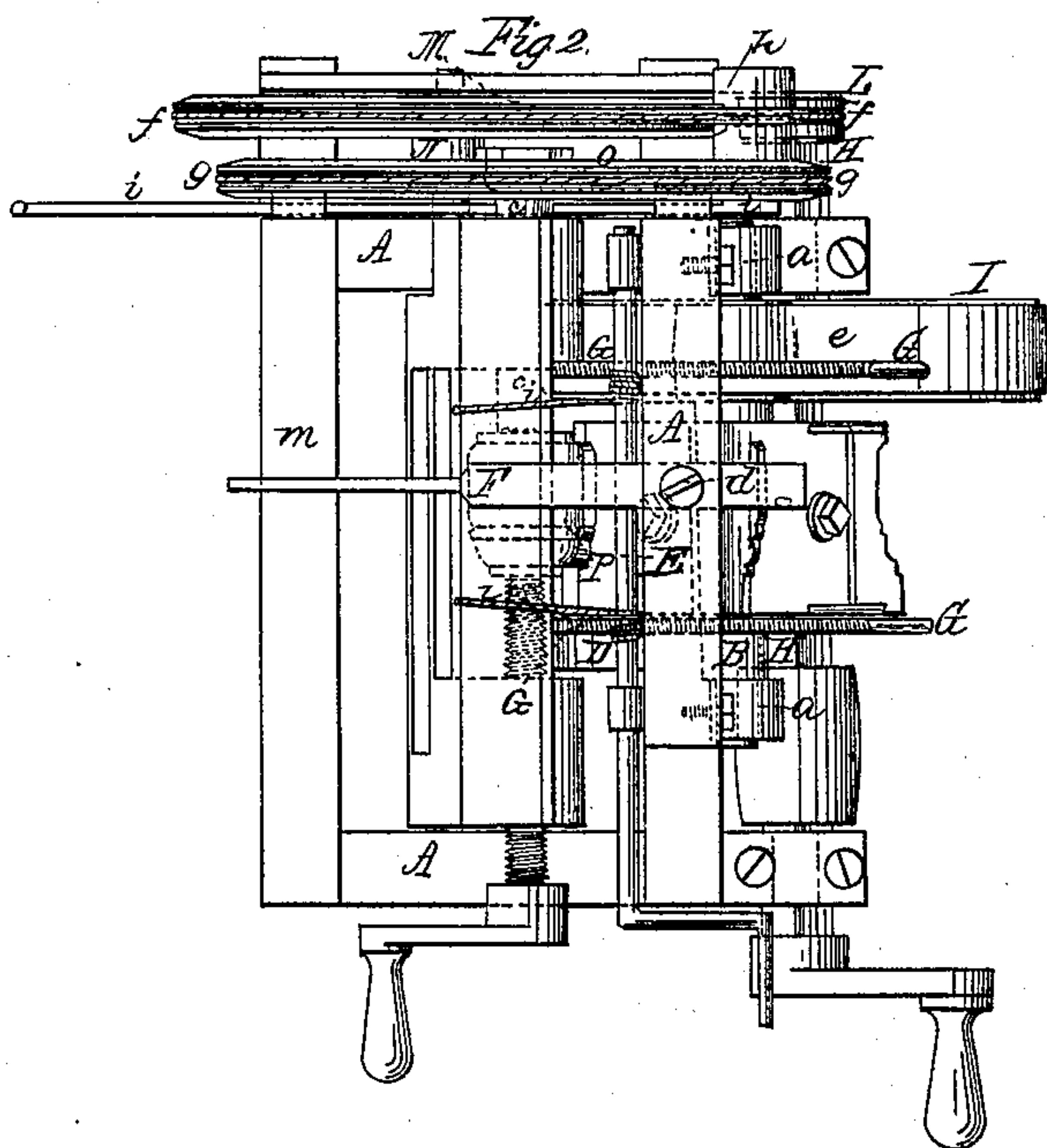
