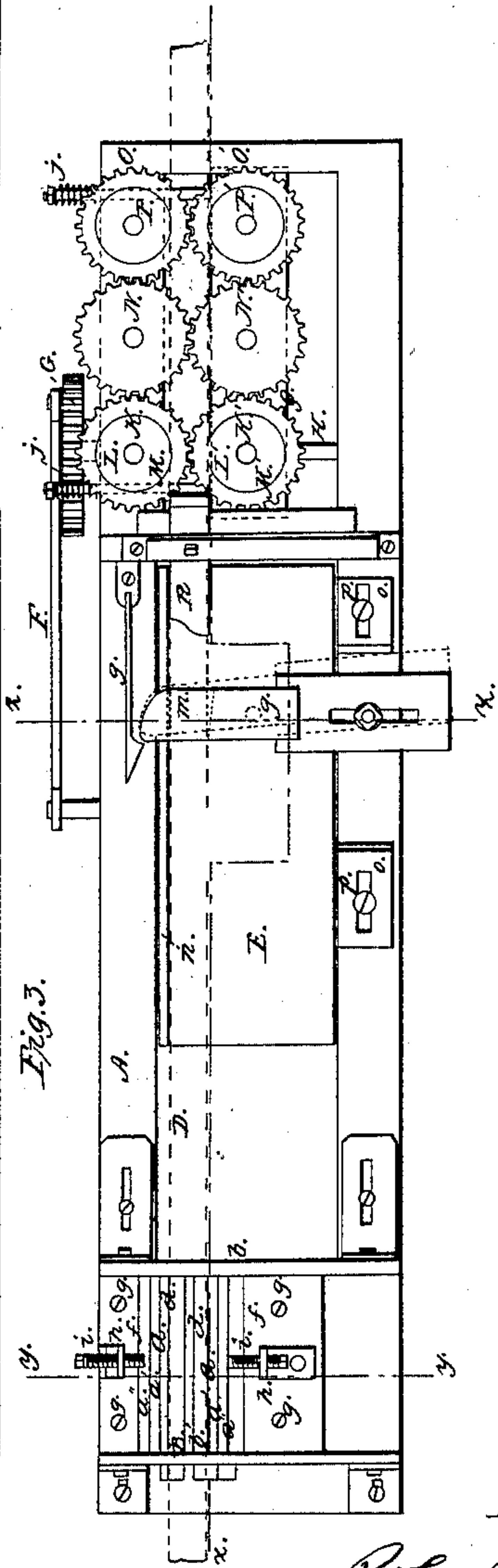
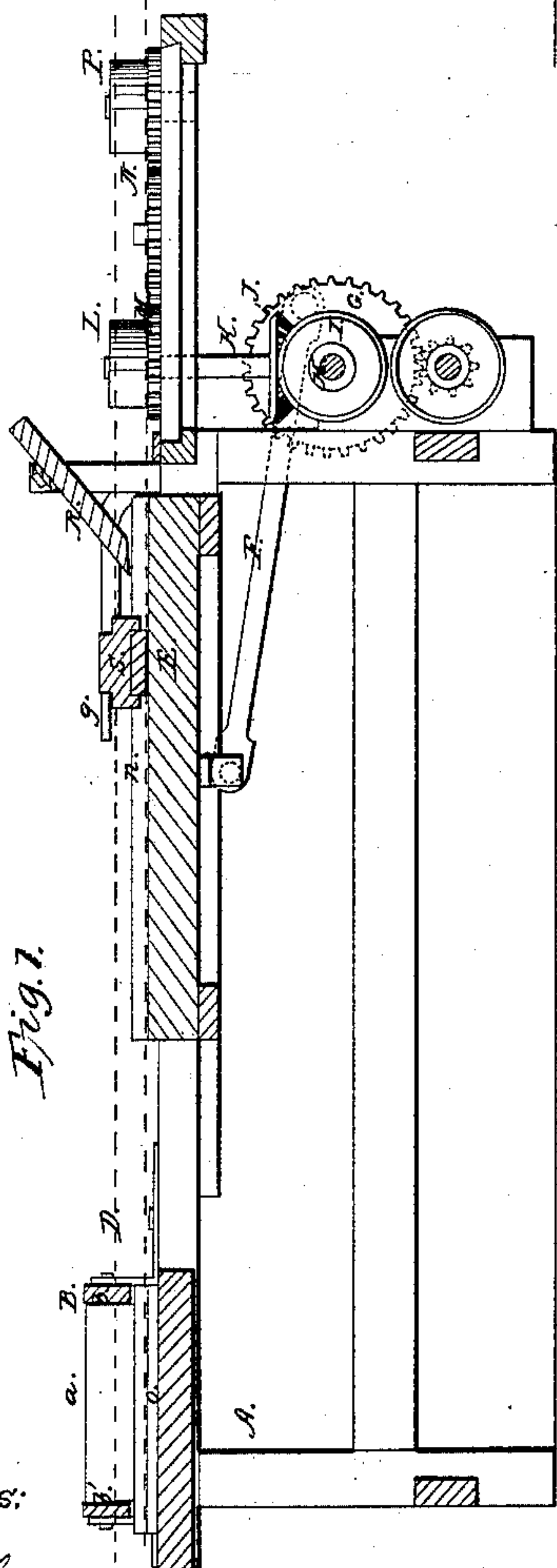
