

D. S. BAILEY.  
Excelsior Machines.

No. 151,742.

Patented June 9, 1874.

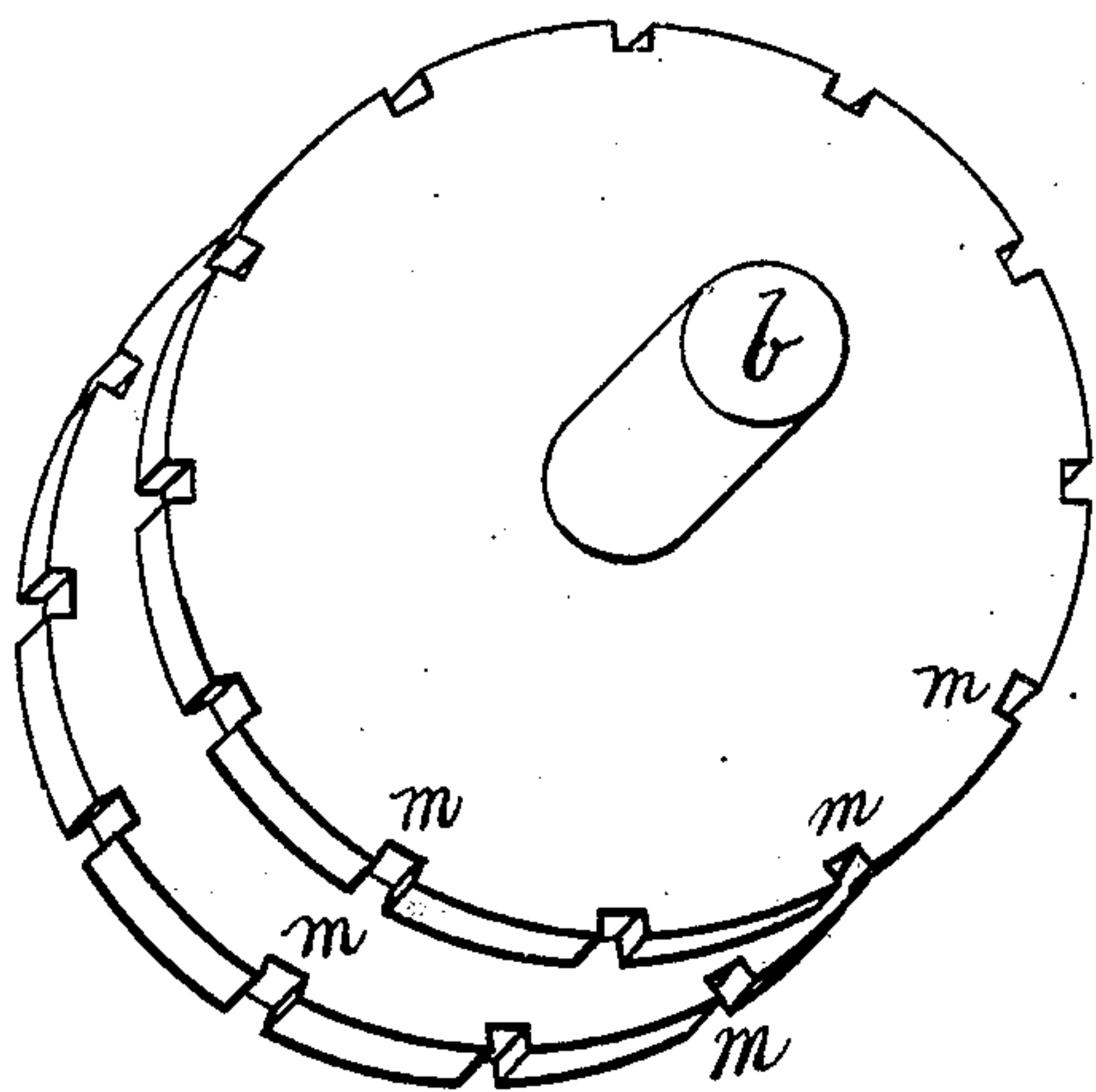


Fig. 3.