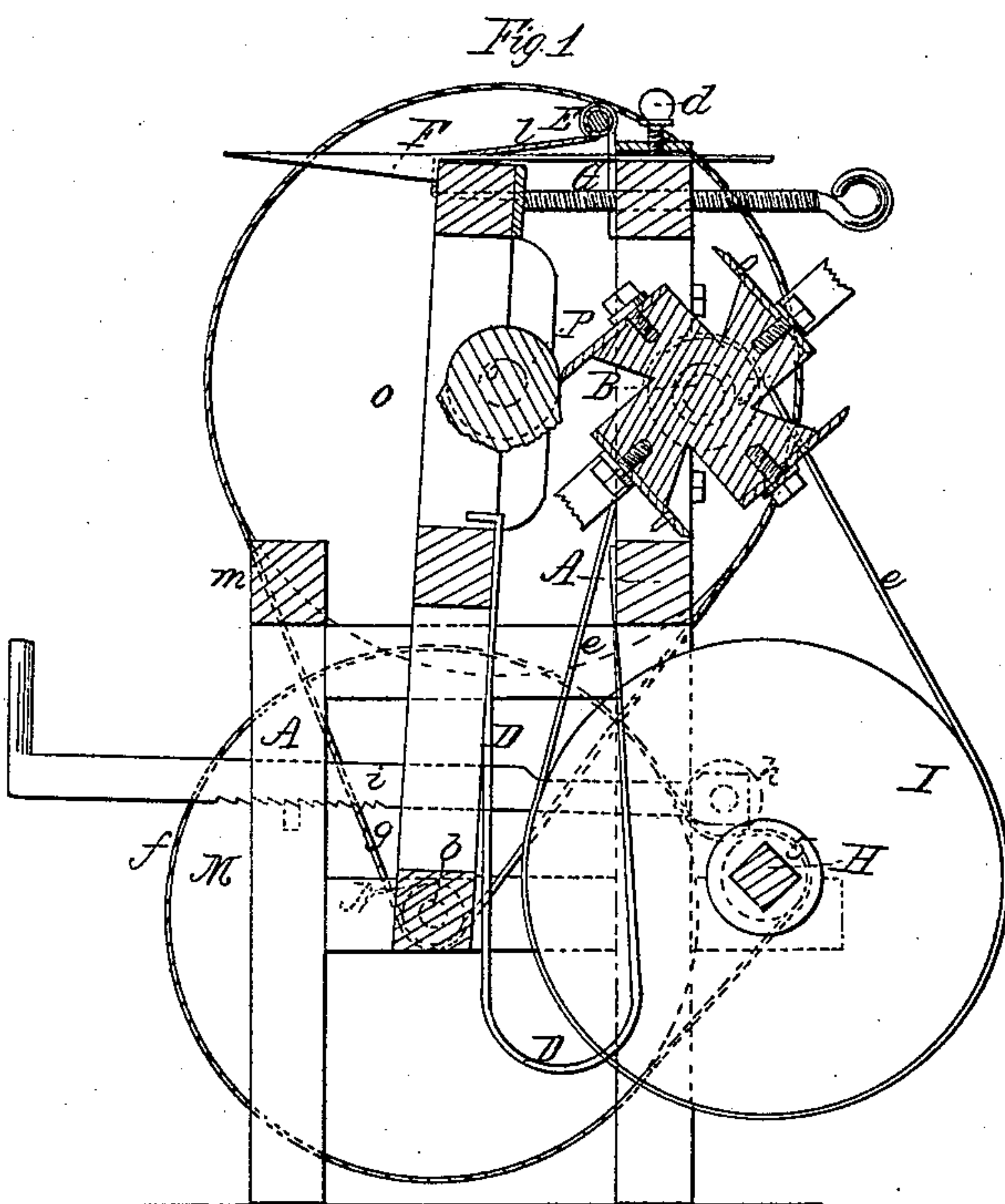


