

(No Model.)

R. T. KING.

MACHINE FOR MAKING SPLIT KEYS.

No. 262,898.

Patented Aug. 15, 1882.

Fig. 1

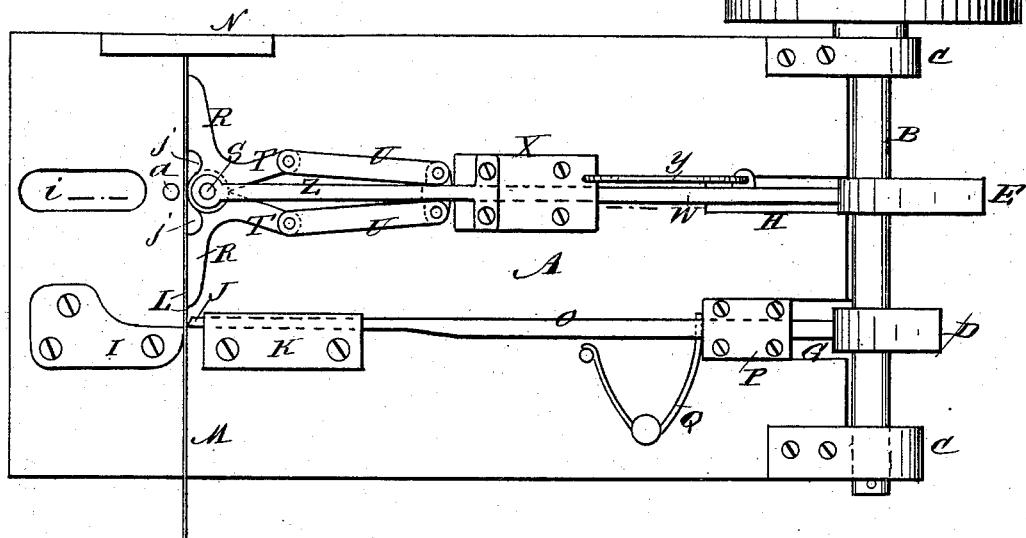


Fig. 2

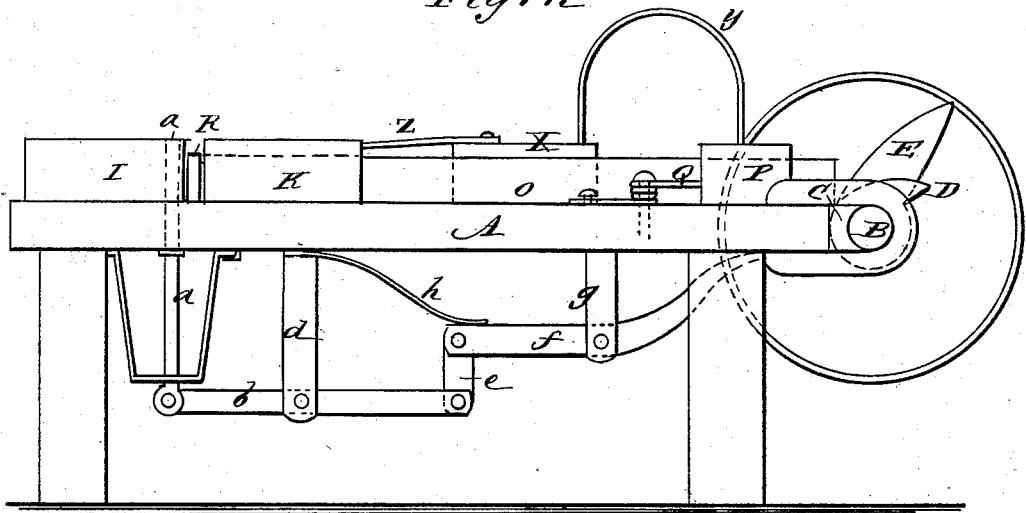


Fig. 3

WITNESSES:

C. Neveux
C. Sedgwick

INVENTOR:

R. T. King
Munn & Co.

UNITED STATES PATENT OFFICE.

ROBERT T. KING, OF COLUMBUS, OHIO.

MACHINE FOR MAKING SPLIT KEYS.

SPECIFICATION forming part of Letters Patent No. 262,898, dated August 15, 1882.

