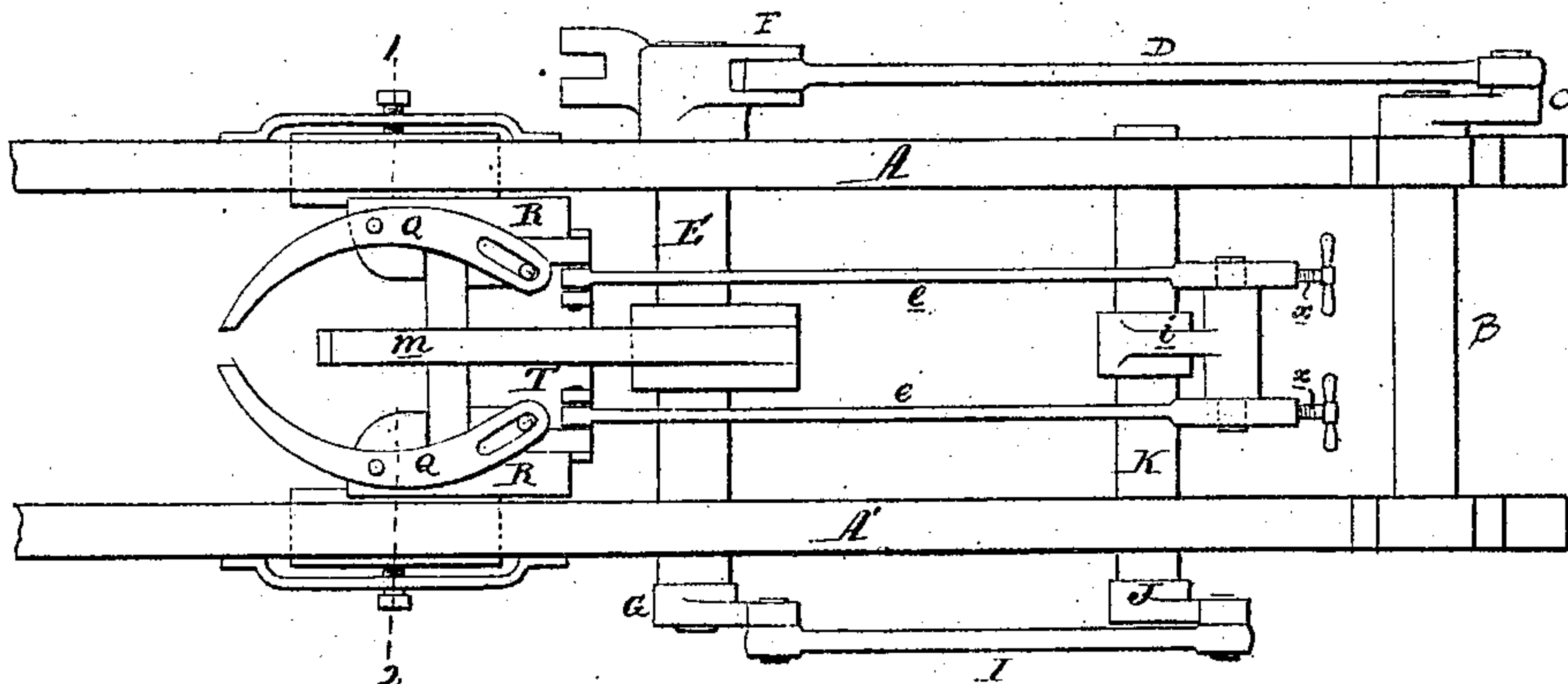


*D. Eymon,*  
*Strike Machine.*

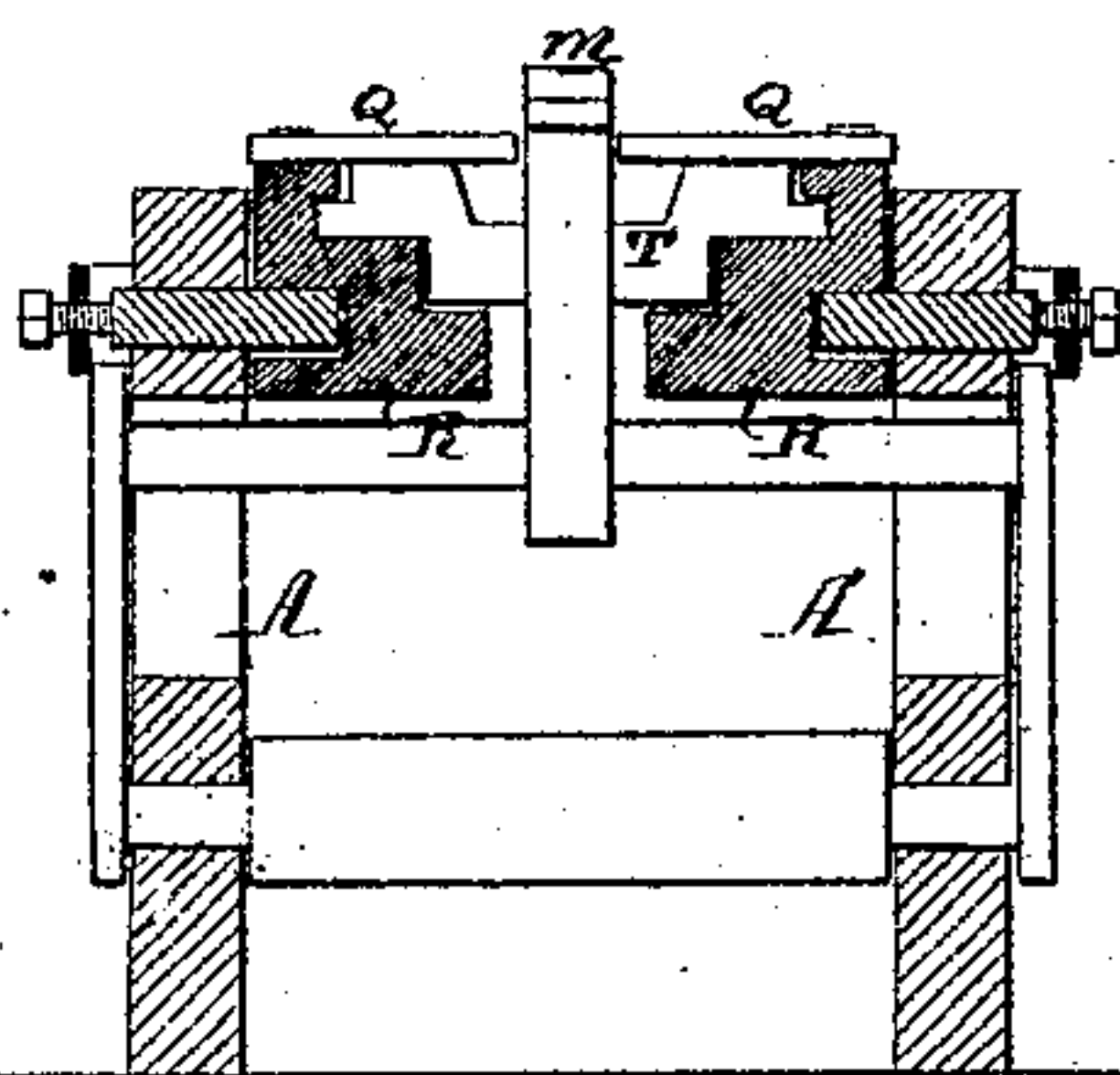
*No. 110,756.*

*Patented Jan. 3. 1871.*

