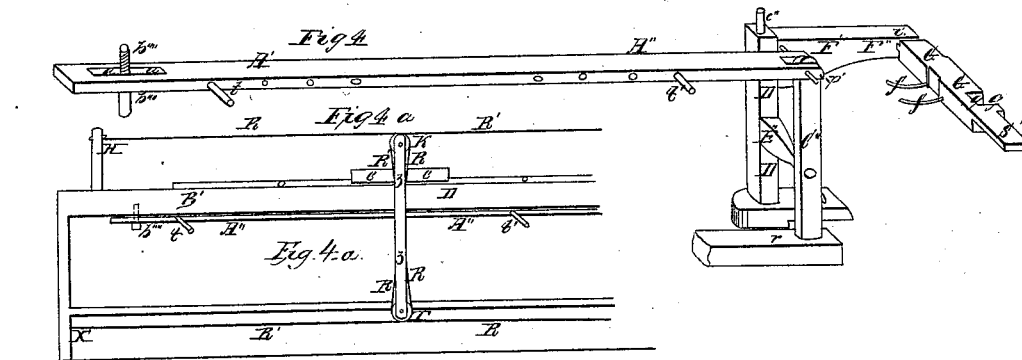
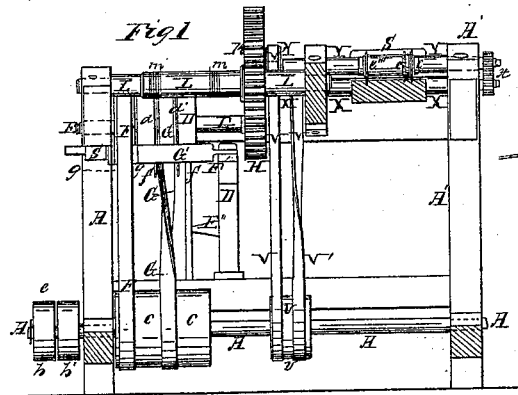
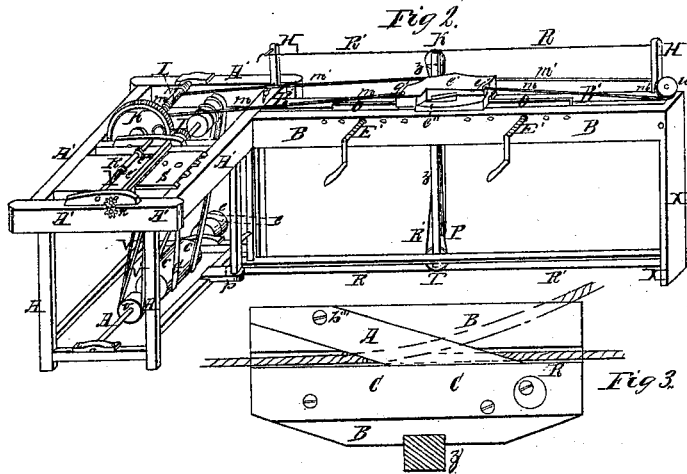


A. & G. Van Riper,
Making Matches, &c.

N^o 5319.

Patented Oct. 2, 1847.



UNITED STATES PATENT OFFICE.

ABRAHAM VAN RIPER AND GARRET VAN RIPER, OF BERGEN COUNTY, NEW JERSEY.

SPLINT-MACHINE FOR BASKETS.

Specification of Letters Patent No. 5,319, dated October 2, 1847.

To all whom it may concern:

Be it known that we, ABRAHAM VAN RIPER and GARRET VAN RIPER, of the county of Bergen, in the State of New Jersey, have
5 invented a new and useful improvement in the manner of constructing a machine for the cutting of splints from timber, for the manufacturing of baskets or for other purposes to which such splints are applicable;
10 and we do hereby declare that the following is a full and exact description thereof.

