

W. A. MARTIN.
MACHINE FOR FOLDING SEIDLITZ POWDERS.

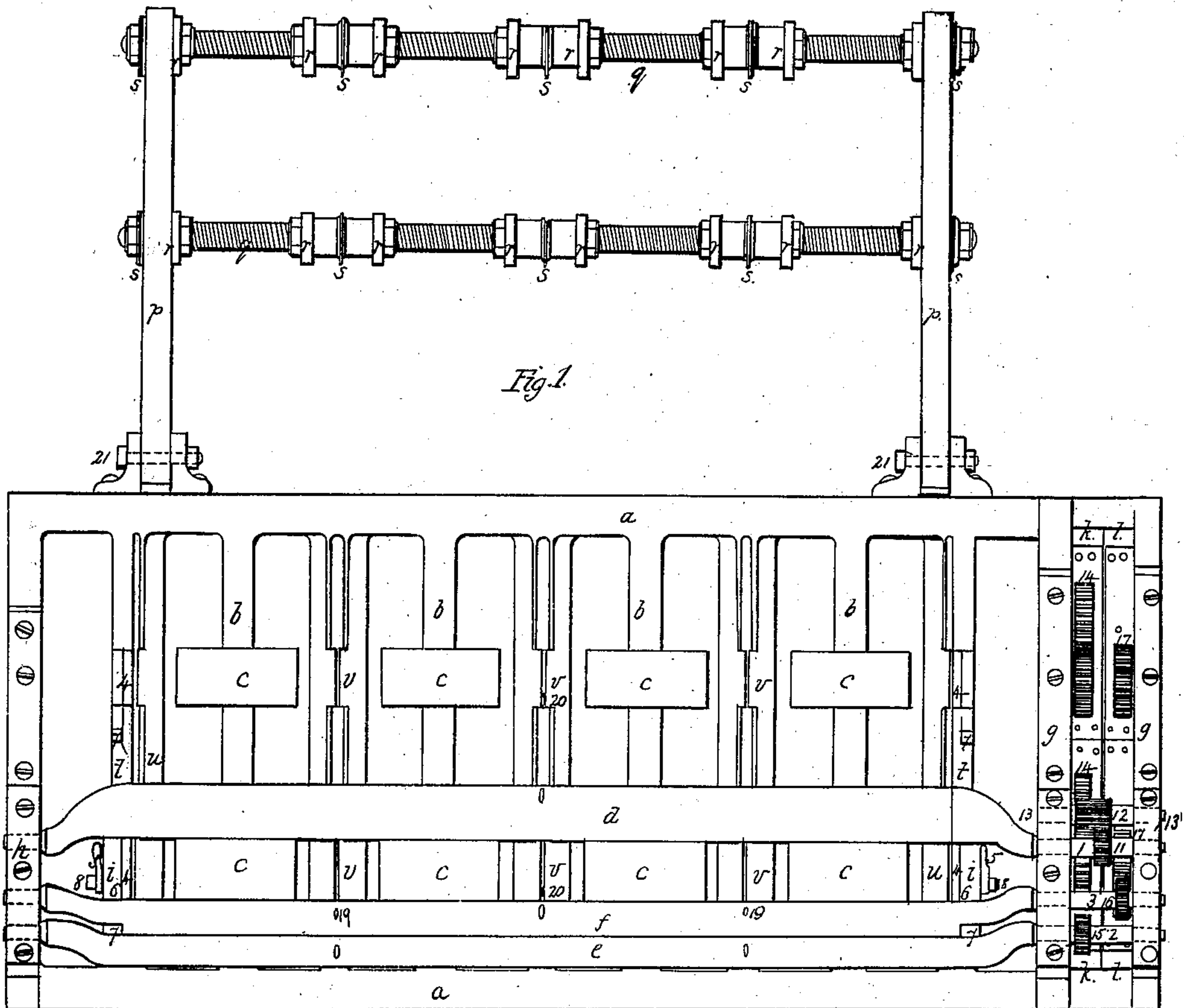
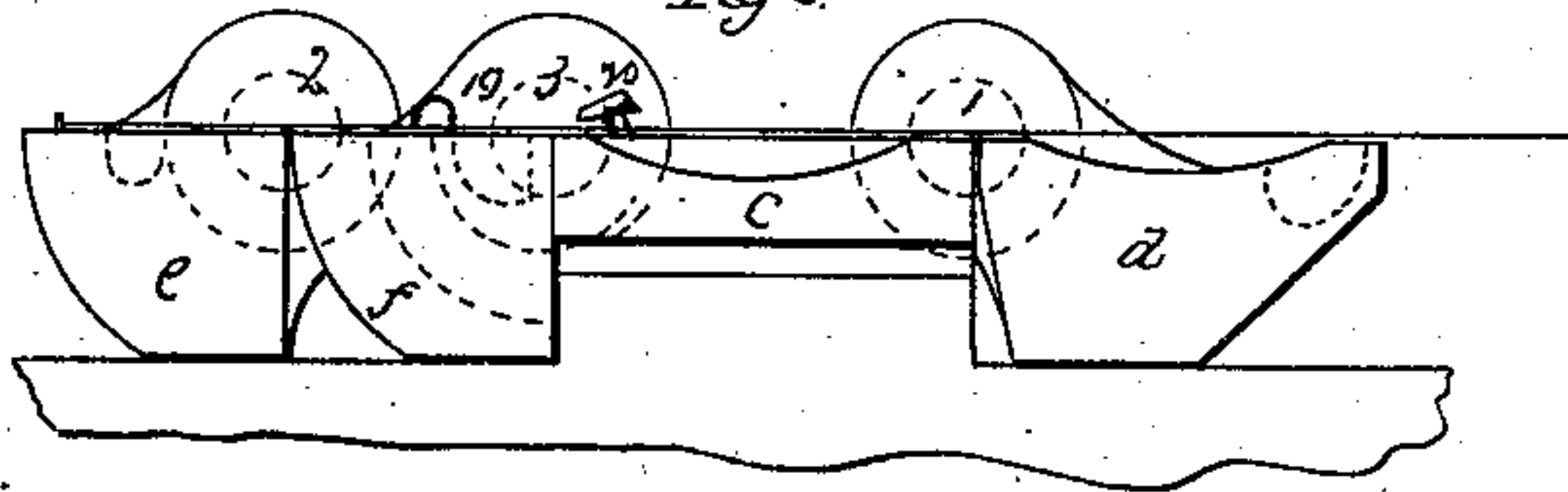
No. 10,357.

