

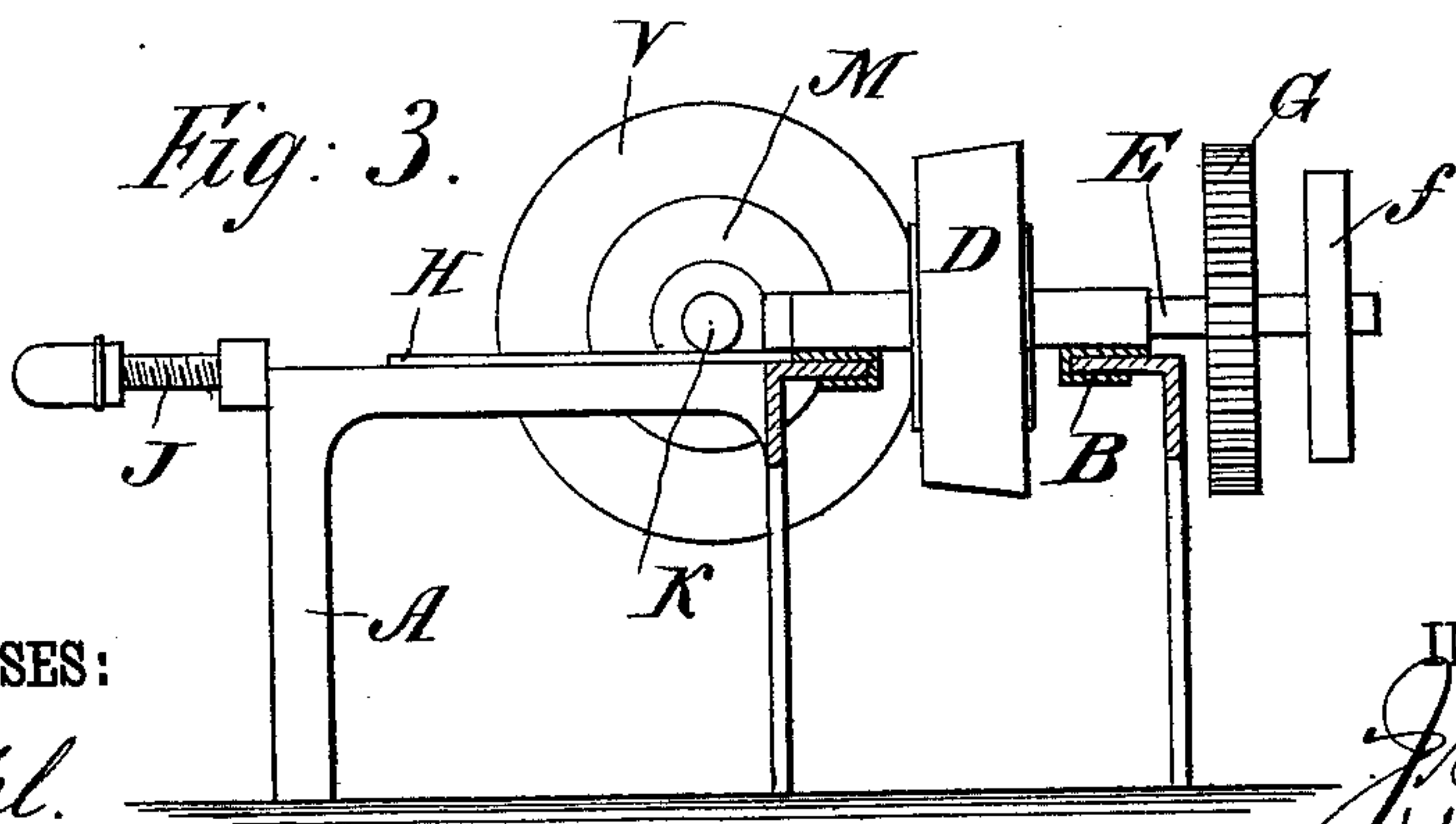
