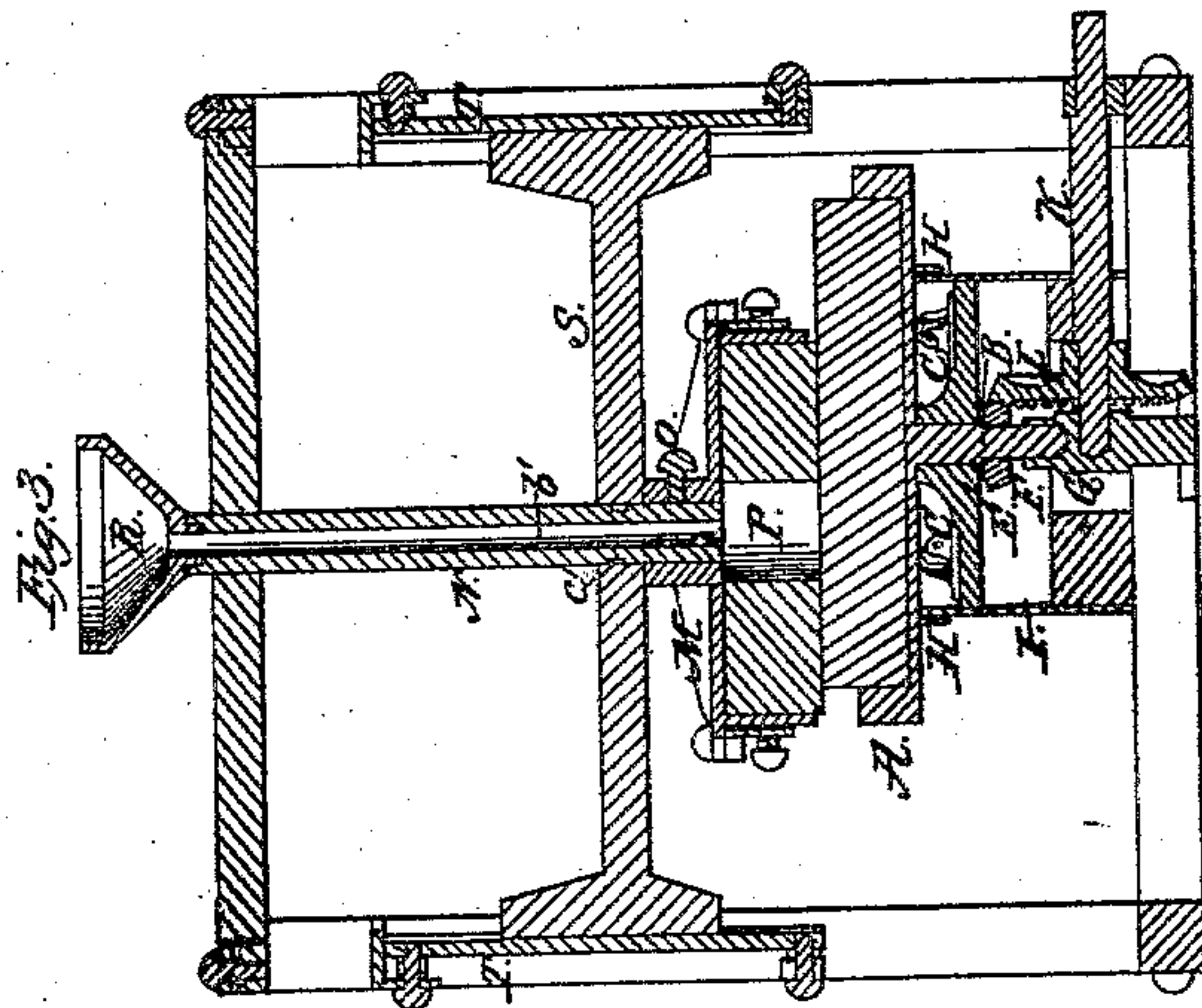