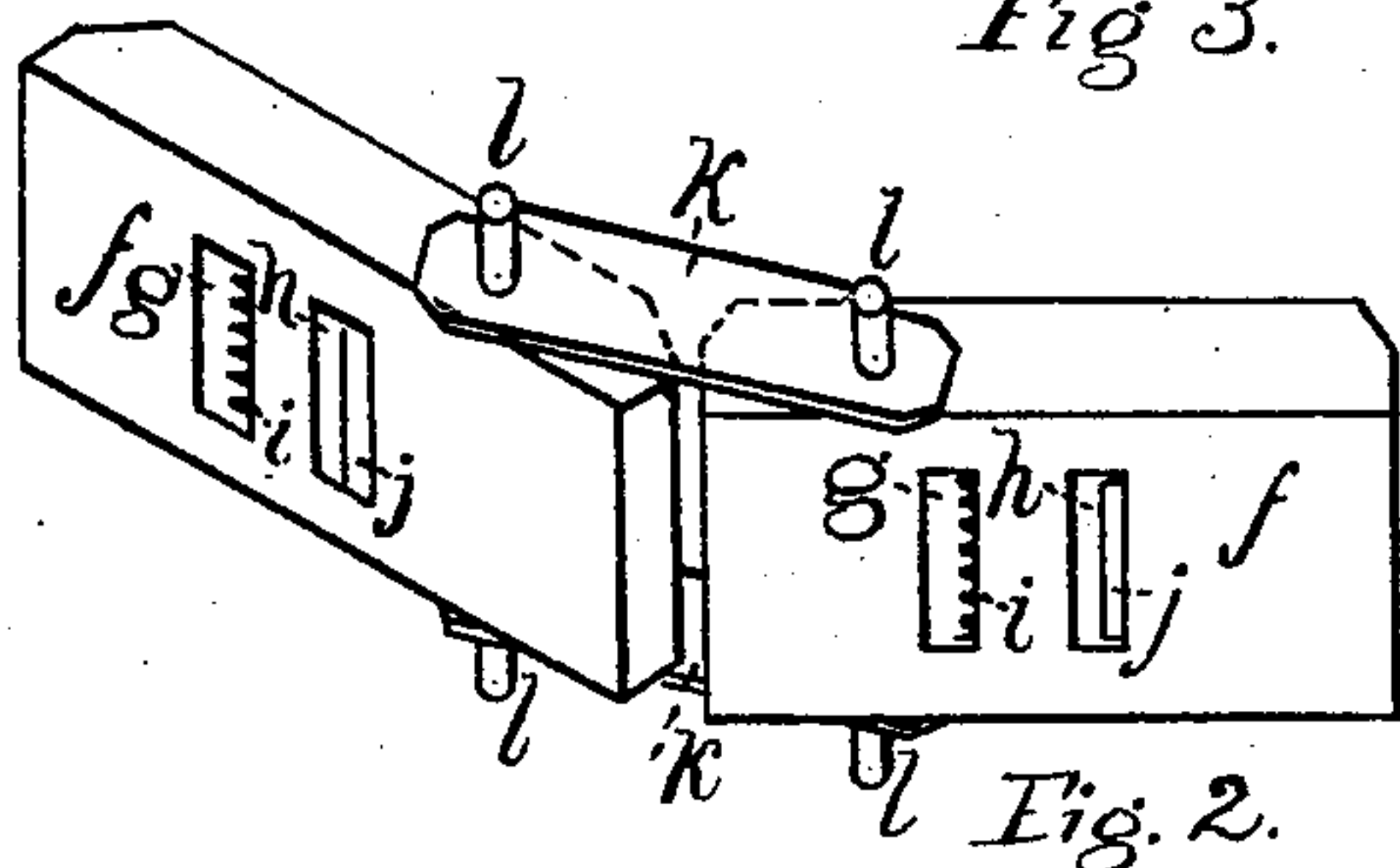


Fig. 2.

