

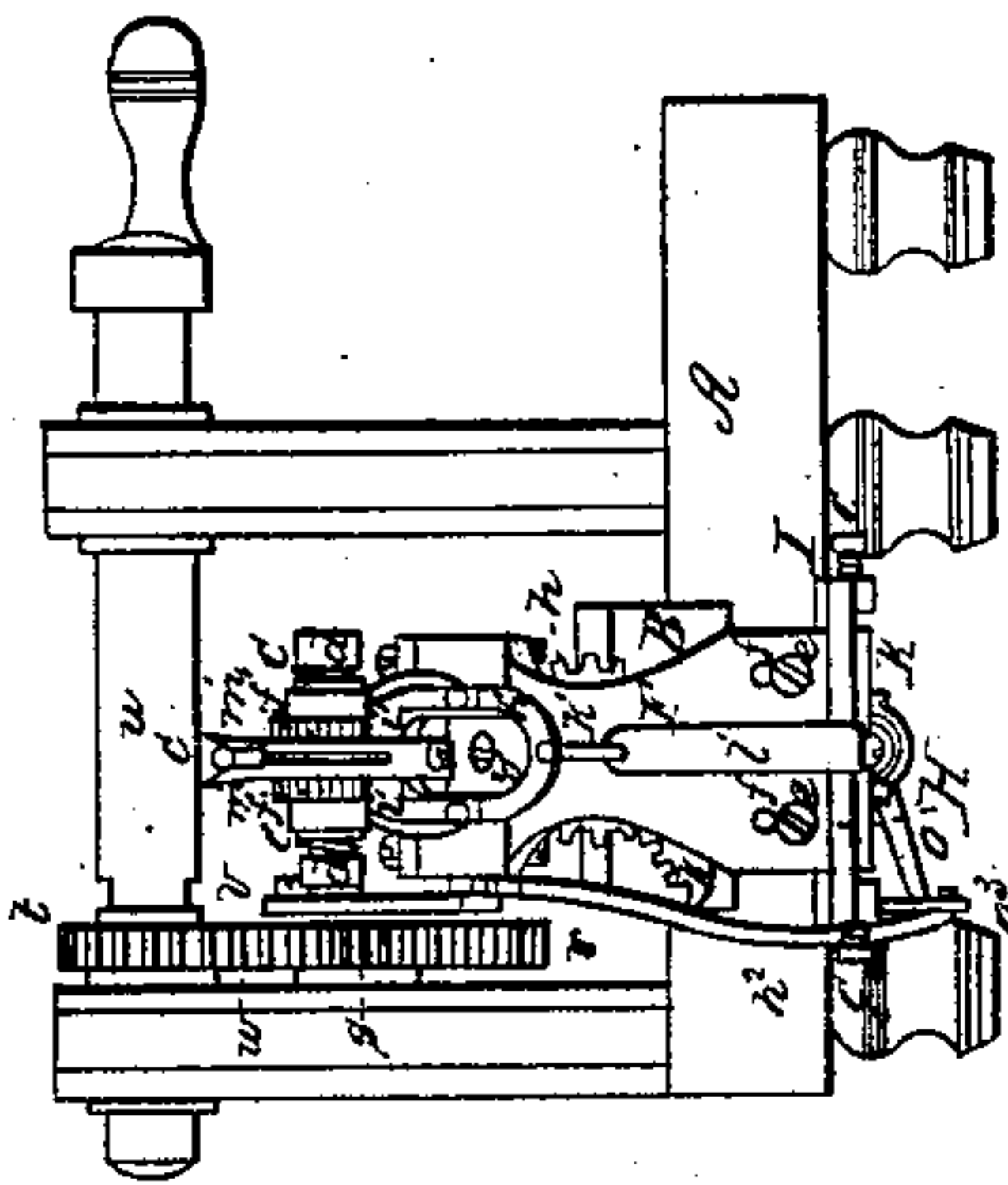
*C. D. Hunt*

*Nail Cutting Mach.*

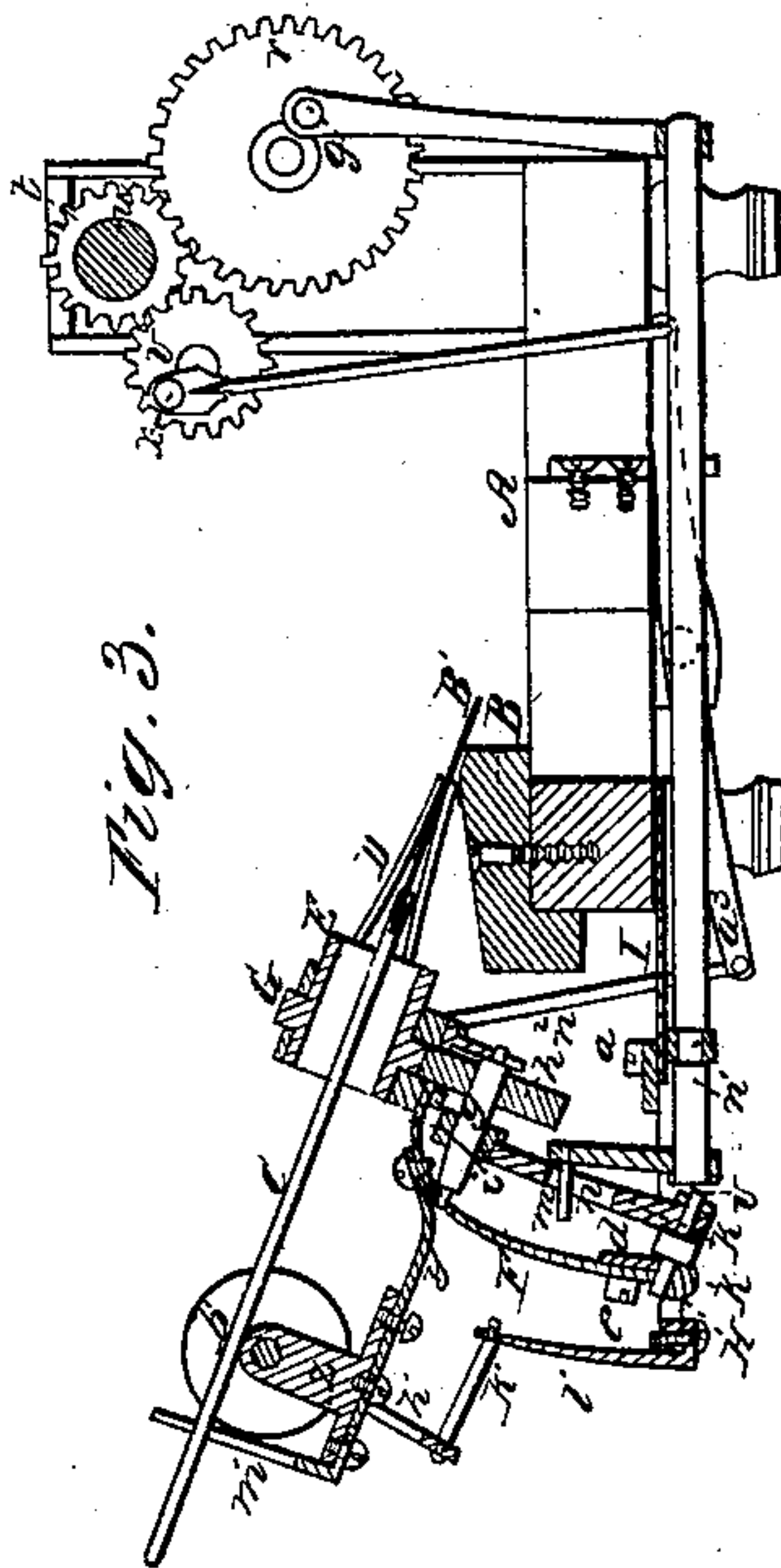
*N<sup>o</sup> 85,665.*

*Patented Jan. 5, 1869.*

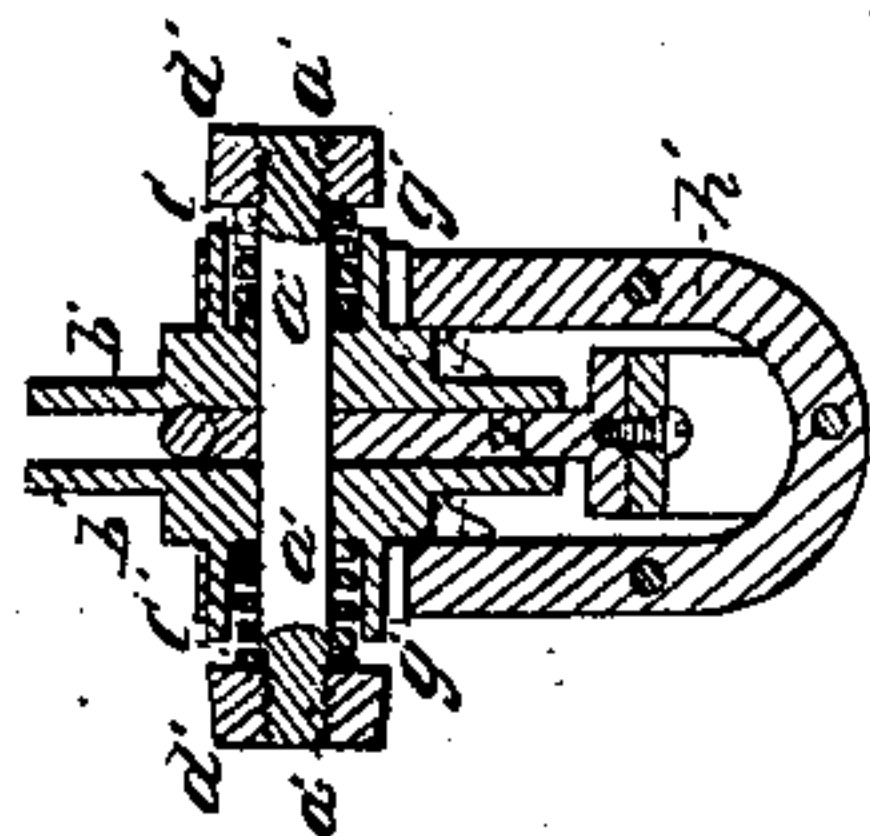
*Fig. 4.*



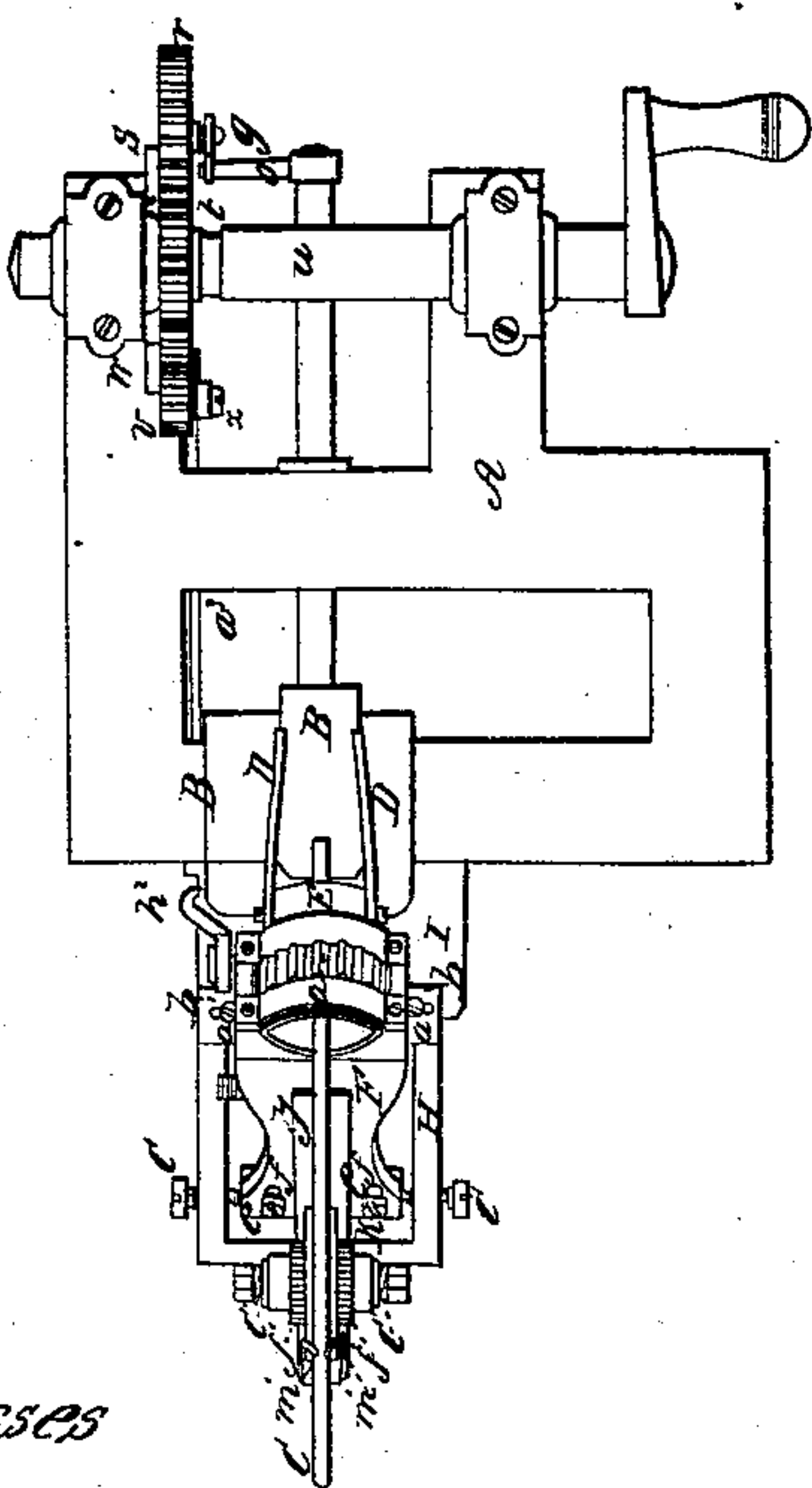
*Fig. 3.*



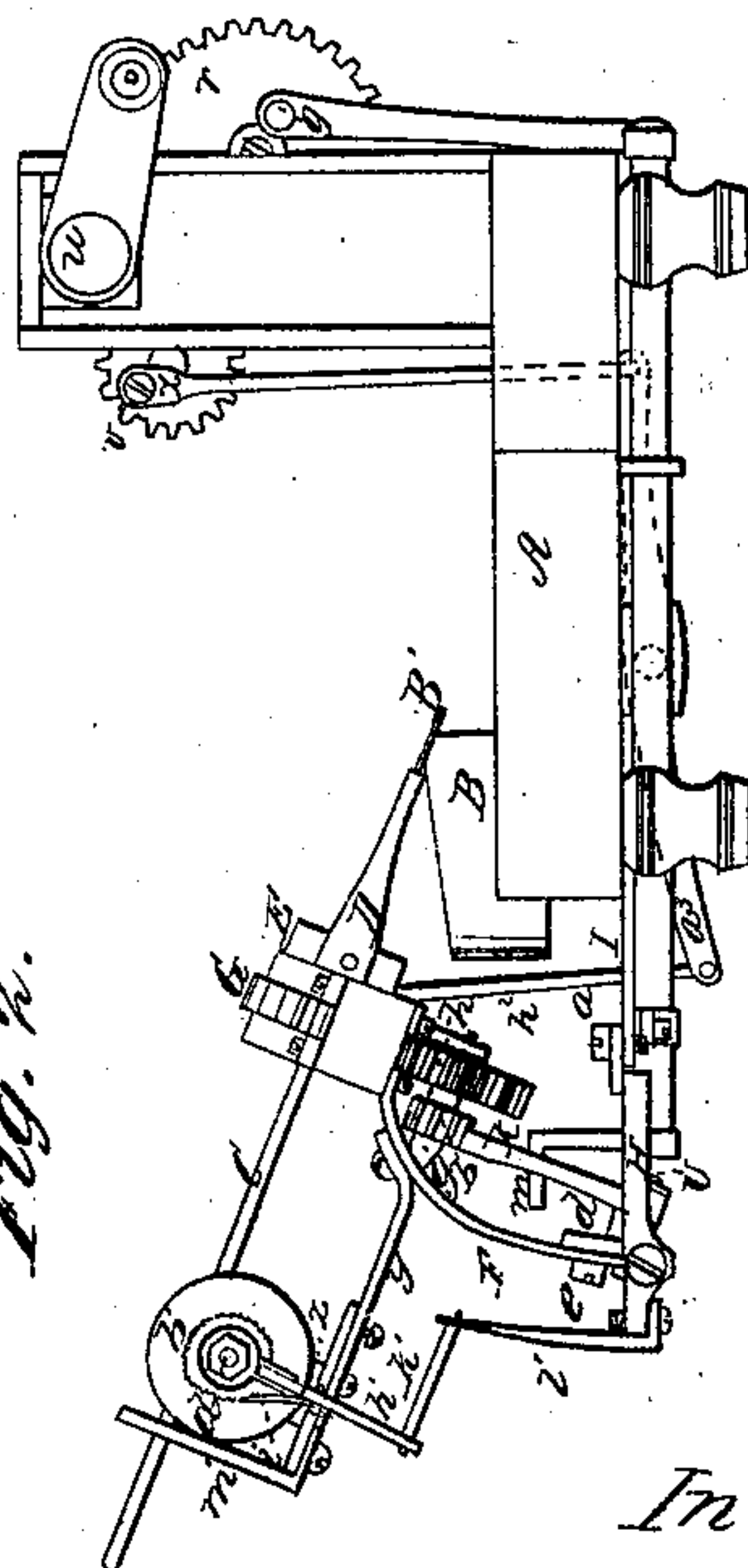
*Fig. 5.*