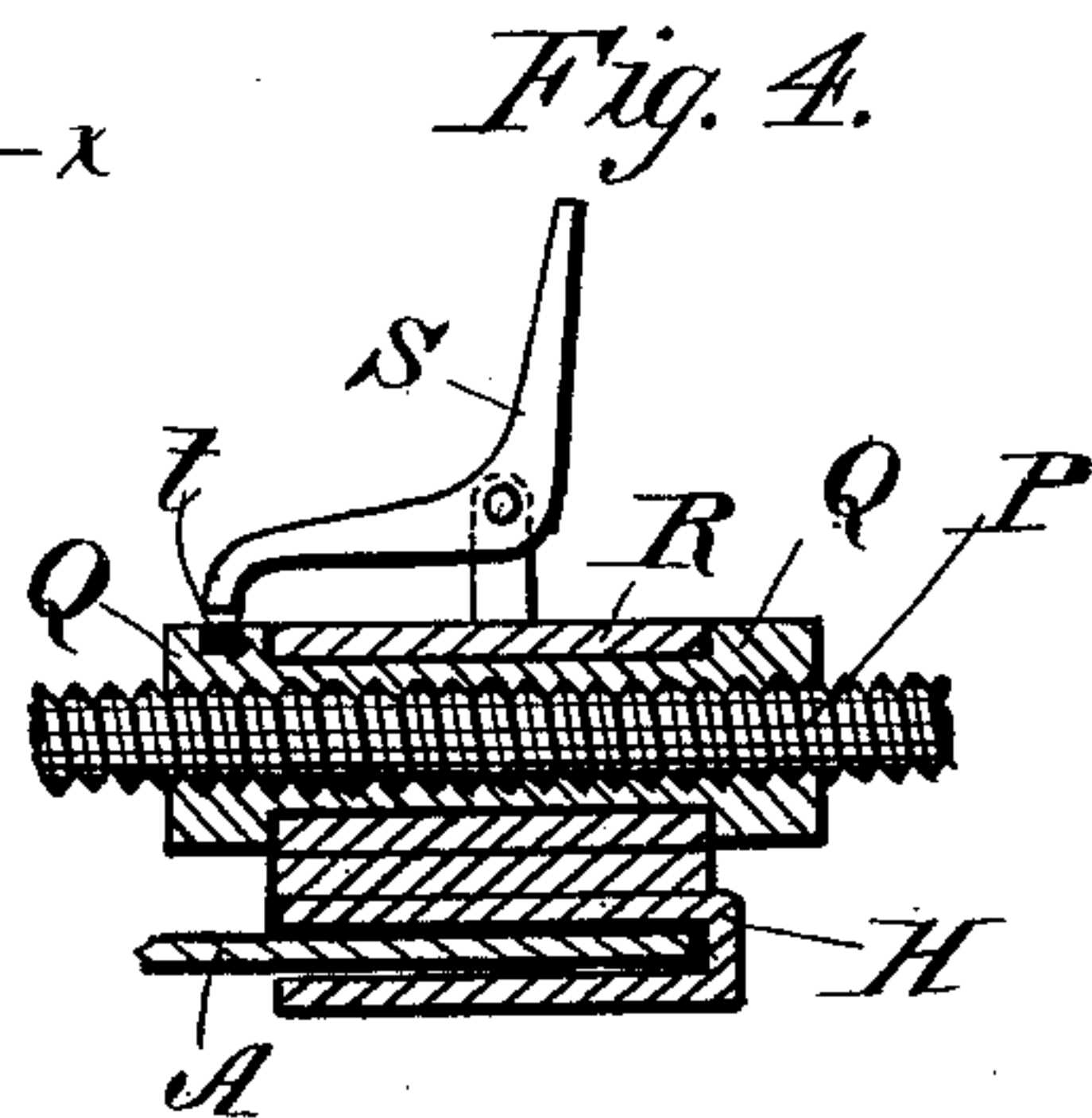
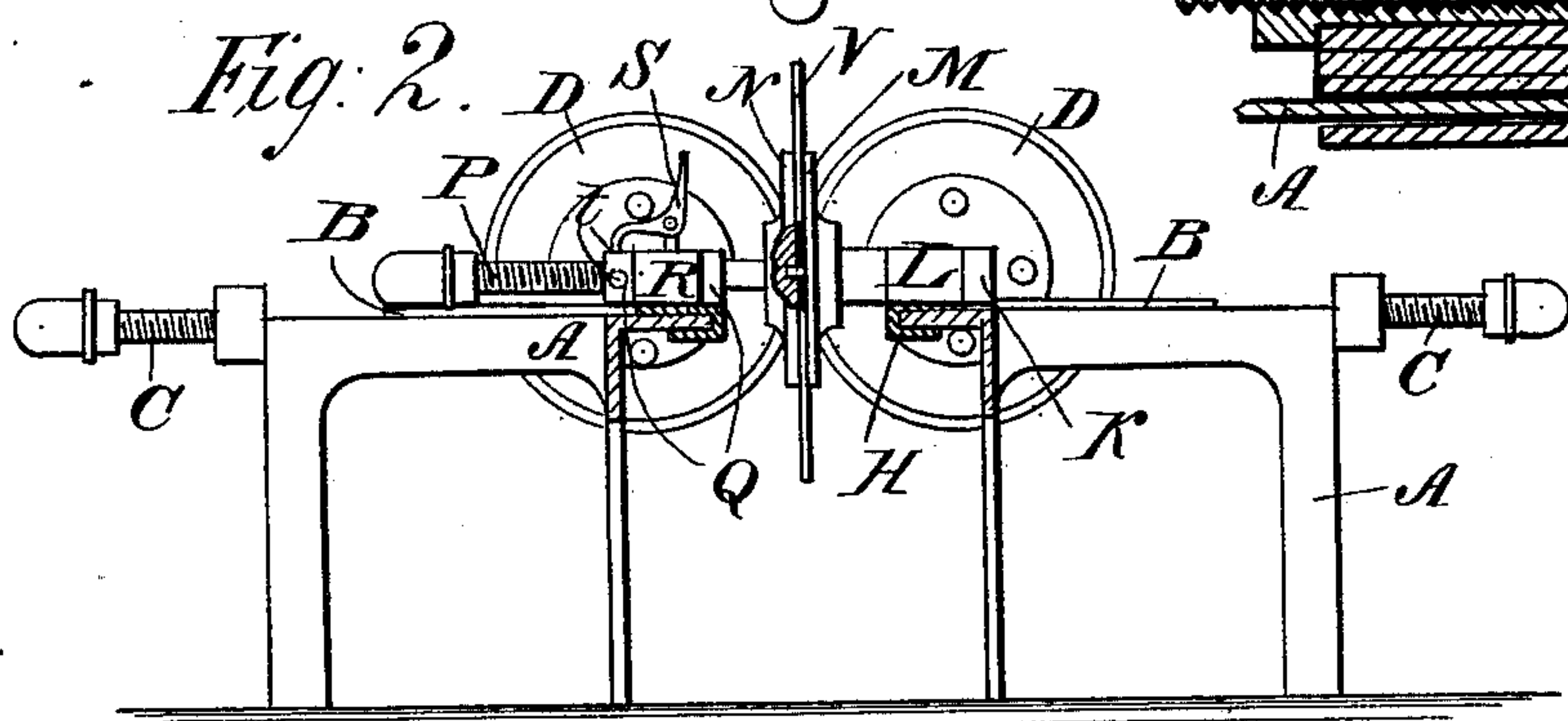