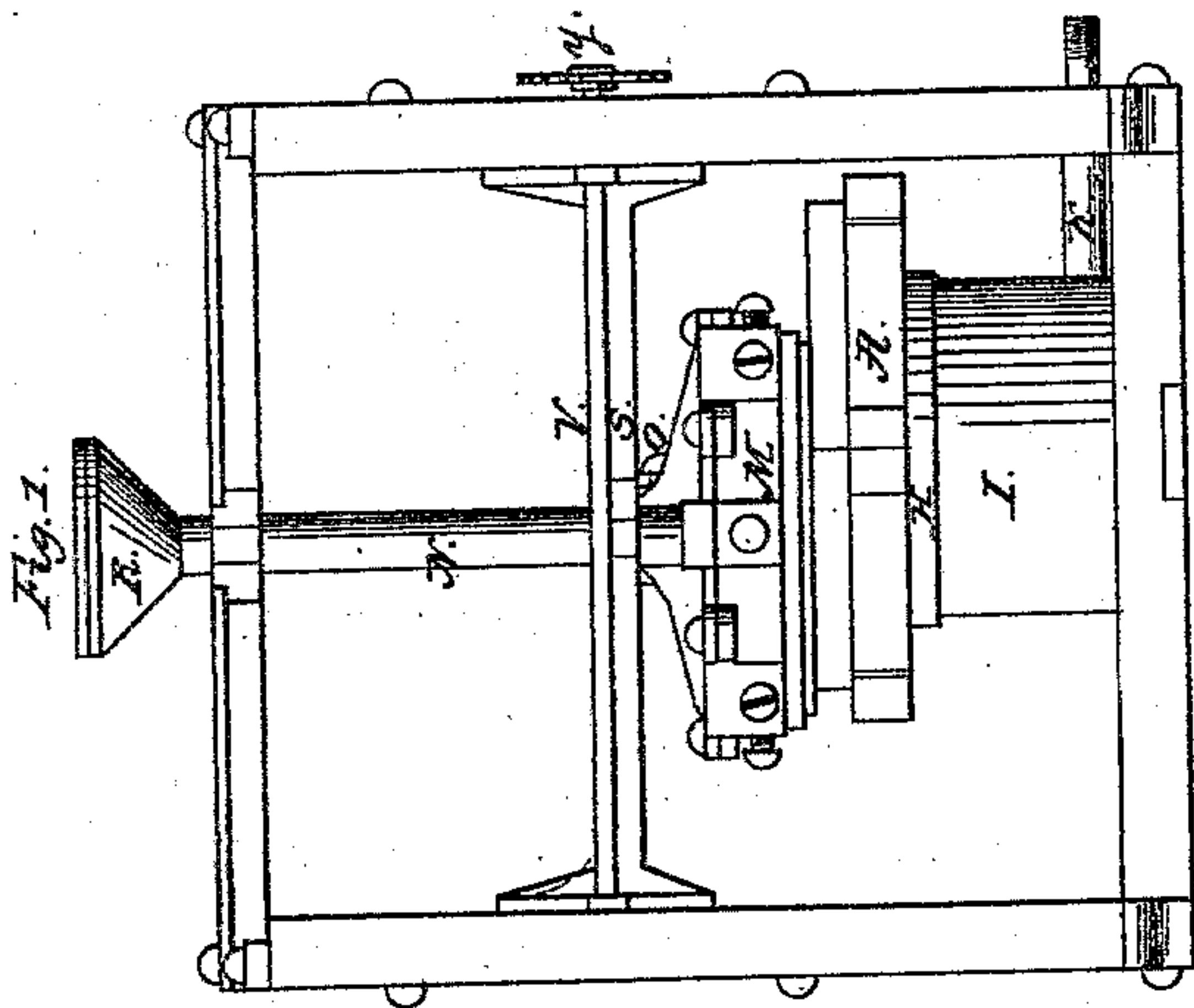