We take timber of any suitable kind, and cut it into boards, or plank, of such thickness as shall be equal to the width of the
15 splint that we intend to cut. When the timber is perfectly green, or unseasoned, it may be cut without first subjecting it to the process of steaming; but most commonly it will be found necessary to steam it before
20 submitting it to the action of the machine. The boards, or plank, so prepared, we confine between horizontal rails, or check-pieces, so that its edge may be exposed to the operation of the oblique cutting knife that is to
25 be passed along it; and we so arrange the machinery by which the knife is made to traverse back and forth, as that it shall do so while the motive power continues to act in the same direction; the manner in which
30 we construct this reversing apparatus constituting a main feature of our improvement. We also employ an apparatus of circular knives for the purpose of dividing the splints which have been cut by the first operation, into such widths as may be neces-
35 sary to adapt them to the particular purpose to which they are to be applied; and as we generally append these circular knives, (and the apparatus by means of which they are made to operate) to the principal machine,
40 so that they may be driven by the same motive power, we have so represented it in the accompanying drawings, and intend to describe it in this specification.

45 In the annexed drawings Figure 1, is an end elevation of the machine. Fig. 2, a perspective view thereof. Fig. 3, represents the underside of the stock, or knife-holder, with the cutting knife placed diagonally, this
50 figure being drawn on a scale much enlarged.

Figs. 4, and 4^a, show the shipping or reversing apparatus separately from the other parts, and drawn on a larger scale than those shown in Fig. 2.

In Figs. 1, and 2, the corresponding parts 55 are designated by the same letters of reference.

A, A, Figs. 1, and 2, is the driving axle, to which the motive power is applied, this axle having on its end a loose pulley *b*, and
60 a fixed pulley *b'* around which passes a belt *e*, that may be shifted from one of them to the other, when it is desired to stop the machine, or to set it in motion. C, C, is a drum or pulley on the axle A, which drum carries
65 two belts F, and G, that embrace the fast and loose pulleys D, D', *d*, *d'*, on the axle E. The pulleys D, D', being those that are fast to the axle, the belt G, is crossed so as to give
70 a motion the reverse of that given by the belt F. The pulleys D, D', are not to be in action at the same time. Upon one end of the axle E, there is a pinion H, (Fig. 1)
which gears into the spur wheel K, fixed upon the axis L, L, (Figs. 1, and 2), around
75 which wind two cords *m*, and *m'*, one of them *m*, having its outer end fastened to one end of the stock, or knife holder *e'*, as seen at J, (Fig. 2); and the other *m'*, to its
80 opposite end *g''*, serving to draw it backward and forward; the cord *m'*, that is to draw it back, passes around a pulley *w*.

A', A', is the frame of the machine, and B, B', Fig. 2, the rails, or checks, which embrace between them, the plank, or board *o*, *o*,
85 from which the splints are to be cut, which board may be held in place by the screws E', E'. By reversing the motion of the axis L, the motion of the knife-carrier will
90 be reversed.

The manner in which we arrange and affix the cutting knife is shown distinctly in Fig. 3, in which A, A, shows the diagonal knife
screwed at *b''*, and at *b'''*, to the stock, or holder B. By means of the screws *b''*, *b'''*,
95 the knife may be adjusted to the desired thickness of the splint to be cut. The knife holder is guarded by a plate of metal *c*, *c*, and has a groove R, R, in it to receive the edge of the plank *o*, *o*, (Fig. 2.). *e''*, Fig. 2, 100

is a throat, or opening, in the knife holder through which the splint is to pass as it is separated by the knife.

The apparatus shown in part in Fig. 1, but more fully in Fig. 2, by means of which we divide the splints cut by the main machine into such widths as we may desire, either for the filling, in basket work, or for other purposes, we will now describe. Upon the axis A, A, Figs. 1, and 2, is fixed a drum, or pulley *u*, *u*, which carries belts V, and V', the latter of which is crossed. The belt V, passes over a pulley Y, which carries the axle Y', on which axle there are shown three circular knives *c'*, *c'*, *e'''*, but there may be more or fewer of these as may be desired, so as to divide the splints into two, three, or more widths. The belt V', drives a pulley X, on a feed roller X', above which is a similar roller R'', between which rollers the splint is to be received as it is cut into strips, which strips may be passed separately through guide grooves in a guide piece S, (Fig. 2). The feeding rollers are geared together by pinions *x*, (Figs. 1 and 2) a section of the feeding rollers with the splint passing between them, and one of the cutting knives is shown at Fig. 1^a.