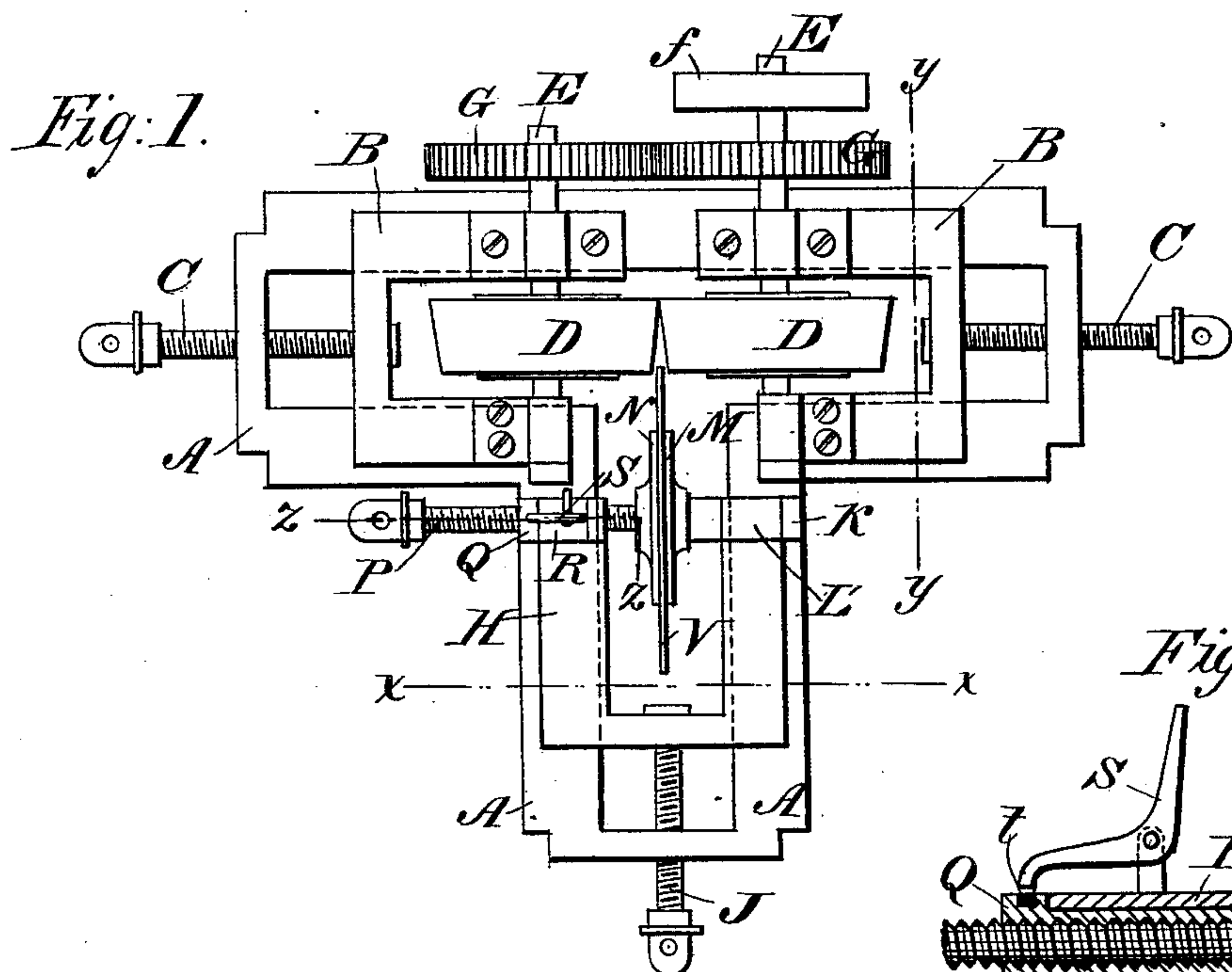
(No Model.)