Patented Dec. 20, 1853.

Fig 7



Fig 8



Witnesses:

Samuel W. Shull
Thos. L. Harold

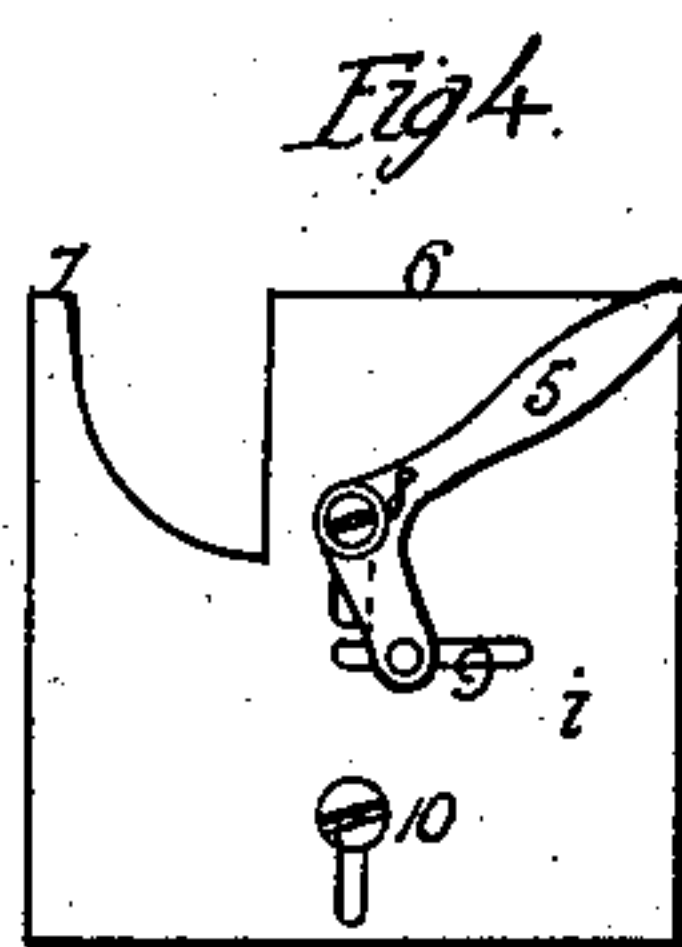
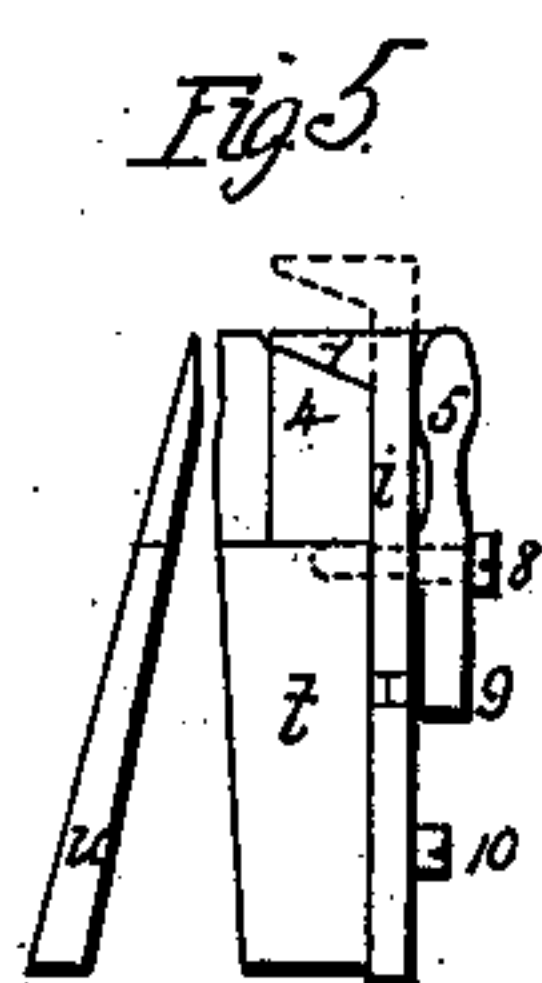
