Sheet 1.
2 Sheets.

J. M. Jay.

Cutting Glaziers Points.

No 74693 Patented Feb. 18, 1868.

Fig. 1.

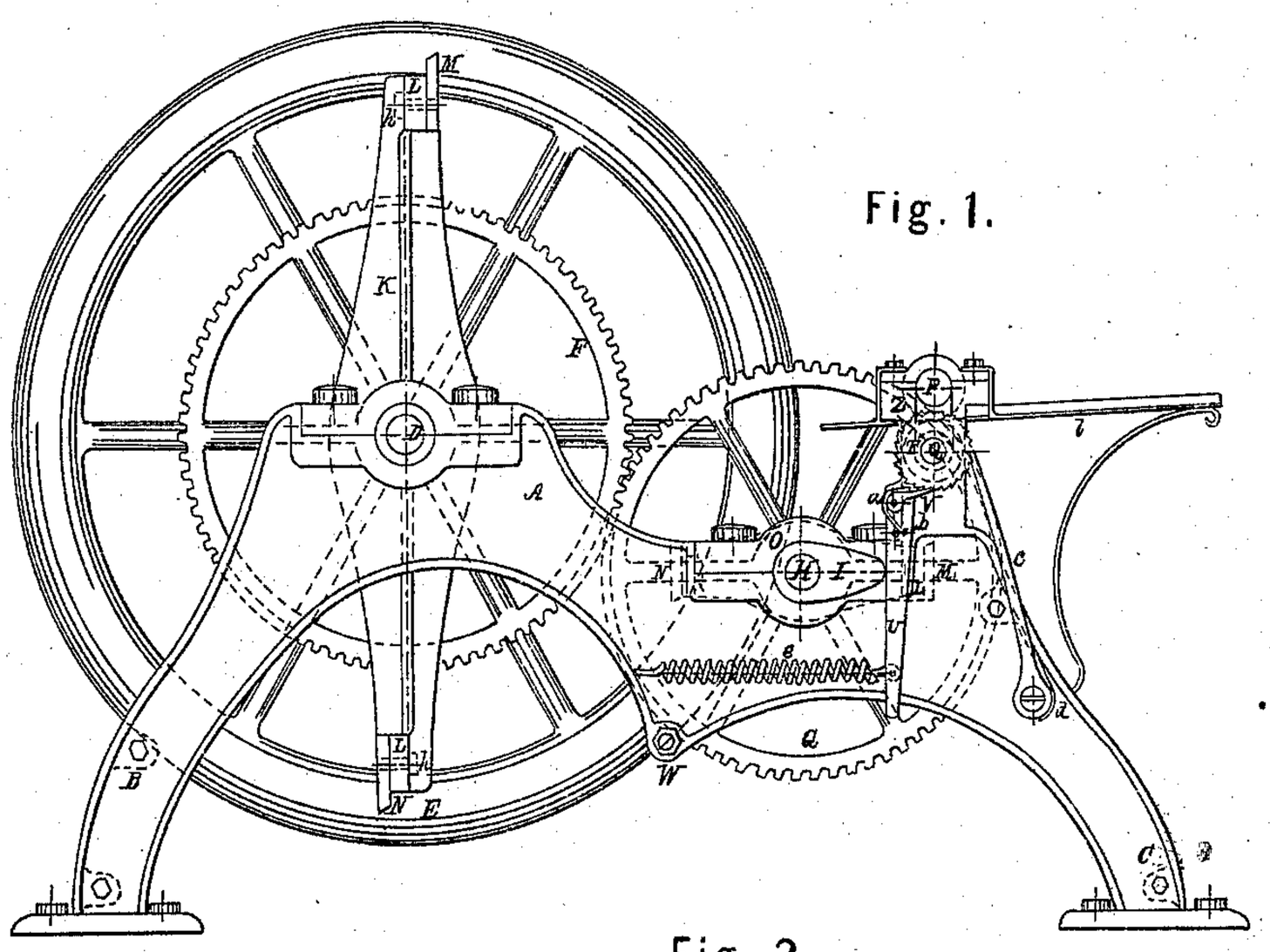
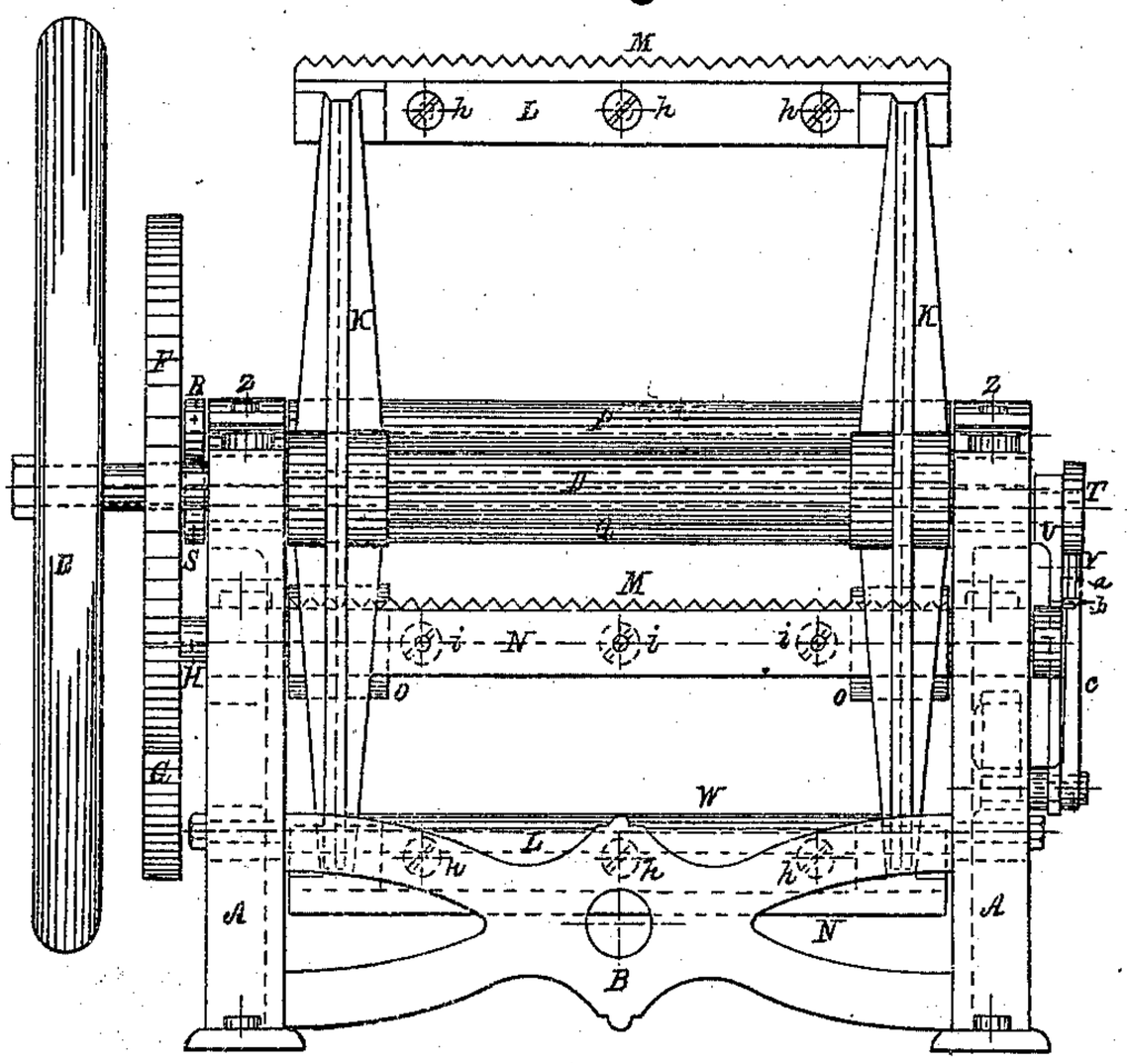


Fig. 2.



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Sheet 2.
2 Sheets

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Cutting Glaziers' Points.

