

S. Carrer,
Planing Shingles.
N^o 8,165. Patented June 17, 1851.

Fig. 1

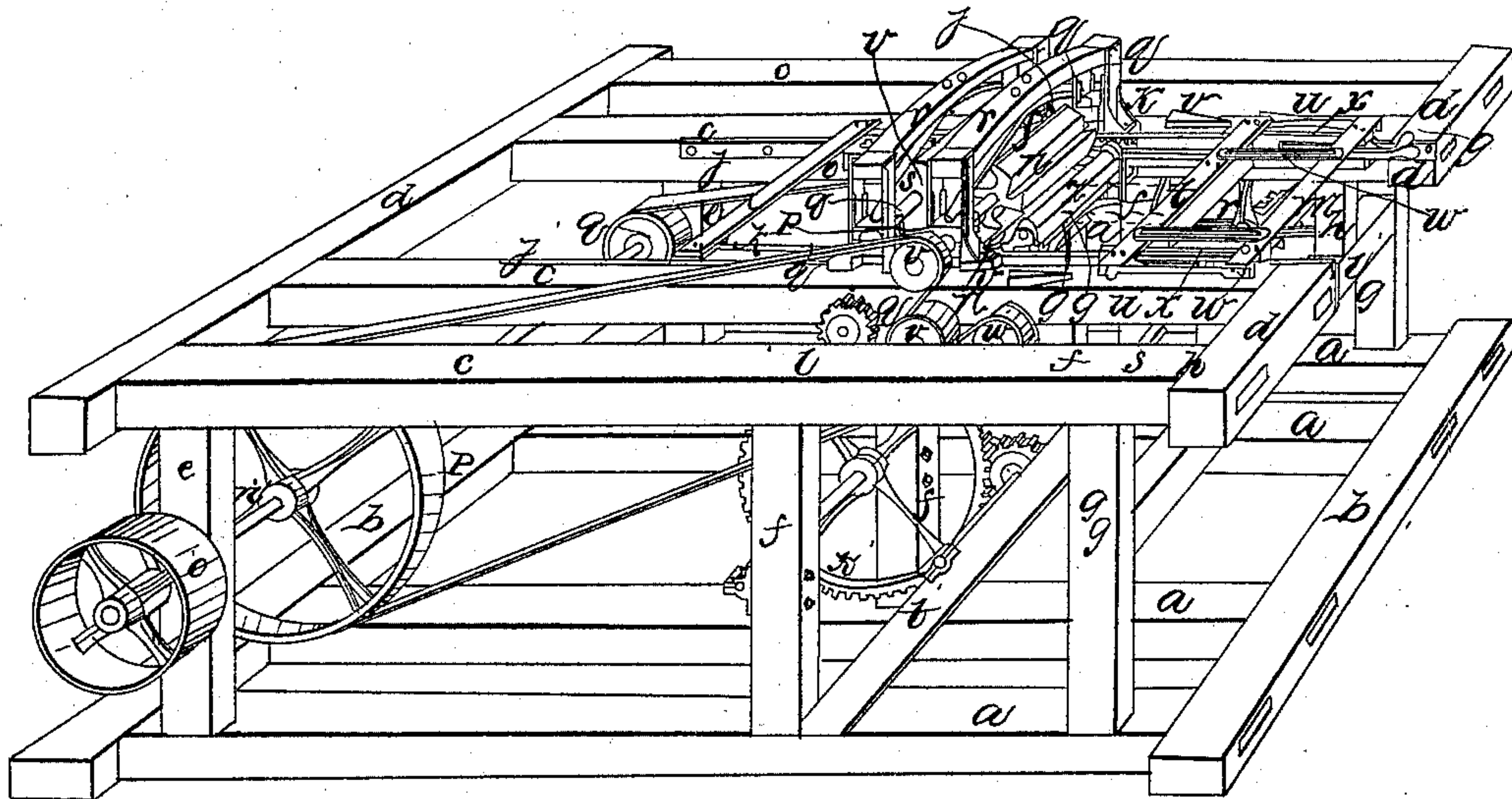


Fig. 2