J. T. DUFF.

Machine for Flattening and Sharpening Plow Colters.

No. 234,006.

Patented Nov. 2, 1880.



WITNESSES:

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JOHN T. DUFF, OF ALLEGHENY, ASSIGNOR OF ONE-HALF TO WALTER M. WAGNER, OF PITTSBURG, PENNSYLVANIA.

MACHINE FOR FLATTENING AND SHARPENING PLOW-COLTERS.

SPECIFICATION forming part of Letters Patent No. 234,006, dated November 2, 1880.

Application filed May 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. DUFF, of Allegheny city, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Machines for Flattening and Sharpening Plow-Colters, of which the following is a specification.

My invention consists in a novel construction, arrangement, and combination of flanges for clamping the colter, and rollers for beveling its edge, and devices operating in connection therewith, as hereinafter particularly described.

In the accompanying drawings, Figure 1 is a top view of a machine embodying my improvements. Fig. 2 is a vertical section taken in the line *xx* of Fig. 1. Fig. 3 is a vertical section taken in the line *yy* of Fig. 1. Fig. 4 is a vertical section taken in the line *zz* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents a T-shaped frame-work or table supporting the working parts of the machine.

In the longest portion of the frame A two sliding beds, B B, are arranged in ways so as to travel horizontally toward and from each other. Each bed is provided with a hand-screw, C, working through the end rail of the frame A for moving said beds in their ways. Each of the beds B carries a shaft, E, and each of said shafts has fixed to it a bevel-faced roller, D, and a gear-wheel, G. One of said shafts is also provided with a band-pulley, *f*.

In the shortest portion of the T-shaped frame is a sliding bed, H, similar to the beds B, provided with a hand-screw, J. This bed H carries on one side a shaft, K, journaled in a journal box or bearing, L, so as to turn freely therein, but not to slide longitudinally. The inner end of the shaft K has a flange, M, rigidly attached to it, and said inner end of said shaft projects beyond the face of said flange, as shown in section in Fig. 2.

On the side of the sliding bed H opposite the shaft K is a hand-screw, P, which carries a flange, N, rigidly attached to its point or inner end. The hand-screw P works in a screw-threaded sleeve, Q, which is journaled in a

box or bearing, R, so as to turn freely therein, but not to slide.

On the top of the journal-box R is pivoted an elbow-lever, S, the short arm of which is tapered and arranged for engagement with recesses *t* in the periphery of the sleeve Q.

Motion is applied through a band to the pulley *f*, and through the gearing G to the shafts E, causing the bevel-rollers D to revolve toward each other. By means of the hand-screws C the beds B are adjusted to the proper distance to obtain the required pressure of the rollers D.

The colter V is placed between the flanges N and M, with the protruding end of the shaft K passing through the eye of the colter. The lever S is lowered, so as to engage the sleeve Q, to prevent it from turning, and then the screw P is turned, so as to press the flange N against the colter, and thus clamp said colter tightly between said flanges M and N. This flattens the colter and straightens out any irregularities, wrinkles, dents, or uneven places which may exist therein, and also holds it firmly, so that it will turn with the shaft K and screw P. The lever S is now disengaged from the sleeve Q, leaving it to turn freely in the bearing R. Then, by means of the hand-screw J, the bed H is moved in its ways, so as to introduce the edge of the colter between the faces of the rollers D D, by the action of which rollers the edge of the colter is sharpened by pressure.

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

1. In a machine for flattening and sharpening plowshares, the combination of the flanged shaft, flanged hand-screw, sleeve, and elbow-lever with the bevel-faced rolls, as and for the purpose specified.

2. The combination of the shaft K, having flange M, the hand-screw P, having flange N, the threaded recessed sleeve Q, journaled to turn without sliding in a bearing, R, and the elbow-lever S, as and for the purpose specified.

JOHN TAYLOR DUFF.

Witnesses:

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