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Fig. 3.

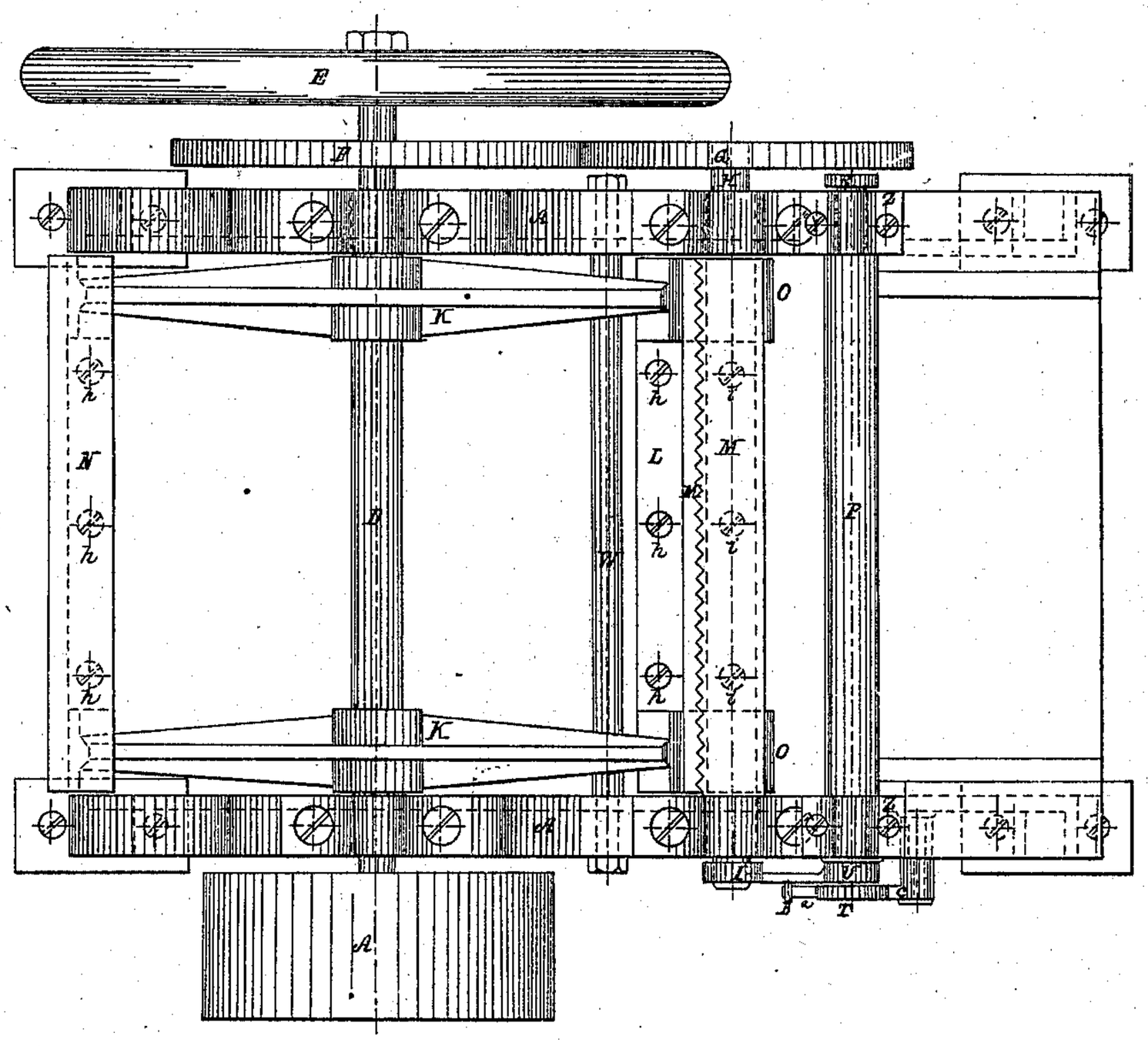
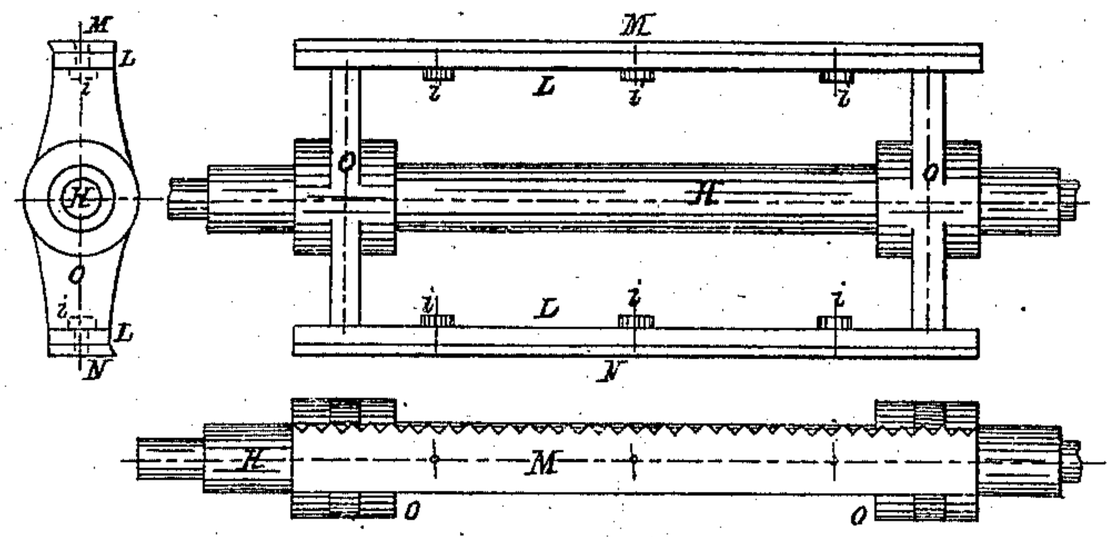


