55

Having fully described my invention, what I claim, and wish to secure by Letters Patent, is—

In a forging-machine a feeding or turning device for the blanks, comprising a bed, a 60 spindle arranged therein having a chuck, adapted to receive and hold a blank a ratchet mechanism and a chain-gear to turn intermittently the spindle, a spring-bolt and a brake to regulate the turning, means to ad- 65 just the strain of the chain and means to reciprocate the spindle for the purpose described and set forth.

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

PETER RUDOLF PEISELER.

Witnesses:

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