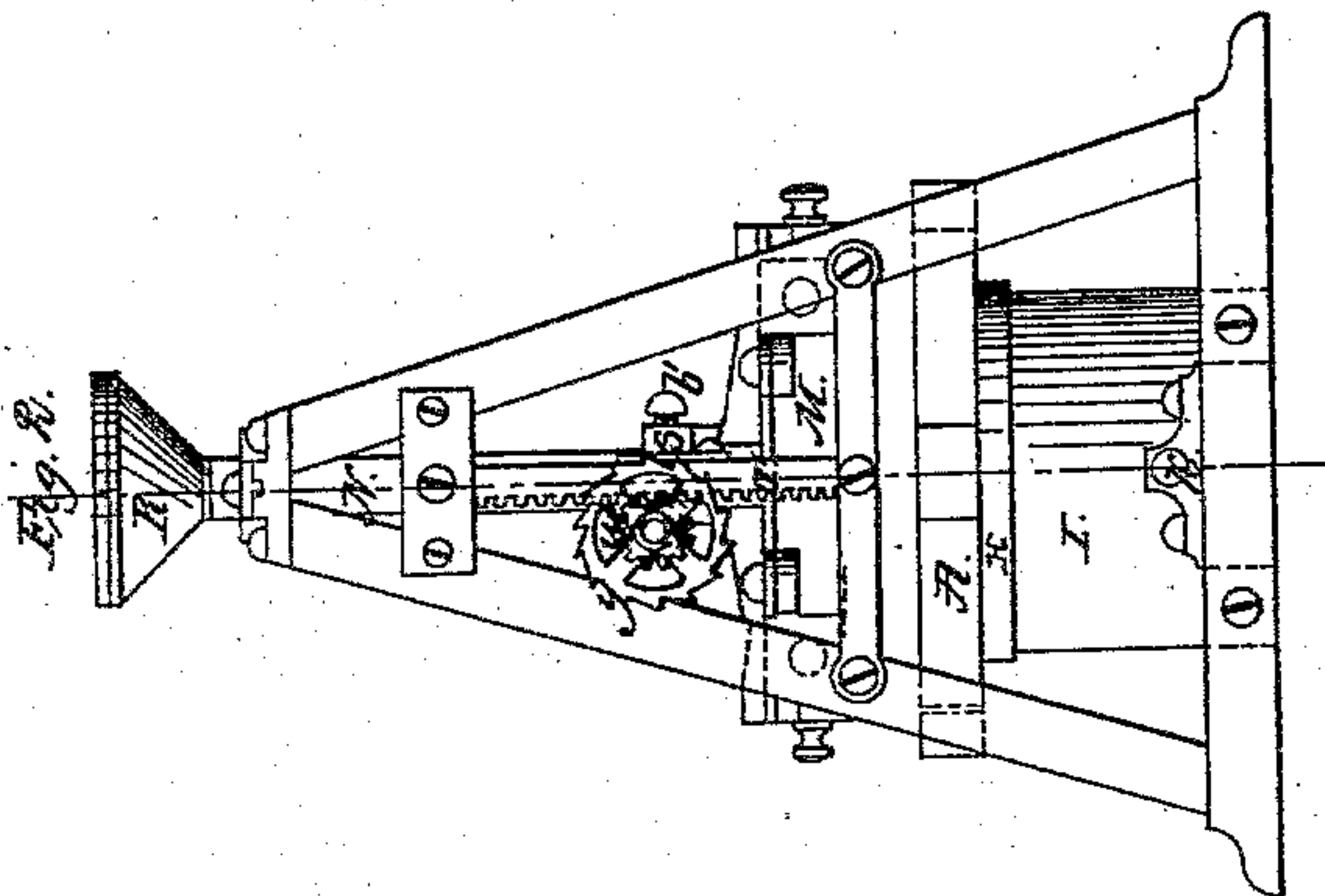