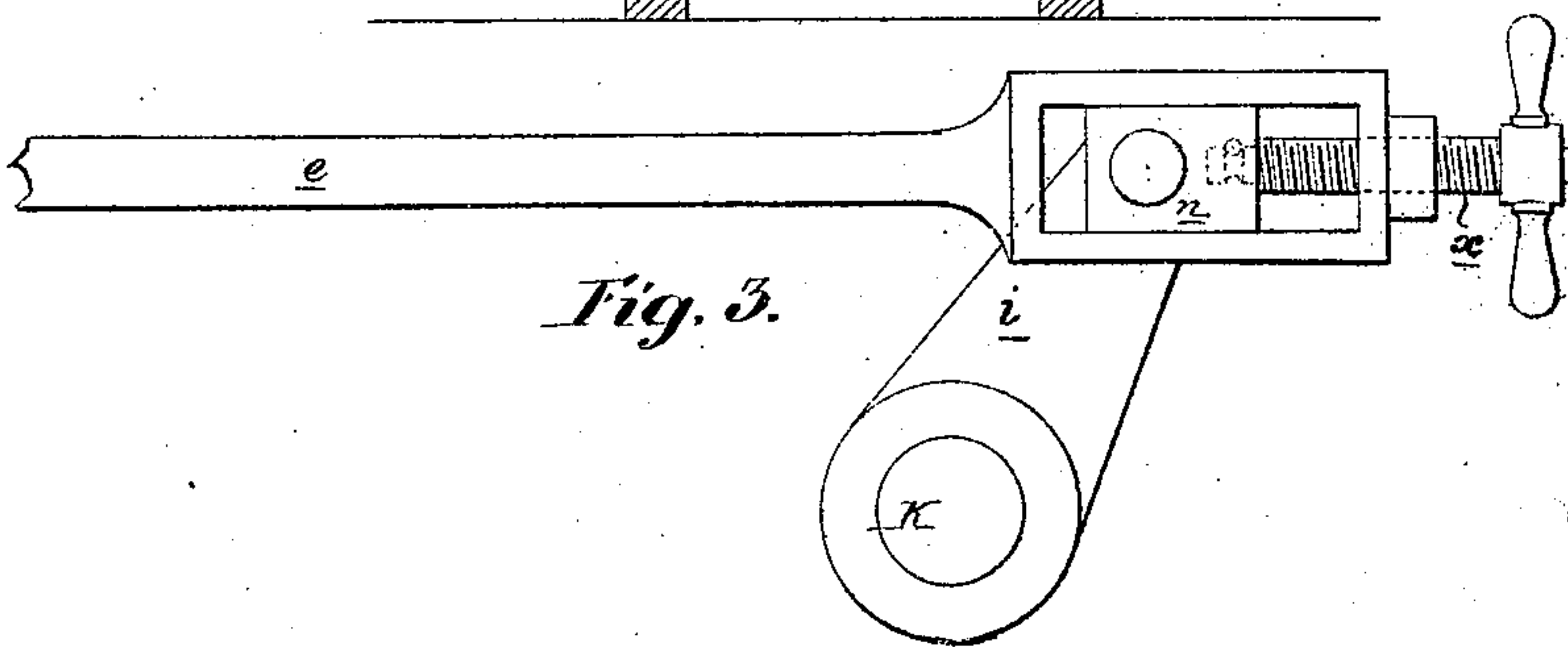
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses {*  
*Jno. B. Harding*  
*John Parker*