*Fig. 1.*



*Fig. 2.*



*Witnesses*  
*S. J. Piper*  
*J. A. Shaw*

*Inventor*  
*Cyrus D Hunt*  
*by his attorney*  
*R. H. Eddy*



# United States Patent Office.

CYRUS D. HUNT, OF FAIRHAVEN, MASSACHUSETTS.

Letters Patent No. 85,665, dated January 5, 1869.

## IMPROVEMENT IN MACHINES FOR CUTTING NAILS.

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

To all persons to whom these presents may come:

Be it known that I, CYRUS D. HUNT, of Fairhaven, in the county of Bristol, and State of Massachusetts, have invented a new and useful Feeding-Mechanism for Nail-Cutting Machines; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view,  
Figure 2, a side elevation,  
Figure 3, a vertical and longitudinal section, and  
Figure 4, a rear-end elevation.

In such drawings—

A may be supposed to represent part of the frame of a nail-cutting machine, and B, the lower or bed-die thereof.

The strip of nail-plate, B', from which nails are to be cut, is required to be advanced at regular intervals of time, and to be revolved through an arc of ninety degrees, preparatory to each advance movement.

This strip is to be connected at its rear end by, or to be there held in connection with a rod, C, and is to be supported by and within two guides, D D, extending from a tubular shaft, E.