We will now describe the manner in which we arrange the apparatus for reversing the motion of the cutting knife while that of the driving shaft is continuous, H, Figs. 2 and 4^a is a standard rising from the frame of the machine at its outer end, and H', Fig. 2, a similar standard rising from the frame in the part represented. R, R', are two cords, one end of the cord R, being made fast to the standard H, and its other end to the lower part of the frame, as at *p*, Fig. 2. The cord R', is made fast by one end to the standard H', and by its other to the lower part of the frame, as at X', Figs. 2 and 4^a; the direction of the cord R, is designated by its being colored red, while that marked R', is colored black. To the back edge of the stock, or knife-holder, is permanently attached a vertical bar, or standard, Z, Z, Figs. 2, 3, and 4^a, which bar extends above and below said block in the manner represented in the drawing. This bar carries a pulley K', at its upper end, and a pulley T, at its lower end, each of which pulleys is furnished with two grooves, to receive, respectively, the cords R, and R', which cords cross from one of them to the other, as represented by the dotted lines in Fig. 4^a.

A'', A'', in this last figure is a sliding piece, (shown separately in Fig. 4) which is placed under the rail B', B', Fig. 2, and may be confined to said rail by means of a screw *b''''*, passing through a slot *a*, *a*; this sliding piece is to be moved back and forth

by means of the vertical bar Z, Z, attached to the knife-holder, which as it is made to traverse with said holder will be brought into contact, alternately, with pins *t*, *t'*, projecting out from the sliding piece; the pins *t*, *t'*, may be shifted into different holes in the sliding piece, according to the length of the stuff to be cut. The sliding piece is attached by means of a joint pin *p'* (Fig. 4) to a vertical post C'', the lower end of which is rounded, and is free to rock in the piece *r*, which receives said end; the post C'', is connected to the vertical part D'', by means of a piece E'', mortised into the latter, and having on its outer end a pin *e''*, that passes loosely through a hole in the post C'', the post D'', turns on the pins *c''*, at both its ends, said pins entering corresponding holes in the frame of the machine. Into the upper end of the post D'' is mortised the piece of timber F, and at right angles to this is attached the bar G', G', by a joint pin at *i*; the end S', of the bar G', slides freely through a mortise in the frame, and is seen at S', Fig. 1. Under this arrangement it will be manifest that the rocking of the piece C'', will give a sliding motion to the bar G', and as this bar is to embrace the edges of the belts F, F, and G, G, it may be made to shift them from the fast pulleys D, D', to and from the loose pulleys *d*, and *d'*, on the axle E, (Fig. 1); *g*, *g*, Figs. 1 and 4, is a notch in the bar G', that embraces the band F; and *f*, *f*, are two pins that embrace the band G; and under this arrangement it will be readily seen that one of these bands will be shifted from the fast to the loose pulley, and the other from the loose to the fast pulley simultaneously, by the action of the vertical bar Z, Z, on the pins *t*, *t'*; and that the required reversing motion will be thus attained, the shaft L, L, that carries the cords *m*, and *m'*, which are attached to the stock, or knife-holder, having its direction changed, while the main driving shaft continues its motion in one direction.

Having thus fully described the manner in which we construct our machine for the cutting of splints for the manufacturing of baskets, and for other purposes to which such splints are applicable, what we claim as new therein, and desire to secure by Letters Patent, is—

The particular arrangement and combination of the respective parts by which the reversing motion of the cutting knife is effected, and the machine thereby adapted to the cutting of stuff of different lengths as herein set forth; said combination consisting principally of the vertical bar Z, attached to the stock or knife-carrier; and the slide A'', operating on the vertical posts

C'', and D'', so as to cause the bar G', that embraces the belts F, and G, to shift said belts, under an arrangement of parts substantially the same with that herein fully
5 made known. We do not claim to be the inventors of a reversing motion, such motion being common to many machines, but we limit our claim as above set forth, to the particular combination by which we have
10 adapted it to our machine; not intending, however, to limit ourselves to the exact

form of the respective parts, as represented, but to vary these as we may think proper, while we attain the same end by means substantially the same.

ABRAHAM VAN RIPER.
GARRET VAN RIPER.

Witnesses:

HENRY THOLMAN POST,
JOSEPH POST,
J. A. VAN RIPER.