*David Eymon*  
*by his Atty*  
*Howson and Son*

# United States Patent Office.

DAVID EYNON, OF RICHMOND, VIRGINIA, ASSIGNOR TO TREDEGAR COMPANY, OF SAME PLACE.

Letters Patent No. 110,756, dated January 3, 1871.

## IMPROVEMENT IN SPIKE-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

I, DAVID EYNON, of Richmond, county of Henrico, State of Virginia, have invented an Improvement in Spike-Machines, of which the following is a specification.

### *Nature and Object of the Invention.*

My invention relates to an improvement in the spike-machine well known to manufacturers of railroad-rail chairs, spikes, &c., as Swett's; and

My improvement consists in the combination of a certain adjustable rod or rods with the nipper-carriers of the said machine, and with the arm for operating the carriers, so that the movement of the said nippers, as regards the points of their reversal, may be regulated at pleasure.

### *Description of the Accompanying Drawing.*

Figure 1 is a plan view of sufficient of a spike-machine, with my improvement.

Figure 2, a transverse section on the line 1-2, fig. 1.

Figure 3, a detached view of part of one of the connecting-rods, illustrating my improvement.

### *General Description.*

A and A' are the side-frames of a spike-machine for which Letters Patent were granted to Jas. H. Swett April 30, 1861.

B is the driving-shaft, from which a vibrating motion is imparted to the shaft E through the medium of the crank C, rod D, and arm F.

From the shaft E a vibrating motion is imparted to another shaft, K, through a crank, G, having an adjustable pin, which is connected by a rod, I, to an arm, J, on the said shaft K, the latter carrying another arm, i, connected by rods e e to the slide T, which is arranged to move to a limited extent on a slide, R, the latter being adapted to guides on the frames A and A'.

To pins on the slide R are jointed the nippers Q Q, by which the nearly-severed end of a hot bar is torn off and carried to a proper position to be acted on by the gripping-dies prior to the heading of the spike by a bar, M, actuated by arms on the shaft E.

All the above-mentioned parts are to be found in Swett's patent machine.

In adjusting the machine for making spikes of different lengths, it becomes necessary to impart a longer or shorter reciprocating motion to the nippers. This I also accomplish substantially in the same manner as described in Swett's patent, that is to say, by the adjustment of the pin which connects the rod I

to the crank G further from or nearer to the axis of the shaft E. But the simple adjustment of the pin only is insufficient to effect all of the changes that may be necessary; for instance, after the adjustment the point of the nippers may seize the piece of the bar too far behind the end of the same, in which case there will be too much metal for the desired head, or there may be too little metal for that purpose, and hence there should be, in addition to the devices for increasing or diminishing the extent of movement of the nippers, other devices by which, while the extent of movement remains the same, the nippers may be caused to grasp the blank at any point nearer to or remote from the end, so that the length of that portion of the blank left projecting beyond the dies, of which to form the head, may be varied at will, and my improvement consists in the arrangement of devices by which this last-named adjustment may be effected. Thus I make each rod with an elongated opening, as shown in fig. 3, adapted to a bearing, n, for one of the pins, the position of this bearing being controlled by a screw, x, in a manner which will be readily understood by referring to fig. 3, so that by operating the screws the rods may be lengthened and shortened at pleasure, and the movement of the nippers restricted in its range accordingly.

It is not essential that there should be two adjustable rods e e, as one rod of proper strength may serve the desired purpose. Nor is it essential that the adjustability of the rod should be effected through the medium of the movable bearing controlled by a screw in the manner described, as other plans may be adopted for lengthening or shortening a rod or rods, without departing from the main features of my invention.

### *Claim.*

The slide R, carrying nippers Q Q, and the slide T, having a limited sliding motion on the slide R, and operating said nippers, in combination with a shaft, K, its crank i, connecting-rod or rods e, and mechanism, substantially as described, for adjusting the length of said rod or rods.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID EYNON.

Witnesses:

CHARLES E. FOSTER,  
WM. A. STEEL.