The said tubular shaft, sustained in bearings in a vibratory arm, F, has a spur-gear or range of teeth, G, extending about it concentrically.

The vibratory arm is connected with a shaft, K, which is pivoted to an open frame, H, that rests on and projects from a shelf, I, of the frame A.

The frame H is connected with the shelf by means of two clamp-screws, a a, going through slots b b formed in the frame H, the same being so as to enable the said frame H to be adjusted laterally.

The screw-pivots of the shaft K are seen at c c, and such shaft has a projecting flange, d, to which the arm F is connected by clamp-screws e e going through slots f f, made vertically in the arm F. By such means the arm can be adjusted vertically.

A shaft, g, pivoted to the arm F, carries a gear, h, to engage with the gear G.

Such shaft also carries a pinion, i, which engages with a toothed sector, k, which is supported by, and so as to be capable of turning on a journal, l, extended from the shaft K.

There is a slot, n, in the toothed sector k, such slot being to receive the wrist of a crank, m, extending from the rear end of a horizontal shaft, n', arranged as represented.

An arm, o, projecting from the shaft n', is jointed to a connecting-rod, p, depending from a crank-pin, q, projecting from a spur-gear, r.

The said gear r is supported on an arbor, s, projecting from one of the posts of the frame A, and engages with a pinion, t, fixed on a driving-shaft, u.

Such pinion, t, engages with another gear, v, supported on an arbor, w.

From a crank, x, projecting from the gear v, a connecting-rod extends, and is jointed to a lever, a<sup>3</sup>, from which a connecting-rod, b<sup>3</sup>, extends to the vibratory arm F.

Furthermore, there extends back from the arm F, another arm, y, on which is placed a standard, z, the two being loosely connected by screws, in order that the standard may turn a little laterally, to allow the friction-disks to accommodate themselves to the nail-plate rod held between them.

Journals a' a' project in opposite directions from the standard z, (see Figure 5, which is a vertical section taken through such journals, and the friction-disks arranged on them,) and support two friction-disks, b' b', which are forced toward each other by springs c' c', arranged on the journals and held in place by nuts d' d' and screws e' e'.

Each disk has a ratchet, f', fixed on its outer side, and, besides this, there projects from the ratchet a neck or tubular journal, g'.

A U-piece, or stirrup, h', turns on the journals g' g', and supports two spring-pawls, i' i', which engage with the two ratchets.

The said stirrup, by means of a rod, k', is connected with an arm, l', extended from the frame H.

In rear of the two disks is a pair of spring-jaws, m m', which, formed as represented, project upward from the arm y.

The rod C, for carrying the nail-plate, is passed between the two disks and the jaws, the latter serving to keep it from being moved upward from between the disks while they may be in movement.

On revolving the driving-shaft, reciprocating vibratory motions will be imparted to the arm F, the nail-plate will first be revolved half a revolution in one direction, and next moved, in the same manner, in the opposite direction.

The friction-disks will be revolved with intermittent motions, such as will feed the rod C forward like distances.

I claim the combination of the movable frame H, and its adjustment-devices, (viz, the clamp-screws a a and slots b b,) with the frame A and the rocker-arm F, provided with mechanism for supporting, revolving, and advancing the nail-rod C, in manner substantially as specified.

I also claim the construction and arrangement of the spring friction-disks b' b', for the purpose of feeding along the nail-plate rods C, substantially as set forth.

I also claim the combination and arrangement of the spring-jaws m' m' with the friction-disks, b' b', constructed as described, and provided with mechanism for revolving them, as and for the purpose described.

I also claim the combination of the spring-jaws m' m' and the friction-disks b' b', constructed and provided with operative mechanism, as described, with the vibratory arm F, and the shaft E having mechanism for vibrating the arm and revolving the shaft, in manner as specified.

C. D. HUNT.

Witnesses:

RUSSELL HATHAWAY, Jr.,  
E. G. PAULL.