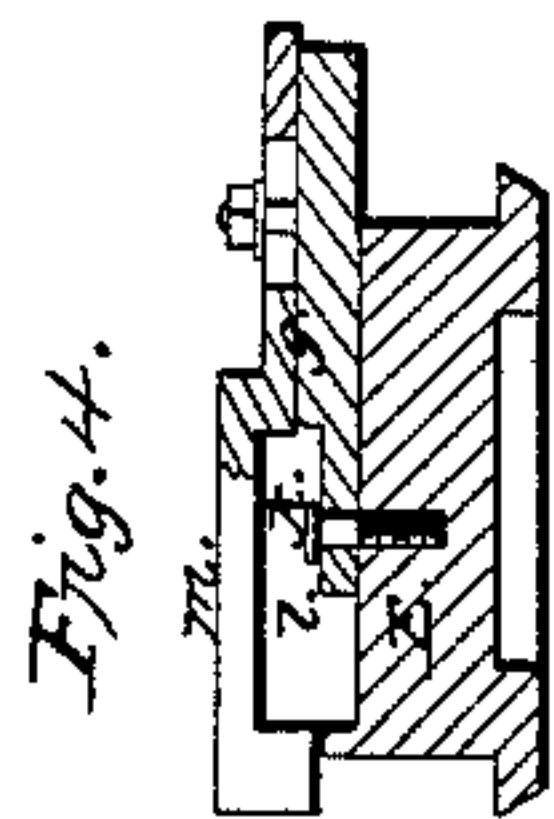
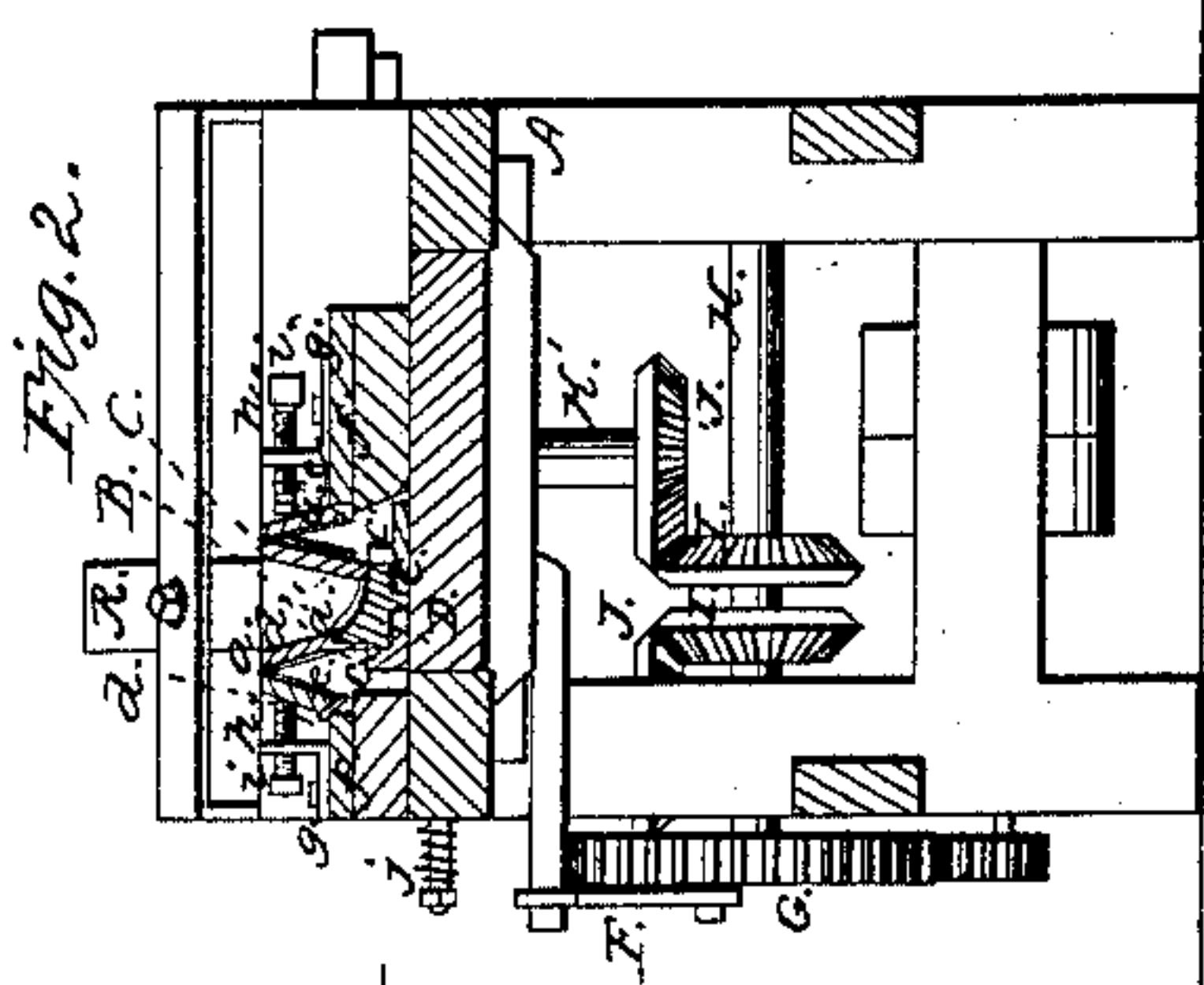