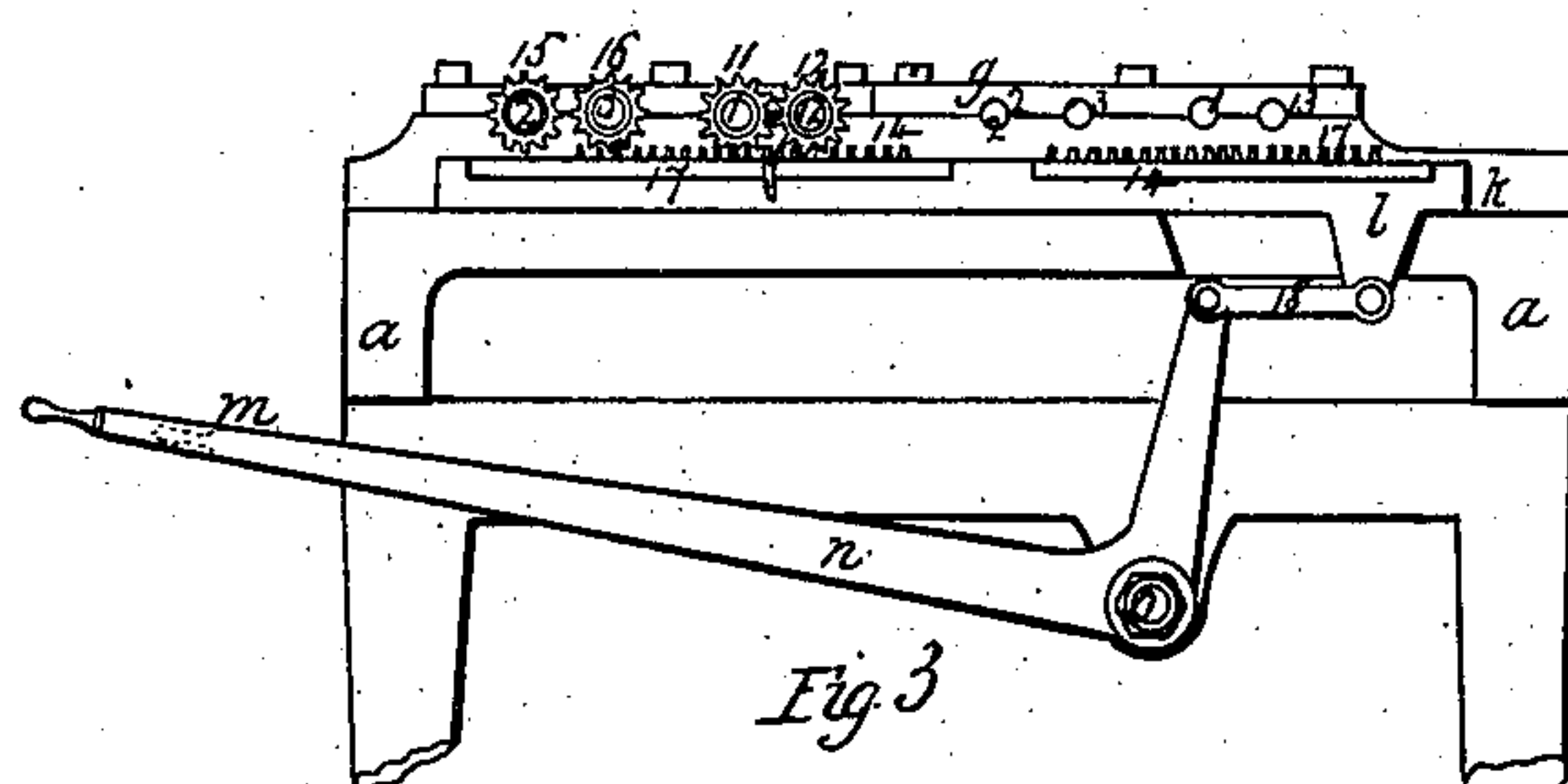
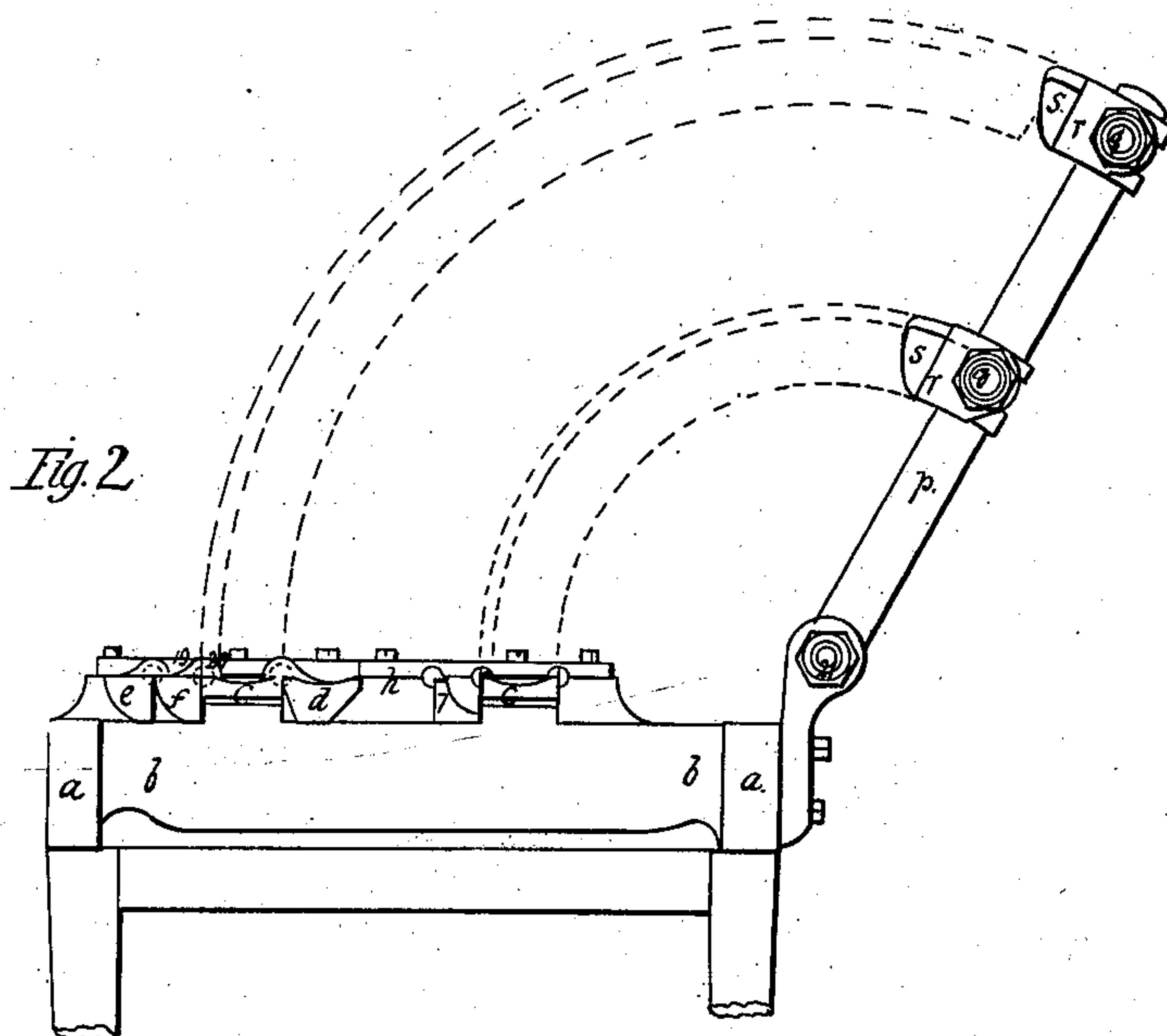
Inventor:

William A. Martin

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MACHINE FOR FOLDING SEIDLITZ POWDERS.

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Witnesses:

Samuel W. Lovell
Thos. G. Harold

Inventor:

William A. Martin

UNITED STATES PATENT OFFICE.

WILLIAM A. MARTIN, OF BROOKLYN, NEW YORK, ASSIGNOR TO WATSON & VAN ZANT.

MACHINE FOR FOLDING SEDLITZ-POWDERS.

Specification of Letters Patent No. 10,357, dated December 20, 1853.

To all whom it may concern:

Be it known that I, WILLIAM A. MARTIN, of Brooklyn, in the county of Kings and State of New York, have invented, made, and applied to use a new and useful Machine for Folding and Cutting Paper Containing Sedlitz or other Powders or Articles; 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 annexed drawing, making part of this specification, wherein—

Figure 1, is a plan; Fig. 2 is a sectional elevation, and Fig. 3, is an elevation through the racks and pinions on the right hand end. The other figures are separately referred to and the like marks of reference designate the same parts in all the figures.

The object of my invention is to fold paper containing sedlitz or other powder, which powder is to be deposited on the paper in parcels containing the proper amount by any proper means, either by weighing out the powder or by placing on the papers as they are on the machine, a board containing holes which are in the proper place and of the size to contain the requisite amount of powder, to be scraped over the board. The machine is then made to fold the paper in the size and shape required and one paper cut from the other and folded across the ends ready for boxing in the ordinary manner.

a, is a frame supported on a frame or table and having cross bars *b*, supporting blocks *c*, which are of the size required for the folded paper.

d, is a bar on center shafts or spindles 1. *e*, is a bar supported on center spindles 2, and *f*, is a third bar similarly supported on center spindles 3, these spindles are supported in journals *g*, *g*, and *h*.

i, *i*, are clamps at each end between the bars *d* and *f*, constructed as shown in larger size in Figs. 4 and 5. These clamps are made handed, and attached to the outer face of the cross bars *t*, by screws 8 and 10, the clamps having slots that allow of their rising vertically on the screws; the screw 8, has a lever 5, with a pin 9, in a cross slot in the clamp, by which the clamp is either raised up or depressed to hold the ends of a strip of paper slightly wider than from the outsides of the bars *d* and *e*, which paper is secured in place by the overhanging parts

of the clamp, as at 6 and 7, clamping the ends of the paper into the top of the cross bars *t*.

The bars *d*, and *e*, are given a half rotation by means of pinions 11 12, and 15, operated on by a rack 14 on the upper side of a slide *k*, that is between the journals *g* and slides on a bed formed between them.

m, is a lever on a center *o*, with a connecting link to a projection on the under side of the slide which projection passes through an opening in the bed.

16, is a pinion on the shaft 3, operated on by a rack 17, which is moved by a lever *n*, see Fig. 3, similar to the lever *m*, connected to the slide by the link 18.