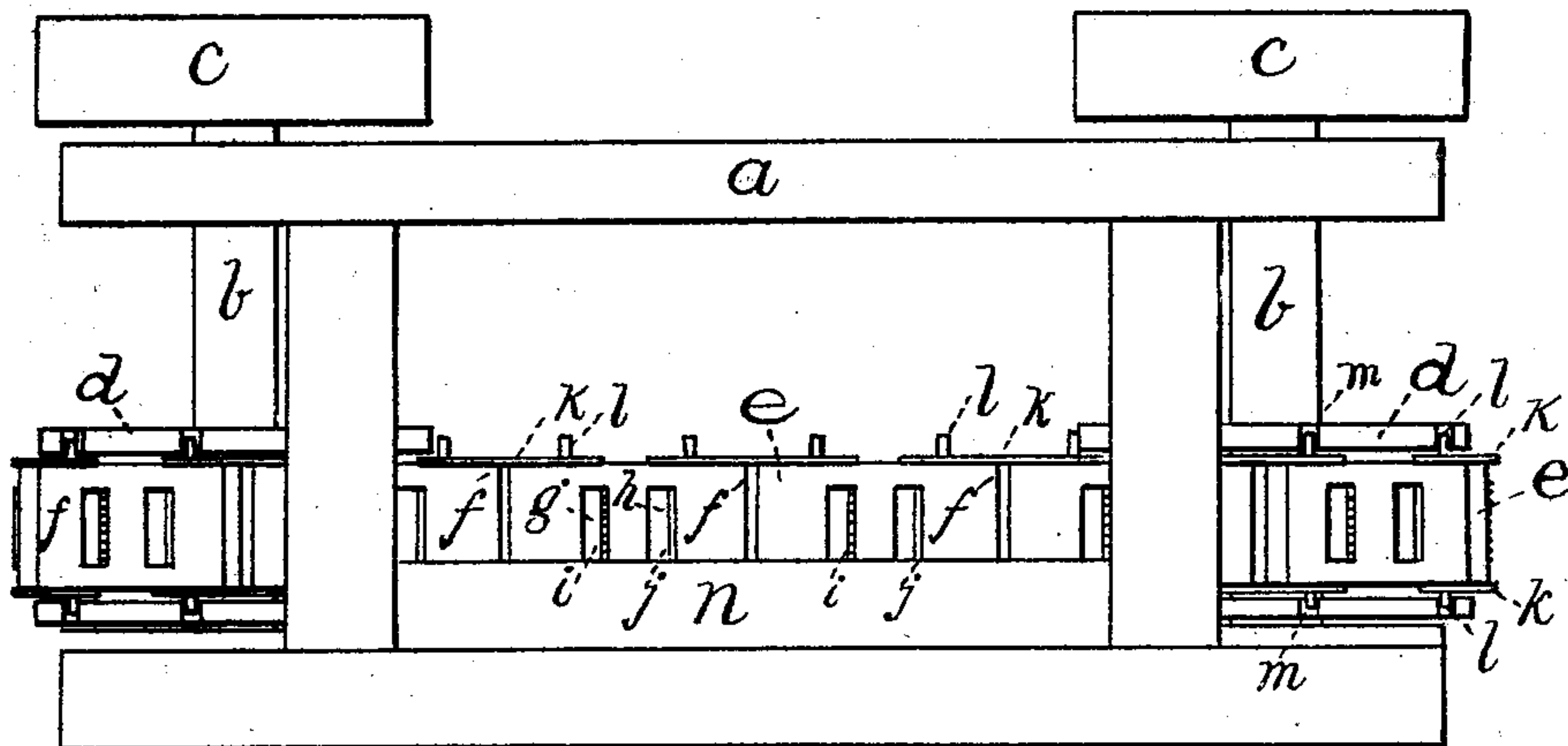


Fig. 1.

Witness  
J. D. Warren  
W. E. Brown

Inventor  
Dexter S. Bailey  
By O. Franklin Leary Atty

# UNITED STATES PATENT OFFICE.

DEXTER S. BAILEY, OF DOVER, ASSIGNOR TO HIMSELF AND ISAAC N. MEADER, OF FOXCROFT, MAINE.

## IMPROVEMENT IN EXCELSIOR-MACHINES.

Specification forming part of Letters Patent No. **151,742**, dated June 9, 1874; application filed February 6, 1874.

*To all whom it may concern:*

Be it known that I, DEXTER S. BAILEY, of Dover, in the county of Piscataquis and State of Maine, have invented certain new and useful Improvements in Excelsior-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 shows a side elevation of my machine; Fig. 2, a detail of two of the sections and their uniting-joint; Fig. 3, a perspective of the drum.

Same letters show like parts.

My invention aims at producing an excelsior-machine which shall perform its work with the least possible waste of material and power. My device consists of an endless chain composed of sections linked together, passing around and receiving its motion from drums, between which it moves, in a straight line, and carrying, inserted in mortises in said sections, cutters of any proper construction for scoring the bolt and removing the shaving. The bolt is applied to the cutters on the chain at that point where their motion is rectilinear, and is fed up to them by any of the ordinary set-works.

I will now proceed to describe my machine by reference to the drawing.

Figure 1, at *a*, shows the frame of the machine, having shafts *b b* at each end, upon one extremity of which are pulleys *c c* for receiving the power from the shafting of the mill, and upon the other drums *d d* for communicating motion to the endless cutter-carrying chain *e*, which passes around them. The chain is composed of sections *f* of any suitable material, mortised at *g h*, in one of which mortises, *g*, are secured scorers *i*, and in the other planers *j*. The sections are secured to each other by metallic plates *k*, extending behind the joint and turned over it at top and bottom, and rods *l* passing through both plates and sections, so as to make a joint upon which

the sections may turn to accommodate themselves to the periphery of the drums, said sections being placed sufficiently distant from each other and constructed to allow them to turn without interfering. These plates *k* effect two purposes: Besides extending across the top and bottom of the joints, uniting the sections of the chain and serving as a bearing for the pivot-rods *l*, they pass behind the chain and serve to stiffen it while operating on the bolts, at the same time, from their construction, allowing it to pass freely around the drums *d*. The rods *l* project through the plates *k*, at top and bottom, and are received in notches or indentations cut around the circumference of the drums at *m*, to prevent any slip of the chain. The drums are recessed to receive that portion of the chain inside the line of the rods. At *n* is a table for the bolts to rest upon while being cut, the sections having a rectilinear motion past said table.

Ordinary set-works may be provided, but these are not shown in the drawings.

Any number of bolts may be cut at one time, depending only upon the number of sections having a rectilinear motion at the same time, and the length of the receiving-table *n*.

The drawing shows a machine capable of cutting six bolts—three on each side—the sides being counterparts one of the other.

The capacity may be increased by adding sections and separating the drums *d* to accommodate them.

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

In an excelsior-machine, the combination of the drums or sprocket-wheels *d d* with the endless cutter-carrying chain *e*, provided with the cutters *j* and *i*, and consisting of sections *f* united and stiffened by plates *k*, through which pass the pivot-rods *l*, all operating and constructed as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of January, 1874.

DEXTER S. BAILEY.

Witnesses:

WM. PAINE,  
J. L. PAIGE.