R. Marcher,

Enameling Machine,

Nº 24,879,

Patented July 26, 1859.



Witnesses:
Wm. Tusch.
R. S. Spencer.

Inventor:
Robt. Marcher.

UNITED STATES PATENT OFFICE.

ROBERT MARCHER, OF NEW YORK, N. Y.

MACHINE FOR ENAMELING MOLDINGS.

Specification forming part of Letters Patent No. 24,879, dated July 26, 1859; Reissued April 3, 1860, No. 940.

To all whom it may concern:

Be it known that I, ROBERT MARCHER, of the city, county, and State of New York, have invented a new and useful Improvement in Machinery for Enameling Moldings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal vertical section of my invention taken in the line *x, x*, Fig. 3. Fig. 2, a transverse vertical section of ditto, taken in the line *y, y*, Fig. 3. Fig. 3, a plan or top view of ditto. Fig. 4, a transverse section of the vibrating bed and dog taken in the line *z, z*, Fig. 3, and showing one form of feeding device that may be used.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement on a machine for enameling moldings, for which Letters Patent, and a re-issue thereof were granted to me, respectively bearing date October 21st 1851, and March 15th 1859.

The within described invention consists in an improvement in the hopper which contains the necessary composition for enameling, whereby the hopper is rendered capable of expanding and contracting to compensate for the inequalities of the molding.

The invention further consists in the adaptation of feeding devices as hereafter shown and described which permit of the employment or use of any power as a motor.

To enable those skilled in the art to freely use, understand and construct my invention I will proceed to describe it.

A represents a framing, which may be of rectangular form and constructed in any proper manner to support the working parts. On the upper part of the framing A and at its back end a hopper B is placed which contains the usual composition C that is applied to the molding. This hopper B is formed of five parts, to wit, two yielding sides *a a*, two end pieces *b b'* and a bottom *c*. The bottom *c* is provided with two ledges *c' c'* between which the molding D passes, and the end pieces *b b'* have each a recess made in them corresponding inversely with a transverse form of the molding, so as to allow the latter to pass through the hopper.

The end piece *b* serves merely as a guide, but the outermost end piece *b'* serves as a scraper to regulate the supply of composition on the molding and give the same its proper form and finish as the molding passes through the hopper. The end piece *b'* may be adjusted at any desired height by set screws. The molding D, when the machine is in use, forms, strictly speaking, the bottom of the hopper, and the composition C rests upon it as shown clearly in Fig. 2. The end pieces *b b'* are arranged substantially like those in the patented machine previously alluded to, and therefor do not require a more minute description. The side pieces *a a*, however, are of novel construction, and are each formed of two parts *a' a''* connected by a joint *d*, the lower end of the plate *a''* being attached by joints, *e*, to blocks, *f*, which are attached to the framing by screws *g*. To each block, *f*, an upright, *h*, is attached, and in each upright a screw, *i* is fitted, the ends of said screws bearing against the parts *a''*. See Figs. 2 and 3. The standards *h*, may be made yielding instead of stiff as represented in the drawing; so as to exert a slight lateral pressure on the parts or side pieces *a, a*, and thus avoid any rigid contact between the parts and the article being operated upon. The lower edges of the parts *a'* of the side pieces *a* are grooved longitudinally and fit on the upper and lower corners of the molding as shown clearly in Fig. 2, said parts acting in connection with end piece *b'* as keepers to retain the molding in proper position as it passes through the hopper.