M. F. Connet,
Turning Regular Forms.

Patented July 24, 1855.



UNITED STATES PATENT OFFICE.

MATTHEW F. CONNET, OF PLAINFIELD, NEW JERSEY.

MACHINE FOR TURNING CYLINDERS OF WOOD, &c.

Specification of Letters Patent No. 13,301, dated July 24, 1855.

To all whom it may concern:

Be it known that I, MATTHEW F. CONNET, of Plainfield, in the county of Somerset and State of New Jersey, have invented certain new and useful Improvements in Machinery for Turning or Cutting Circular Forms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a vertical section of a machine for turning hubs, embracing my improvements, and Fig. 2, is a plan of the same.

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

In the machine, which forms the subject of this invention, rotary cutters are employed and the work or article to be turned has a circular motion, but the work instead of revolving rapidly in contact with the cutters as in common lathes and turning machinery generally, and being gradually reduced all around, only rotates once to complete the operation, the cutters cutting into it at once to the full depth necessary to reduce it, and every revolution of the cutters finishing a portion of the surface of the work.

A, is a fixed framing carrying the journal boxes *a, a*, of the rotary cutter shaft B, whose cutters have their edges made of a form corresponding with the longitudinal profile to be produced by the turning operation.

C, is a frame or gate swinging from fixed pivots at *b*, near the bottom of the frame, A, and carrying, opposite the cutter shaft B, live and dead centers *c, c'*, like those of a common lathe, between which the material or article to be turned, is placed.

D, is a horseshoe spring applied between the fixed frame A, and the swinging work frame C, to force the latter away from the former, and E, is a small windlass for drawing the swinging frame toward the fixed frame, by two ropes or chains *l, l*.

F, is a spring catch for securing the swinging work frame at any distance from the fixed frame and its cutter shaft, the tail of said catch sliding in a slot in the fixed frame and being secured in various positions by a binding screw *d*.

G, G, are two screws, screwing into the upper rail of the fixed frame, for adjusting

the swinging work frame at the required distance from the cutter shaft.

H, is the main shaft of the machine which is intended to rotate continuously. This carries a large pulley I, from which a belt *e*, runs to a smaller pulley J, on the cutter shaft to drive the latter at a quick speed. The main shaft also carries a small pulley L, from which a band *f*, runs over and gives motion to a larger pulley M, which runs loosely on a fixed axle on the side of the frame A. This pulley M, has a small pulley N, attached to receive a band *g*, which runs over and gives motion to a large pulley *o*, which is secured on the live center *c*. The material between the centers is thus caused to rotate very slowly. The band *f*, has a tightening pulley *h*, applied to it, said pulley being attached to a ratchet slide *i*, by which it can either be thrown off to let the belt slack, or thrown on to tighten it.

I will now proceed to describe the operation of the machine. Before placing the material between the centers *c, c'*, of the swinging work frame, the latter is set free from the catch F, to be thrown forward by the spring D, against the rail *m*, of the fixed frame and the tightening pulley *h*, is thrown off the belt *f*, so as to stop the motion of the live center *c*. The material or article P, to be turned is then secured between the centers in the usual way and the screws G, G, are adjusted to such a position that when the swinging work frame is drawn up in contact with them, the axis of the material or article to be turned will be at the required distance from the orbit of the edges of the cutters to reduce it to the required diameter. The work frame is then wound up by the windlass E, till it is stopped by the screws G, G, and the catch F, is brought up to it and made fast by the screw, *d*, to secure it. In moving up to the rotary cutters, the material P, is reduced at the point opposite the cutters to the necessary degree. The tightening pulley *h*, now requires to be thrown on the belt *f*, and the material P, will commence to rotate, slowly. Every revolution of the cutters reduces a portion of the work to the required form and radius, and in one complete revolution of the material on its own axis, the required circular form will be produced. When one piece of work is finished, the tightening pulley *h*, is thrown off to stop its revolution and the swinging work frame is set free by raising the catch F, by

hand and is thrown back against the rail *m*,
to have the work removed and a new piece
of material, inserted, ready to be put through
the same operation. The catch *F* does not
5 require to be moved for every piece of work
where a number of similar pieces are to be
produced, as being elastic, it raises to allow
the work frame to pass in moving up and
falls over the said frame when it arrives in
10 place. Instead of the spring *D*, a weight
may be so applied as to effect the same re-
sult, and instead of a windlass *E*, some other
purchase or power may be applied.

This machine is admirably adapted for
15 the turning of cross grained and knotty
stuff which it will reduce in much less time
than the machines generally used.

Having thus fully described the nature of
my invention, I would state that I do not

claim the revolving of the cutters at a rapid, 20
and the block at a slow motion as this has
been done before, but

What I do claim as new and desire to
secure by Letters Patent is—

So combining a swing frame which car- 25
ries the block to be cut, with a cutter or
cutters revolving around a fixed center, as
that the block may be swung up to the cut-
ters and first cut to the required depth or
gage without revolving, and then be revolved 30
slowly on its centers against the action of
the cutters, to complete the turning or cut-
ting at a single revolution of the block, sub-
stantially as herein described.

MATTHEW F. CONNET.

Witnesses:

E. KIRKPATRICK,
JAMES L. DEMOREST.