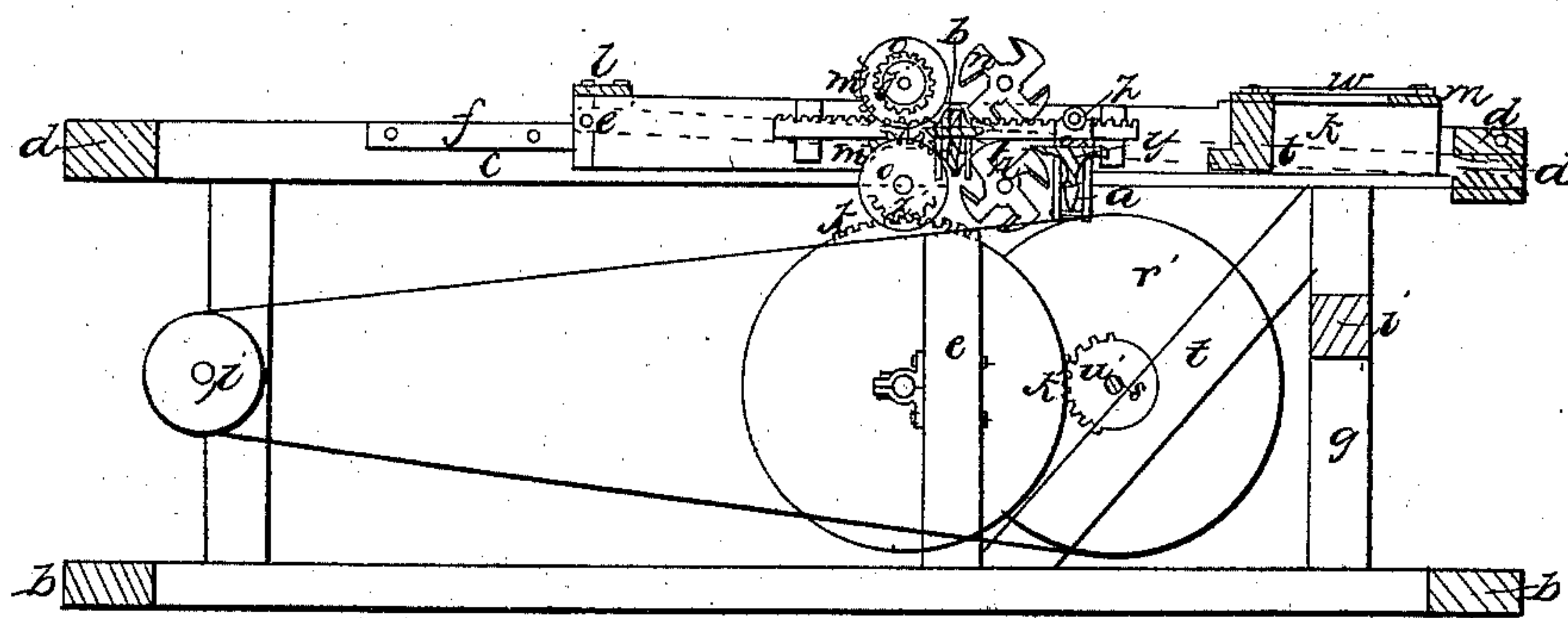
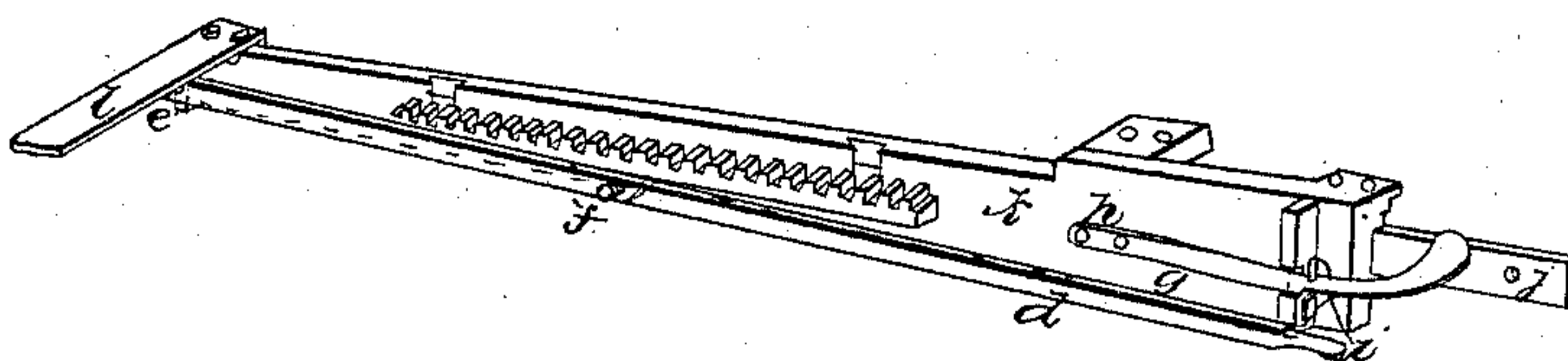


Fig. 3



UNITED STATES PATENT OFFICE.