From the above description it will be seen that as the molding, D, passes through the hopper, B, the sides, *a a*, will yield or give and thereby conform to any irregularities of surface which the molding may have. This will be fully understood by referring to Fig. 2.

In the upper part of the framing, A, a reciprocating bed, E, is placed, and allowed to slide freely back and forth. This bed, E, has its reciprocating movement given it by means of a connecting rod, F, which is attached to a crank wheel, G, that is secured to one end of a horizontal shaft, H, at the front end of the framing, A. This shaft, H, has two bevel wheels, I, I, placed on it; said wheels gearing into corresponding wheels, J, J, which are placed on the lower

end of the vertical shafts, K, K', on the upper parts of which feed rollers, L, L', are placed, to the lower ends of which two other wheels, M, M', are attached. The wheels, 5 M, M', gear into corresponding wheels, N, N', on the upper part of the framing, and these wheels, N, N', gear into wheels, O, O', which are attached to the lower part of feed rollers, P, P'. This system of wheels is 10 shown clearly in Fig. 3. The feed rollers, L', P', and connecting wheel, N', with their respective shafts are connected with a laterally sliding bed, Q, at the front part of the framing, and the lower end of the shaft, K', 15 of the roller, L', is stepped in a bar which is attached to the bed, Q. By this arrangement the feed rollers, L', P', are allowed to yield or give, and springs, j, are attached to the bed, in order to keep said rollers, L', P', 20 to their work.

To the framing, A, and directly in line with the space between the feed rollers, a bearing plate or block, R, is placed. This plate or block is attached to a suitable support and its lower end is made of such form 25 as to correspond inversely with the transverse form of the molding, D.

To the upper surface of the bed, E, a dog, S, is attached by a pivot, k, the dog being 30 allowed to work freely on its pivot. The bearing edge of this dog is designated by l, and the dog has a horizontal projecting plate, m, attached which projects beyond a fence, n, on the bed, E. To the upper part 35 of the framing, A, at one side two vertical, adjustable plates, o, o', are attached by screws, p, p, and to the opposite side a spring-catch, q, is attached as shown clearly in Fig. 3.

40 The operation is as follows:—Power is applied to the wheel G, in any proposed way, and a rotary motion is communicated to the feed rollers, L, L', P, P', by the gearing described, and a reciprocating movement is 45 communicated to the bed, E, by the connecting rod, F. The molding, D, is fed along by the feed rollers underneath the bearing plate, R, and between the dog, S, and fence n, and if heavy or large moldings are to be 50 enameled the rollers, L, L', P, P', serve merely to feed the molding to the dog, S, which serves to feed the molding during its progress through the hopper B. The dog,

S, grips the molding, D, during the forward movement of the bed, E, and feeds it 55 along through the hopper, the dog being released at the termination of the forward movement of the bed E, by the plate o. At the termination of the backward movement of the bed, E, the dog, S, is slightly actuated by the plate o', but not sufficiently to 60 cause the dog to grip the molding D, the remaining movement being given the dog by the spring-catch, q, which effects the result, just after the commencement of the forward 65 movement of bed E. By this arrangement no retrograde movement is allowed the molding, D, a contingency which would be liable to occur if the dog, S, were actuated by the plate o', for the dog would necessarily 70 grip the molding a little before the termination of the backward movement of the bed, and the work of enameling would be marred to a certain extent by such a result.

In enameling light moldings the feed may 75 be given by the rollers, L, L', P, P', for the power required is not great and the rollers would be competent to do the work; but in enameling heavy moldings the rollers would be inefficient when used alone. They would, 80 however, in the latter case, be valuable to feed the moldings to the dog, S, and thereby save considerable labor.

I do not claim broadly a hopper, B, through which the molding, D, passes, for 85 this has been used and was formerly patented by me, as previously alluded to; neither do I claim the feed movements as herein described, when separately considered, for 90 they have been previously used, but

I do claim as new and desire to secure by Letters Patent,

1. The elastic or yielding sides a, a, of the hopper B, arranged to operate substantially 95 as, and for the purpose, set forth.

2. In combination with the hopper, B, the reciprocating dog, S, attached to the bed, E, and operated as shown, and also, in combination with said hopper the feed rollers, L, L', P, P', either or both feeding devices 100 being employed for the purpose specified.

ROBT. MARCHER.

Witnesses:

WM. TUSCH,
S. H. WALES.