Fig. 4.



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JAMES M. JAY, OF CANTON, OHIO.

Letters Patent No. 74,693, *dated February* 18, 1868.

IMPROVEMENT IN MACHINE FOR CUTTING GLAZIERS' POINTS.

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, JAMES M. JAY, of Canton, in the county of Stark, and State of Ohio, have invented a new and useful Machine for Cutting Glaziers' Points; and I do hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, of which drawings—

Figure 1 is a side view of my machine.

Figure 2 is an end view of the same.

Figure 3 is a plan of the same.

Figures 4 are views of one of the rotary cutters.

Figures 5 are views of the feed-lever, with its pawl and spring.

The nature of my invention consists in a peculiar arrangement of two or more sets of rotary cutters, which are so arranged as to cut from the sheet of tin, zinc, or other suitable material, which is fed up to them through suitably-arranged rollers, two or more rows of glaziers' points at each revolution of the main driving-shaft, the number of rows depending on the number of sets of cutters, and the points being so cut from the sheet as to prevent any waste of material, by means of which machinery I am able to manufacture glaziers' points with great rapidity and economy, thus lessening the cost of said points, and thereby benefiting the public.

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

A A are the side-pieces of the frame of the machine, which are firmly connected and secured together by the end-pieces B and C and the bolt W. D is the main shaft of the machine, which is arranged in boxes on the side-pieces A A, as shown. On this shaft D are placed the fly-wheel E, gear-wheel F, the arms K K, which carry one set of the rotary cutters, and the pulley A. Motion is imparted to shaft D by means of a belt over the pulley A, or a crank may be put on instead of the pulley, and the machine be turned by hand-power. The shaft H is arranged in boxes on the side-pieces A A, as shown, and on this shaft is placed the gear-wheel G, which gears into the wheel F on the shaft D, the arms O O, which carry a set of cutters, which work in connection with the cutters on the arms K K, and the cam I, which works the feed-motion. The feed-rollers P and Q are arranged in uprights Z Z, on the side-pieces A A, and are geared together by the gear-wheels R and S, at their ends, as shown. On the roller Q, and at the end opposite from that to which the gear-wheel S is attached, is placed the ratchet-wheel T. The feed-lever U, seen in detail in figs. 5, is hung on the roller Q, between the ratchet-wheel T and side-piece A, as fully shown in fig. 2. On this lever U is secured the pawl V, by means of screw *g*, and said pawl is made to work on the ratchet-wheel T, by means of a spring, *a*, attached to it, and placed behind a pin, *b*, in the lever U, as seen in figs. 5. A catch, *c*, with spring, *d*, is attached to the side-piece A, as shown, and works on the ratchet-wheel T. It is easily seen that, at each rotation of the shaft H, the cam I, operating on the feed-lever U, will cause a partial rotation of the rollers P and Q, they being geared together through the action of the ratchet-wheel T and pawl V, and by means of this partial rotation, the sheet of tin, or other material to be cut, which is fed in over the table *l*, will be fed up to the cutters, a distance depending on the length of the cam I and the distance of the roller Q from the shaft H. The spring *e* is attached to the feed-lever U and the side-piece A, and serves to keep said lever