S. CARVER, OF GENEVA, ILLINOIS.

MACHINE FOR DRESSING SHINGLES.

Specification of Letters Patent No. 8,165, dated June 17, 1851.

To all whom it may concern:

Be it known that I, SEYMOUR CARVER, of Geneva, in the county of Kane and State of Illinois, have invented a new and useful Machine for Dressing Rived Shingles, called "Carver's Rotary Shingle-Machine," of which the following is a full and exact description.

The nature of my invention consists in passing a rived shingle between two cylinders furnished with knives, the cylinders revolving in contrary directions, the lower cylinder being placed in fixed boxes, the upper cylinder is made to rise and fall by means of two inclined planes upon which the boxes of the upper cylinder rests, as the shingle passes through between the cylinders it is planed or dressed on both sides, the upper cylinder being gradually let down by the incline plane gives the shingle its proper taper; the shingle being carried forward by a carriage of peculiar construction moved by means of a rack and pinion, the shingle is urged forward by a detached head block resting upon the carriage and retained by two springs. When the shingle is passed about two thirds of its length between the cutting cylinders the springs are disengaged from the head block and it remains stationary while the shingle having passed between two rollers directly behind the cutting cylinders, the boxes of these rollers being arranged in the same manner as the boxes of the cutting cylinders, these rollers revolving in contrary direction press upon and pass out the shingle. At this moment the pinion moving the carriage passes the rack from under it and the carriage stops; to return the carriage to receive another shingle a lever is disengaged from a spring and depressed by hand, which depresses the rack so that it will return below the teeth of the pinion. The carriage is then drawn back by hand, another rived shingle is inserted, and the lever being raised and sustained by a spring the rack is again brought into gear with the pinion and the carriage is again passed forward.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation, reference being had to the accompanying drawings, where—

Figure 1, represents a perspective view of the machine; Fig. 2 represents a longitudinal section showing the combination of pul-

leys, drums, and cog wheels, to give motion to the two rollers, rack and carriage, also showing the guides which prevent the shingle from vibrating as it is being passed between the cutting cylinders; Fig. 3 is a section of the carriage showing the operation of the lever in raising and depressing the rack.

I construct a frame of wood work consisting of 4 parallel sills *a, a, a, a*, tenoned into the cross sills *b, b*, also the plates *c, c, c, c* placed directly over the sills *a, a*, and tenoned into the transverse plates *d, d, d*; these plates rest on 10 upright posts as shown at *e, e; f, f; g, g; and h, h*. The posts *h, h*, are tenoned into the rail *i*.

j, j, represents 2 railways attached to the plates *c, c*; on these railways I place the 2 side pieces *k, k*, of the carriage, which are connected by the transverse cast iron rails *l, m*, which are bolted to proper flanges cast on, or attached to the sides *k, k*.

n, n, represents the cutting cylinders and *o, o*, the rollers. The journal of the lower cylinder and roller is suspended in proper boxes bolted to the under side of the plates *c, c*; *p, p*, the boxes of upper cylinder, and rollers, resting on an inclined plane formed on the upper edge of the sides *k, k*, of the carriage; these boxes rise and fall between the cast iron guides *q, q*, as the carriage with its inclines returns and advances.

r, r, represents 2 pieces of timber connecting the top of the guides *q, q*, as shown in the drawing.

s, s, are two elliptic springs attached to the pieces *r, r*; the ends of these springs press the boxes *p, p*, upon the inclined plane. The guides *q, q*, have flanges at the lower end through which they are firmly bolted to the timbers *c, c*; *t*, the detached head block resting on the edge of the carriage *k, k*.

u, u, are two springs attached to the end of the cross bar *m*. These springs are notched so as to retain the head block *t*, until the end of the spring comes in contact with the cams *v, v*, which press the springs outward.

w, w, are two plates of metal having a slant in them. These plates are secured to the head *t*; two pins are placed in the cross bar *m*, which play in the slants as shown in the drawing.

x, x, are two pins placed in the plates *c, c*, these pins pass under the cross bar *m*, but come in contact with the head block *t* and

retain it until the carriage is drawn fully back.

y, represents a cast iron bridge tree bolted to the sides of the timbers *c, c*.