F. L. KING.  
MACHINE FOR DRESSING STONE.

No. 80,286.

Patented July 28, 1868.



Witnesses:  
Henry Chapman  
Russell R. McIntyre

Inventor:  
Francis L. King



# United States Patent Office.

FRANCIS L. KING, OF WORCESTER, MASSACHUSETTS.

*Letters Patent No. 80,286, dated July 28, 1868.*

## IMPROVED MACHINE FOR DRESSING STONE.

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

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, FRANCIS L. KING, of the city and county of Worcester, and State of Massachusetts, have invented a new and improved Machine for Dressing Stone; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a side elevation.

Figure 2 an end elevation.

Figure 3 a sectional elevation, taken on the red line, (shown in fig. 2.)

The object of my invention is, first, to arrange the stone so as to compel them to dress each other to a plain, smooth, and even surface, by the assistance of sand and water; second, by arranging the relative position of the upper and nether stones so as to produce the greatest celerity in grinding, by the use of a small amount of motive-power, and a cheap and simple arrangement of machinery to produce this result; third, a simple arrangement for protecting the bearings of the machinery under the rotary carriage from the sand and water falling from above; fourth, an improved self-adjusting frame.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

The entire machine should be made of iron. The frame may be made in any manner convenient to furnish the necessary bearings, the rotary carriage A furnished with a fixed or adjustable spindle, B, which passes through the disk E and the gear F into the step G, the bearing in the disk E holding the carriage in position and allowing a rotary motion to be imparted.

The principal weight of the carriage is sustained by the trucks C C. The carriage A is furnished with the apron H, which shuts down over the curbing I, for the purpose of protecting the machinery from matter falling from above. The power is applied to the shaft K, and, by means of the bevel-gears F and L, a rotary motion is imparted to the carriage A. Over the carriage A is placed the rotary grinder-box M, which holds the upper stone, and is held in position by the shaft N, to which it is fixed by the set-screw O. The grinder-box is made the same size of the carriage A, but is set a little one side of the centre of the carriage.

The stones are adjusted in the rotary grinder-box so as to leave a hollow space in the centre. The carriage is filled with one or more stones of equal height. The stone in the grinder-box rests upon the stone in the carriage. The power being applied to the carriage, the friction rotates the grinder-box. Thus an eccentric grinding-power is produced. At the same time, sand and water are fed into the open space P in the grinder-box, through the hopper R and hollow shaft N, or their equivalent. Power may also be applied to the shaft N, if convenient, and the grinder-box rotated in a direction opposite to the motion of the carriage. By applying power in one or both ways, an eccentric motion is produced, thus preventing any hard or flinty places in the upper or nether stones, grooving the stone with which it comes in contact.

The self-adjusting frame S furnishes a bearing to the shaft N, to prevent vibration. It slides up and down in the grooved rack T T, so as to accommodate itself to the different thicknesses of stone to be dressed, and compensate for the reduction of the stone as it wears away.

The projecting arms at each end, sliding in the grooved racks, prevent the frame from turning or canting.

By means of the shaft V, which passes through the bearings *a a'*, (shown on fig. 1,) and the gears U, at each end, working in the rack T T, the ratchet-wheel Y and the set-screw *b'*, (shown on fig. 3,) working in the groove *e'* in the shaft N, the frame S, with the grinder M and the shaft N, may be raised and lowered at will.

The shaft V and gears U and racks T serve also to hold the frame S accurately in a level position.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The peculiar construction of the self-adjusting frame, with its shaft, gears, grooved racks, and set-screw B, when constructed and operating substantially as and for the purpose specified.

2. The carriage A, spindle B, or its equivalent, apron H, constructed and operating substantially as and for the purpose specified.

3. The trucks C C, disk E, and curb I, constructed and operating substantially as and for the purpose specified.

4. Gears F and L, shaft K, constructed and operating substantially as and for the purpose specified.

5. The peculiar relative positions or adjustment of the carriage A and grinders M upon different centres, whereby the irregular or eccentric motion is produced, arranged and operating substantially as and for the purpose specified.

6. The combination of the hopper R, hollow shaft N, the grinder-box M with the carriage A, with its various bearings, constructed and operating substantially as and for the purpose specified.

FRANCIS L. KING.

Witnesses:

HENRY CHAPIN,

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