Fig. 6, shows the folding bars in full size, and the blue line represents the paper, which is to be placed as shown, and the strip extending from one clamp *i*, to the other is by them secured at the ends. The operator then places the powder to be inclosed in the paper, over the center of each block *c*, and then depresses the lever *m*, which moves the slide *k* and rack 14, and rotates the pinion 12, which rotates the pinion 11, turning the folding bar *d*, and paper over, and onto, the blocks *c*, (the blocks *c*, and folder *d* being hollowed so as not to force out the powder). The length of the rack 14 is such that it disengages from the pinion 12, when the folder *d*, has come down onto the blocks *c*, the other end having previously taken the pinion 15, rotates that so as to fold the paper over onto the bar *f*, the other edge having previously been brought over by the bar *d*, this edge incloses the same, and the three thicknesses of paper are held onto the bar *f*, by means of pins 19, which project sufficiently from the surface of the bar *f*, the bar *e*, being provided with holes to pass over the pins. The pins 19 are not required, except where three or four sedlitz powders are folded in a row together. The paper thus receives the two first folds, the bars being sufficiently stiff to crease the same. The workman then raises the lever *m*, which throws the bars *d*, and *e*, back into the place shown in the drawing, and by the lever *n*, and pinion 16, gives the bar *f*, a semirotation which carries with it the paper making the last fold in the form shown in Fig. 7, inclosing the powder.

It will be seen that the point 7 of the clamp holds the paper for the second fold and on the bar *f*, rising the paper is cut or broken

at this point, the main body of the clamp still holding the ends of the lower part of the paper. But the spring of the paper forming the upper folds would prevent the apparatus hereafter described from cutting off and folding back the paper for each powder. To obviate this I place a hooked cutter point 20 shown full size in Fig. 6, in the middle of the length of the paper, onto which the fold is forced by the bar *f*, the point 20 passing into a recess in the bar *f*, and its hooked point holding the folds of paper down in place, preventing their springing up edgewise. The points 19 being smooth, draw out on throwing the bar *f*, back by raising the lever *n*.

p, p, are bars jointed at 21, to the frame *a*, carrying a bar or bars *q*, which by nuts and washers sustain cutter blades *s*, that are on a line to pass down between triangular blades *v*, supported by bars across between the frames *a*.

r, r, are blocks passing down on each end of and close to the blocks *c*.

The continuous fold of paper containing the powder running over blocks *c*, from one end of the machine to the other is cut off in sections for each powder by the attendant drawing down the frame *p*, the cutters *s*, entering between the standing blades *v*, and outside the blades *u*, at each end divides the paper and the further downward motion of the frame causes the blocks *r*, to bend the paper down against and at the sides of the ends of the blocks *c*, leaving each powder and its inclosing paper ready to be taken off and put into boxes after raising the frame *p*, out of the way.

It will be evident that a greater number of powders than four (the number shown) may be formed in a row and that several rows may be placed parallel with each other, one row being shown by the second range of

blocks *c*, toward the back of the machine, the bars *d, f*, and *e*, being similarly fitted and connected, so that one operation by the levers *m*, or *n*, folds all the papers that may be used, and the frame *p*, being similarly extended cuts off and folds back all the papers by its downward motion. It will be seen that the center cutters *s*, are made narrower to clear the point 20, and also that the pins 19 entering between the standing blades *v*, only leave a mark where the cutting is effected. The centers of the folding bars it will be seen being on the line or nearly so of the top edge of the bars next blocks *c*, only have a turning motion around this point, hence the folding operation on the paper. The clamps *i*, being raised by turning up the handles 5 or by any similar means the parts are ready to receive strips of paper for another operation, and the small ends of paper left beneath the clamps will require to be removed every three or four motions of the machines.

What I desire to secure by Letters Patent is—

1. I claim the bars *d, e*, and *f*, moved by the means herein shown or any analogous device, for folding the paper in the manner specified.

2. I claim the frame *p*, with its cutters *s*, and blocks *r*, in combination with the beds on which the paper lies, to divide the papers containing the powder and fold the ends against the ends of the blocks *c*, as described and shown.

In testimony whereof I have hereunto set my signature this fifth day of May one thousand eight hundred and fifty three.

WILLIAM A. MARTIN.

Witnesses:

LEMUEL W. SERRELL,
THOMAS G. HAROLD.