5 *z* represents a roller the journals of which work in two pillow blocks which have guides passing downward in grooves formed in the bridge tree *y*, the lower ends of these guides are connected to the elliptic spring *a*,
10 the spring being attached to the under side of the bridge tree, therefore by means of the spring the roller *z* is pressed downward; I also place a similar bridge tree between the cutting cylinders and the rollers *o, o*, as
15 shown at *b*, on Fig. 2.

c represents a bar of cast iron resting on the bridge tree *b*, which is kept in its place by means of guides, same as pillow blocks in bridge tree *y*; the bar *c* and bridge tree *b*
20 have their front edges beveled so that the butt of the shingle pressing between the beveled edges raises the bar, and the shingle passes between the bar and the bridge tree.

Fig. 3 shows the rack by which the carriage is moved being guided by the dove-tailed grooves in the side *k* of the carriage.

d represents the lever working on a pin at *e*, and connected by a pin at *f* to the rack.

g, represents a spring attached at *h* to the side *k*, a notch is formed on the side of this spring at *i*, which receives the lever *d* when
30 it is raised up, which brings the rack into gear with the pinion *j*.

l is a small pinion on the end of the shaft
35 of the lower roller *o*, which is geared into the cog wheel *k*.

m, m, are cog wheels on the shafts of the rollers *o, o*, these cog wheels have long teeth to allow the upper roller to rise and
40 fall without putting the wheels out of mesh.

n, is the main shaft working in boxes attached to the posts *e, e*.

o is the driving pulley, *P* the drum to drive the cutting cylinders.

45 *q*, is a pulley which drives the pulley *r* on the shaft *s*; the shaft *s* works in boxes attached to the braces *t*.

u, represents a pinion fixed to the shaft *s*, which gears into the cog wheel *k*.

50 *v, v*, are small pulleys fixed on the ends of the shafts of the cutting cylinders.

w is an idler pulley having its shaft working in boxes secured to the under side of the frame *c, c*; I then pass an endless belt

around the drum *P*, over the upper pulley *v*, 55 and under the lower pulley *v*, then over the pulley *w*; I then place an endless belt around the pulley *q* and drum *r*, on shaft *s*, and the machine is completed.

The operation of this machine is such, 60 that the carriage being drawn outward by hand the head block *t* comes in contact with the pins *x x*, the carriage stile passing outward the pins in the bar *m*, passes along the slants in the plates *w*, until the springs *u, u* 65 fall behind the head block—a rived shingle is then placed in front of the head block *t* one end of the shingle rests on a ledge formed on the head block the other end resting on the bridge tree *y*, as represented by the dotted 70 lines in Fig. 1; motion being given to the pulley *o*, the drum *P*, communicates a rapid motion to the cutting cylinders at the same time the pulley *q* gives the motion to the shaft *s*, which by the cogged wheels *u, k*, 75 and *l* gives motion to the rollers *o, o*; the lever being raised by hand falls into the notch *i*, of the spring *g*; which brings the rack into gear with the pinion *j*, and the carriage is passed inward preessing the 80 shingle under the roller *z* and between the cylinders *n, n*, the head block *t* strikes against the bridge tree *y*, and being released from the springs *u, u*, by means of the cams *v, v*, the head block remains stationary, and 85 the carriage passes on regularly depressing the upper cutters until the rollers *o, o*, draw the shingle out and deposit it—the rack is then depressed by the lever *d*, and the carriage drawn back by hand, ready to receive a 90 shingle as first specified.

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

The arrangement of the head block *t*, with the springs *u, u*, cams *v, v*, the rollers 95 *o, o*, and stops *x, x*; for the purpose of passing the shingles between and out from the cutting cylinders; in combination with the arrangement for depressing the upper cylinder while in motion for the purpose of 100 giving a taper to the shingle, the whole combined and arranged substantially as set forth in the above specification.

SEYMOUR CARVER.

Witnesses:

HORACE LAMB,
JOHN M. VANESDEL.