Application filed March 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, ROBERT T. KING, of Columbus, in the county of Franklin and State of Ohio, have invented a new and Improved 5 Machine for Making Split Keys, of which the following is a full, clear, and exact description.

My invention relates to improvements in a machine for bending split metal keys, patented to me September 6, 1881, by Patent No. 10 246,788; and it has for its object the adaptation of mechanism whereby machine-power may operate the various parts of the machine to make split metal keys automatically, except feeding in the wire, which must still be 15 done by hand; and it consists mainly in the substitution for hand-levers of revolving cams which communicate power to the levers actuating the forming-pin, and to a slide which operates the bending-levers.

20 To this end I have adapted the form of the various levers to be actuated in a certain order of rotation by peculiarly-formed cams on a shaft provided with a pulley to be revolved by suitable power, as more fully hereinafter 25 described, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of my improved machine. Fig. 2 is a side elevation, and Fig. 3 is 30 a central longitudinal vertical section through parts *a* *Z* of Fig. 1.

A represents a bed-plate or table, at one end of which the cam-shaft *B* is mounted in suitable bearings, *C*, said shaft carrying the cutter- 35 operating cam *D* and the bending and discharging cam *E*, for which the table is slotted at *G* and *H*, so that the cam-shaft may be located close up to the end of the table.

I represents a stationary cutter attached to 40 the table near the end opposite to the cam-shaft, and *J* a movable cutter working in the guide *K* to operate with cutter *I* for cutting off the blanks *L* from the strips *M*, which are to be fed into the machine by hand or other 45 means against the stop-gage *N*. The said movable cutter *J* is attached to the end of sliding stock *O*, extending back to the cam *D* through guide *P*, and has the retracting-spring *Q* suitably arranged for sliding the cutter back after 50 each operation.

R represents the bending-dies. They are

pivoted together by a strong pivot, *S*, fixed in bed *A* by a nut, *s*, so as to allow the dies to lie flat upon the bed-plate, the dies having elbow-arms *T*, connected by links *U* with the 55 sliding bar *W*, arranged in the guide *X*, and driven forward by the cam *E* and back by the spring *Y*. The pivot *S* of the bending-dies is connected by a brace, *Z*, to the stationary guide-block *X* to support and steady the pivot. 60

a represents the forming-pin, around which the blanks are to be bent by the dies *R*. It is fitted in a hole through the bed-plate, and arranged to drop down to the level of the table for the discharge of the keys, and for being so 65 operated is connected some distance below the table with the lever *b*, pivoted in a hanger, *d*, and coupled by link *e* with another lever, *f*, in another hanger, *g*, and projecting at its rear end into the range of the cam *E* to be operated by it for withdrawing the forming-pin *a* 70 immediately after having worked the bending-jaws for shaping the key, thus utilizing this cam *E* for both operations and saving the expense of another cam. The spring *h* returns 75 the forming-pin to its working position. The slot *i* is made through the bed-plate a little in advance of the forming-pin, and the keys, falling through the bed-plate, are discharged from the machine as soon as the forming-pin is withdrawn. The joint of the bending-dies around the pin *S*, by which they are connected together, forms a round boss, which bears the blank against the side of the forming-pin as soon as the cam *E* begins to drive the stock *W* 85 forward, and each jaw has a cavity, *j*, each side of the joint, in which the blank has room for the bend around the pin to swell or bow into for making the head of the key, while the faces of the jaws beyond said cavities *j* swing 90 around the pin *a*, so as to bend the two parts of the key together beyond the pin. The pin *S*, on which the dies *R* are pivoted, is set in the bed *A* a sufficient distance from the forming-pin *a* to allow space for the feeding of the 95 blanks up to stop *N* between the dies and the forming-pin, as represented in Fig. 1.

It will be seen that cam *E* is made in this machine to do the work of two cams. Either of the cams, operating as described, might be 100 used in connection with the other parts operated by hand, as formerly done.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a machine for bending split metal keys, the combination, with the elbow-lever, bending-dies R T, links U, slide W, and guide X, of the driving-cam E and retracting-spring y, as shown and described.
2. The combination of the forming-pin a and levers b f with the driving-cam E and returning-spring h, as shown and described.

3. The combination of the cutters I J, connecting-rod O, and slide-box P with the driving-cam D and returning-spring Q, as shown and described.

ROBERT THOMAS KING.

Witnesses:

R. W. KING,
W. H. CRETHERS.