drawn up to the cam I. The catch *c* serves to prevent the feed-rollers from being turned backwards, by the backward motion of the feed-lever U, which takes place by means of the action of the spring *e*, while the cam I makes a semi-rotation from the position shown in fig. 1. The arms K K are attached to each other at their ends by the cutter-beds L L, and the cutters M and N are secured to these cutter-beds by the screws *h h*, as shown. The arms O O are also attached by the cutter-beds L L, and the cutters M and N are attached to these cutter-beds by the screws *i i*. The cutters M and M are made with saw-toothed edges, the teeth being made of the same shape that the glaziers' points are to have, and they are so arranged on the cutter-beds L and L that, in rotation, a tooth on the cutter M shall come opposite a space, or between two teeth on the cutter M, and *vice versa*. The cutters N and N are simply straight knives, as shown. These cutters M N and M N may be so arranged as to cut along their whole length at once, or they may have a shearing cut, commencing to cut at one end, and cutting across, as may be found desirable, the cutters in the first case being parallel to the shafts D and H, and, in the

second case, being placed at a small angle with said shafts, but still in the plane of the surface of their cylinder of rotation.

Having thus fully described the construction of my machine, the *modus operandi* is easily seen.

A sheet of the material to be cut into points being placed on the table *l*, it is caught by the feed-rollers Q and fed up to the cutters, as before shown, the feeding up of the metal being accomplished when the cutters are separate, as seen in fig. 1. The cutters being in rotation, the toothed cutters M and M, coming together, as seen in plan in fig. 3, cut from the sheet of metal a row of points, and leave another row on the sheet. The cutters N and N then come around and cut off this row of points left on the sheet. The sheet is then fed up a distance equal to the height of a point, and the same operation of cutting is repeated, and so on until the sheet is cut up.

It is readily seen that, by having two or more sets of cutters M N on the shaft D, and a corresponding number on the shaft H, and so arranged that, in rotation, a straight cutter should follow next to a toothed cutter, and having the cam I of such a shape as to feed up the metal immediately after each set of straight cutters N N shall have finished their cut, the speed of cutting these points may be increased to almost any desired point. It is also easily seen that, by making the teeth on the knives or cutters M M of the proper form, shoe-nails or brads, with heads on one side, may be made with great ease and rapidity.

Having thus fully described my machine, what I claim as my invention, and desire to secure by Letters Patent, is—

1. The arrangement and combination of the rotary cutters M N, M N, on the shafts D and H, when operating in connection with each other through the gear-wheels F G, for the purpose of cutting glaziers' points, or any brads or nails which may be cut from sheet metal, substantially in the manner herein specified.

2. The arrangement and combination of the cam I, feed-lever U, with pawl V, ratchet-wheel T, catch *e*, and feed-rollers P Q, when used in combination with the rotary cutters M N, M N, substantially in the manner and for the purpose herein specified.

As evidence that I claim the foregoing, I have hereunto set my hand, in presence of two witnesses.

JAMES M. JAY.

Witnesses:
JOB ABBOTT,
HARRY LAIRD.